

# Opening the 'black box' of human resource management s association with team characteristics and performance in healthcare : lessons from rehabilitation services in public hospitals

**Author:**

Pereira, David Joseph

**Publication Date:**

2013

**DOI:**

<https://doi.org/10.26190/unsworks/16197>

**License:**

<https://creativecommons.org/licenses/by-nc-nd/3.0/au/>

Link to license to see what you are allowed to do with this resource.

Downloaded from <http://hdl.handle.net/1959.4/52705> in <https://unsworks.unsw.edu.au> on 2024-03-29

**Opening the 'black box' of  
Human Resource Management's  
association with team characteristics and  
performance in healthcare: lessons from  
rehabilitation services in public hospitals**

David Joseph Pereira

A thesis in fulfilment of the requirements for the degree of

Doctor of Philosophy

**UNSW**



Australian Institute of Health Innovation

Faculty of Medicine

2013

**THE UNIVERSITY OF NEW SOUTH WALES**  
**Thesis/Dissertation Sheet**

Surname or Family name: **Pereira**

First name: **David**

Other name/s: **Joseph**

Abbreviation for degree as given in the University calendar: **PhD**

School: **Australian Institute of Health Innovation**

Faculty: **Medicine**

Title: **Opening the 'black box' of Human Resource Management's association with team characteristics and performance in healthcare: lessons from rehabilitation services in public hospitals**

**Abstract**

How does Human Resource Management (HRM) contribute to organizations and their functioning? What is the relationship between HRM, teamwork and clinical performance? We know that organizations deploy Human Resources (HR) departments and initiate HRM with the express purpose of improving performance, yet little is known about their associations, especially in the healthcare setting. HRM is essentially a 'black box' which needs to be understood, thereby informing organizations on how to maximize the benefits of the HR function. This thesis contributes to this deficit in knowledge, examining team characteristics, job satisfaction and clinical performance and how these relate to HRM policy and practice. Specifically, it investigates the links between aspects of HRM with teamwork and performance.

A mixed method cross sectional study was conducted focusing on full service category rehabilitation services from public hospitals in Australia. This setting was selected for investigation because of the strong teamwork orientation and the lack of research comprehensively evaluating the contribution of HRM in this medical field. A total of 163 participants, comprising 152 rehabilitation clinicians and 11 managerial staff from seven hospitals were enrolled. A semi-structured questionnaire was administered to clinicians to determine their individual and team characteristics. Two measures of team performance were employed, namely: self reported job satisfaction, and compliance with clinical indicators defined by the Australian Council of Healthcare Standards. Twenty four focus groups and 18 interviews were conducted with clinicians and HR managers to investigate HRM policy and practice. Quantitative input from survey and clinical indicator data were analyzed using descriptive and inferential statistics while qualitative data from focus groups and interviews were thematically analyzed.

The results show that a holistic approach to HRM is related to teamwork and facets of performance. Influenced by local context, HRM has the potential to either positively or negatively affect teamwork, job satisfaction and clinical performance. HRM's links to teamwork and performance were found to be significantly mediated by elements of efficiency, effectiveness, change, structure, service constraints, leadership, staffing, specialization and research. The tailoring of HRM approaches to take account of local organizational circumstances could contribute positively to desirable teamwork and performance outcomes.

**Declaration relating to disposition of project thesis/dissertation**

I hereby grant to the University of New South Wales or its agents the right to archive and to make available my thesis or dissertation in whole or in part in the University libraries in all forms of media, now or here after known, subject to the provisions of the Copyright Act 1968. I retain all property rights, such as patent rights. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation. I also authorise University Microfilms to use the 350 word abstract of my thesis in Dissertation Abstracts International (this is applicable to doctoral theses only).



Signature



Witness

17 June 2013

Date

**FOR OFFICE USE ONLY**

Date of completion of requirements for Award:

## **COPYRIGHT STATEMENT**

'I hereby grant the University of New South Wales or its agents the right to archive and to make available my thesis or dissertation in whole or part in the University libraries in all forms of media, now or here after known, subject to the provisions of the Copyright Act 1968. I retain all proprietary rights, such as patent rights. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

I also authorise University Microfilms to use the 350 word abstract of my thesis in Dissertation Abstract International (this is applicable to doctoral theses only).

I have either used no substantial portions of copyright material in my thesis or I have obtained permission to use copyright material; where permission has not been granted I have applied/will apply for a partial restriction of the digital copy of my thesis or dissertation.'



Signed .....

Date .....17 June 2013.....

## **AUTHENTICITY STATEMENT**

'I certify that the Library deposit digital copy is a direct equivalent of the final officially approved version of my thesis. No emendation of content has occurred and if there are any minor variations in formatting, they are the result of the conversion to digital format.'



Signed .....

Date .....17 June 2013.....

## ORIGINALITY STATEMENT

'I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at UNSW or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at UNSW or elsewhere, is explicitly acknowledged in the thesis. I also declare that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project's design and conception or in style, presentation and linguistic expression is acknowledged.'

A handwritten signature in black ink, appearing to be 'M. H. H.', is centered on the page.

Signed .....

Date .....17 June 2013.....

## **DEDICATION**

This thesis is dedicated to my family,  
parents Rene and Shirley Pereira for their years of loving nurturing and selfless sacrifices,  
and  
siblings Adrian and Elizabeth for their inspiring courage in the journey of life.

| <b>CONTENTS</b>  | <b>PAGE</b> |
|--|-------------|
| <b>Dedication</b>  | iii         |
| <b>List of tables</b>  | ix          |
| <b>List of figures</b>   | x           |
| <b>Abbreviations</b>   | xi          |
| <b>Definitions</b>   | xii         |
| <b>Abstract</b>  | xiii        |
| <b>Acknowledgements</b>  | xiv         |
| <b>Peer reviewed papers arising from the research</b>              | xvii        |
| <b>Peer reviewed published abstracts arising from the research</b> | xvii        |
| <b>Peer reviewed abstracts arising from the research</b>           | xviii       |
| <b>Chapter 1: Introduction</b>                                     | <b>1</b>    |
| 1.1 Introduction   | 1           |
| 1.2 Scope of the study   | 2           |
| 1.3 Rationale for the study  | 7           |
| 1.4 Significance of the study                                      | 10          |
| 1.5 The study aims and research questions                          | 12          |
| 1.6 Methodology  | 13          |
| 1.7 Structure of the thesis  | 14          |
| 1.8 Conclusion   | 14          |
| <b>Chapter 2: Literature Review</b>                                | <b>15</b>   |
| 2.1 Introduction   | 15          |
| 2.2 Overview of HRM literature                                     | 15          |
| 2.3 HRM and organizational performance                             | 19          |
| 2.4 Teamwork   | 23          |
| 2.5 Theoretical framework  | 31          |
| 2.6 Healthcare literature review process                           | 34          |
| 2.7 Team characteristics in healthcare                             | 39          |
| 2.7.1 Structural team characteristics                              | 39          |
| 2.7.2 Individual characteristics of team members                   | 41          |
| 2.7.3 Team functioning characteristics                             | 44          |
| 2.8 Assessing healthcare team performance                          | 47          |
| 2.9 HRM in healthcare  | 50          |
| 2.9.1 Existing healthcare HRM research                             | 50          |
| 2.9.2 Healthcare workforce planning and staffing                   | 51          |
| 2.9.3 Healthcare staff evaluation and appraisal                    | 53          |
| 2.9.4 Health delivery system                                       | 54          |
| 2.9.5 Healthcare organization policy                               | 55          |
| 2.9.6 Healthcare organization and service structure                | 56          |
| 2.9.7 Healthcare leadership  | 57          |
| 2.9.8 Healthcare staff recognition and reward                      | 59          |
| 2.9.9 Healthcare staff development                                 | 60          |
| 2.9.10 Healthcare staff well-being                                 | 62          |
| 2.9.11 High performance work systems                               | 63          |
| 2.9.12 Healthcare HRM and teamwork                                 | 64          |

|  |            |
|--|------------|
| 2.10 Rehabilitation services   | 65         |
| 2.11 Conclusion  | 68         |
| <b>Chapter 3: Research Methodology</b>   | <b>69</b>  |
| 3.1 Introduction   | 69         |
| 3.2 General research approach and theoretical underpinnings                                  | 69         |
| 3.3 Identification of variables, and justification of study instruments and research setting | 71         |
| 3.3.1 Team characteristics   | 72         |
| 3.3.1.1 Structural team characteristics  | 72         |
| 3.3.1.2 Individual characteristics of team members   | 73         |
| 3.3.1.3 Team functioning   | 74         |
| 3.3.2 Performance measures   | 78         |
| 3.3.3 HRM influence and association with team characteristics and performance                | 82         |
| 3.3.4 Suitability of rehabilitation services   | 83         |
| 3.3.5 Overview of variables within theoretical framework                                     | 84         |
| 3.4 Study population and sampling strategy   | 86         |
| 3.5 Human research ethics committee applications   | 87         |
| 3.6 Participating hospitals  | 88         |
| 3.7 Study participants   | 89         |
| 3.7.1 Survey participants  | 90         |
| 3.7.2 Interview and focus group participants   | 90         |
| 3.8 Types of data  | 92         |
| 3.9 Primary data collection  | 92         |
| 3.9.1 Survey questionnaire   | 93         |
| 3.9.2 Focus groups   | 99         |
| 3.9.3 Interviews   | 103        |
| 3.10 Secondary data  | 106        |
| 3.10.1 Administrative records on participating hospitals and their rehabilitation services   | 106        |
| 3.10.2 Rehabilitation medicine clinical indicator data                                       | 106        |
| 3.11 Data analysis   | 109        |
| 3.11.1 Quantitative data analysis  | 109        |
| 3.11.2 Qualitative data analysis   | 110        |
| 3.11.3 Combining quantitative and qualitative findings                                       | 112        |
| 3.12 Limitations of the research methods   | 113        |
| 3.13 Conclusion  | 114        |
| <b>Chapter 4: Team Characteristics and Performance</b>                                       | <b>115</b> |
| 4.1 Introduction   | 115        |
| 4.2 Structural team characteristics  | 116        |
| 4.3 Survey participant distribution by hospital  | 117        |
| 4.4 Individual characteristics of team members (participant demographics)                    | 118        |
| 4.5 Reported number of team members in the rehabilitation service                            | 122        |
| 4.6 Team type index  | 123        |



|   |            |
|---|------------|
| 4.7 Perceived efficiency index  | 129        |
| 4.8 Team climate index  | 132        |
| 4.9 Teamwork comments   | 139        |
| 4.10 Overall job satisfaction scale   | 141        |
| 4.11 Rehabilitation medicine clinical indicator data  | 147        |
| 4.12 Association between team characteristics and performance   | 150        |
| 4.13 Discussion   | 156        |
| 4.14 Conclusion   | 158        |
| <b>Chapter 5: Human Resource Management</b>   | <b>159</b> |
| 5. 1 Introduction   | 159        |
| 5.2 HR staff findings   | 163        |
| 5.2.1 General site and study elements   | 163        |
| 5.2.1.1 <i>Healthcare organization</i>  | 163        |
| 5.2.1.2 <i>Rehabilitation service</i>   | 164        |
| 5.2.1.3 <i>Factors influencing teamwork</i>   | 164        |
| 5.2.1.4 <i>Factors influencing performance</i>  | 165        |
| 5.2.2 HR planning and evaluation  | 166        |
| 5.2.2.1 <i>Factors influencing HR planning in the organization</i>  | 166        |
| 5.2.2.2 <i>Selection and recruitment</i>  | 166        |
| 5.2.2.3 <i>Attributes important for staff employed</i>  | 167        |
| 5.2.2.4 <i>Influence of existing staff on selection and recruitment of new staff</i>                      | 168        |
| 5.2.2.5 <i>Staff evaluation</i>   | 168        |
| 5.2.2.6 <i>Staff learning their jobs</i>  | 169        |
| 5.2.2.7 <i>Management and clinical staff relationships</i>  | 169        |
| 5.2.2.8 <i>Staff motivation</i>   | 170        |
| 5.2.2.9 <i>Provision of leadership</i>  | 171        |
| 5.2.3 Healthcare staff work systems   | 171        |
| 5.2.3.1 <i>Individual work and teamwork requirements</i>  | 171        |
| 5.2.3.2 <i>Staff decision making responsibility</i>   | 172        |
| 5.2.3.3 <i>Staff recognition and reward</i>   | 172        |
| 5.2.3.4 <i>Support for staff innovation</i>   | 174        |
| 5.2.3.5 <i>HR response for staff innovation support requirement</i>                                       | 174        |
| 5.2.4 Healthcare staff education, training and development  | 175        |
| 5.2.5 Healthcare staff well-being and satisfaction  | 175        |
| 5.2.5.1 <i>Positives for staff working in the organization</i>  | 176        |
| 5.2.5.2 <i>Negatives for staff working in the organization</i>  | 177        |
| 5.2.5.3 <i>Suggestions for improving staff well-being and satisfaction in the healthcare organization</i> | 178        |
| 5.2.5.4 <i>Reasons for staff turnover</i>   | 178        |
| 5.2.5.5 <i>HR department effort to retain healthcare staff</i>  | 179        |
| 5.2.6 Healthcare context: Influence of different departments and units on one another                     | 180        |
| 5.2.7 General people management in the organization   | 181        |

|   |            |
|---|------------|
| 5.2.7.1 <i>Healthcare staff management in the organization</i>  | 181        |
| 5.2.7.2 <i>HR department's influence on staff</i>   | 182        |
| 5.2.7.3 <i>Usefulness of HR department increasing its involvement in staff management</i>                         | 182        |
| 5.2.8 Views on HRM  | 183        |
| 5.3 Clinical staff findings   | 184        |
| 5.3.1 General site and study elements   | 184        |
| 5.3.1.1 <i>Description of team</i>  | 184        |
| 5.3.1.2 <i>Factors influencing teamwork</i>   | 186        |
| 5.3.1.3 <i>Factors influencing performance</i>  | 186        |
| 5.3.2 Human resource planning and evaluation  | 188        |
| 5.3.2.1 <i>Selection and recruitment</i>  | 188        |
| 5.3.2.2 <i>Staff evaluation</i>   | 190        |
| 5.3.3 Healthcare staff work systems   | 191        |
| 5.3.3.1 <i>Individual work and teamwork requirements</i>  | 191        |
| 5.3.3.2 <i>Staff recognition and reward system</i>  | 193        |
| 5.3.4 Healthcare staff education, training and development  | 195        |
| 5.3.5 Healthcare staff well-being and satisfaction  | 197        |
| 5.3.5.1 <i>Positives for staff working in the organization</i>  | 197        |
| 5.3.5.2 <i>Negatives for staff working in the organization</i>  | 199        |
| 5.3.6 Healthcare context: influence of other staff in the hospital on the rehabilitation team                     | 201        |
| 5.3.7 General people management in the organization   | 203        |
| 5.3.7.1 <i>Healthcare staff management or people management in the organization</i>                               | 203        |
| 5.3.7.2 <i>HR department influence on the rehabilitation team</i>   | 205        |
| 5.3.7.3 <i>Rehabilitation team reaction to people management efforts from the HR department</i>                   | 206        |
| 5.3.8 Views on HRM  | 207        |
| 5.4 Notable common and unique HRM findings across hospitals   | 209        |
| 5.5 Discussion  | 214        |
| 5.6 Conclusion  | 216        |
| <b>Chapter 6: Discussion and Implications</b>   | <b>217</b> |
| 6.1 Introduction  | 217        |
| 6.2 Research foundation, thesis achievement and qualifying limitations  | 217        |
| 6.3 Original research contribution  | 221        |
| 6.4 Discussion of HRM's association with team characteristics and performance                                     | 223        |
| 6.5 Discussion of specific associations between study variables   | 227        |
| 6.5.1 Association 1: HR planning and evaluation; team functioning; and rehabilitation medicine clinical indicator | 227        |

|  |            |
|--|------------|
| 6.5.2 Association 2: HR planning and evaluation; healthcare staff work systems; team functioning; and rehabilitation medicine clinical indicator   | 229        |
| 6.5.3 Association 3: HR planning and evaluation; healthcare staff work systems; healthcare staff well-being and satisfaction; team functioning; overall job satisfaction; and rehabilitation medicine clinical indicator | 231        |
| 6.5.4 Association 4: Healthcare staff work systems and overall job satisfaction  | 233        |
| 6.5.5 Association 5: Healthcare staff work systems; healthcare staff well-being and satisfaction; and overall job satisfaction   | 235        |
| 6.5.6 Association 6: Healthcare staff work systems; healthcare staff well-being and satisfaction; and rehabilitation medicine clinical indicator   | 236        |
| 6.6 Implications   | 237        |
| 6.6.1 Theory   | 238        |
| 6.6.2 Policy   | 239        |
| 6.6.3 Practice   | 240        |
| 6.6.4 Future research  | 240        |
| 6.7 Conclusion   | 241        |
| <b>References</b>  | <b>242</b> |
| <b>Appendix 1-Participant information statement</b>  | <b>287</b> |
| <b>Appendix 2-Survey questionnaire</b>   | <b>290</b> |
| <b>Appendix 3-Focus group questions</b>  | <b>301</b> |
| <b>Appendix 4-Interview questions</b>  | <b>302</b> |
| <b>Appendix 5-Summaries of HR staff and clinical staff responses for HRM</b>   | <b>304</b> |

## LIST OF TABLES

| <b>Table</b> | <b>Heading</b>  | <b>Location</b> |
|--------------|---|-----------------|
| 2.1          | Search findings used to generate reference pool for ensuring significance of research                       | 35              |
| 2.2          | Results for systematic searching within team characteristics journal pool                                   | 37              |
| 3.1          | General details of the participating hospitals and their respective rehabilitation services                 | 88              |
| 3.2          | Number of interview and focus group sessions, and participants across hospitals                             | 91              |
| 3.3          | Simplified headings, corresponding tool/thematic coverage and number of items in survey questionnaire       | 94              |
| 3.4          | Survey questionnaire Part A's characteristics of team individuals and perceived team size                   | 95              |
| 3.5          | Survey questionnaire Part B's original team type index themes and user friendly/specific rewording          | 96              |
| 3.6          | Survey questionnaire Part C's perceived efficiency index items  | 97              |
| 3.7          | Survey questionnaire Part D's team climate index items  | 97              |
| 3.8          | Survey questionnaire Part E's overall job satisfaction scale items  | 98              |
| 3.9          | HRM areas and coverage from the MBNQA's Health Care Pilot Criteria HRDM category                            | 101             |
| 3.10         | Division of focus group questions by part with corresponding question group and number of questions         | 103             |
| 3.11         | Division of interview questions by part with corresponding question group and number of questions           | 105             |
| 3.12         | Hospital and rehabilitation service figures requested through communication with senior clinicians          | 106             |
| 3.13         | ACHS rehabilitation medicine clinical indicators specifications   | 108             |
| 4.1          | Structural team characteristics, by hospital  | 117             |
| 4.2          | Number of survey participants, by hospital  | 117             |
| 4.3          | Comparison of team members' characteristics, by hospital  | 119             |
| 4.4          | Perceived number of rehabilitation team members compared to administratively determined number, by hospital | 123             |
| 4.5          | Distribution of rehabilitation service team type index, by hospital   | 125             |
| 4.6          | Participant responses to team type index themes   | 126             |
| 4.7          | Team type index themes, by hospital   | 128             |
| 4.8          | Perceived efficiency index, by hospital   | 129             |
| 4.9          | Perceived efficiency index items, by hospital   | 130             |
| 4.10         | Team climate index, by hospital   | 133             |
| 4.11         | Team climate index items, by hospital   | 134             |
| 4.12         | Teamwork comments categorization, by hospital   | 140             |
| 4.13         | Overall job satisfaction scale, by hospital   | 141             |
| 4.14         | Overall job satisfaction scale items, by hospital   | 143             |

*Continued*

|      |   |     |
|------|---|-----|
| 4.15 | Rehabilitation medicine clinical indicator data results demonstrating level of compliance, by hospital                  | 148 |
| 4.16 | Summary of significant items, indexes, scale and indicator results, by hospital   | 151 |
| 5.1  | Breakdown of individual participants according to interview or focus group research session and profession, by hospital | 160 |
| 5.18 | Summary of common and unique findings, by HRM area  | 212 |
| 6.1  | Study aims, research questions, concise answers, and corresponding thesis chapter and section                           | 219 |

\*Tables 5.2-5.17 have been appendicized

## LIST OF FIGURES

| <b>Figure</b> | <b>Label</b>   | <b>Location</b> |
|---------------|--|-----------------|
| 1.1           | Variables adopted for study's theoretical framework  | 7, 84, 218      |
| 2.1           | General theoretical framework guiding study's evaluation of the association between team characteristics, performance and HRM  | 32              |
| 3.1           | Breakdown of full service rehabilitation providers in Sydney for sample selection  | 86              |
| 3.2           | Primary data collection methods utilized   | 93              |
| 6.1           | Association between aspects and elements of: HR planning and evaluation; team functioning; and rehabilitation medicine clinical indicator  | 228             |
| 6.2           | Association between aspects and elements of: HR planning and evaluation; healthcare staff work systems; team functioning; and rehabilitation medicine clinical indicator   | 230             |
| 6.3           | Association between aspects and elements of: HR planning and evaluation; healthcare staff work systems; healthcare staff well-being and satisfaction; team functioning; overall job satisfaction; and rehabilitation medicine clinical indicator | 232             |
| 6.4           | Association between leadership aspect of Healthcare staff work systems and overall job satisfaction  | 234             |
| 6.5           | Association between aspects and elements of: Healthcare staff work systems; healthcare staff well-being and satisfaction; and overall job satisfaction   | 235             |
| 6.6           | Association between aspects and elements of: Healthcare staff work systems; healthcare staff well-being and satisfaction; and rehabilitation medicine clinical indicator   | 236             |
| 6.7           | Contextual influences on HRM's association with team characteristics and performance   | 238             |

## ABBREVIATIONS

| Abbreviation | Term  |
|--------------|---|
| ACHS         | Australian Council on Healthcare Standards          |
| AFRM         | Australasian Faculty of Rehabilitation Medicine     |
| AROC         | Australasian Rehabilitation Outcomes Centre         |
| CEO          | Chief Executive Officer                             |
| HR           | Human Resources                                     |
| HRDM         | Human Resource Development and Management           |
| HREC         | Human Research Ethics Committee                     |
| HRM          | Human Resource Management                           |
| MBNQA        | Malcolm Baldrige National Quality Award             |
| NUM          | Nurse Unit Manager                                  |
| PACE         | Program of All-Inclusive Care for the Elderly       |
| SWA          | Social Work Abstracts                               |
| SYMLOG       | System for the Multiple Level Observation of Groups |
| TCI          | Team Climate Inventory                              |
| UK NHS       | United Kingdom's National Health Service            |
| UNSW         | University of New South Wales                       |

## DEFINITIONS

| Term                                       | Definition   | Source/s   |
|--|--|--|
| Clinical indicator                         | “A measure of the clinical management and/or outcome of care”  | Collopy (2000, p211)   |
| Full service rehabilitation service        | “A rehabilitation service under the direction of a rehabilitation medicine specialist and providing a full range of rehabilitation services”   | Graham and Cameron (2008, p393)  |
| Human Resource Management (HRM)            | “All the activities of management in respect of managing employees”  | Boxall (1992, p62)   |
| Individual characteristics of team members | Demographic or composition information of the team   | Synthesized from: Goni (1999), Leggat (2007) and Greene (2005)                               |
| Job satisfaction                           | “The degree to which a person reports satisfaction with intrinsic and extrinsic features of the job”   | Warr et al. (1979, p133)   |
| Rehabilitation                             | “A well planned, goal-oriented, time-limited process, where several professions or services cooperate in assisting individuals to use their own efforts to achieve best possible functioning and coping capabilities, to become independent and to participate in society” | Kjeken et al. (2007, p598)   |
| Structural team characteristics            | Team characteristics determined by organization or service context and constraints   | Synthesized from: Gene-Badia et al. (2008) and Temkin-Greener et al. (2004)                  |
| Team characteristics                       | Team elements determined by organizational and service constraints, demographic elements contributing towards team composition, and aspects of teamwork processes and relationships  | Synthesized from: Anderson and West (1998), Borrill et al. (2000) and Shortell et al. (2004) |
| Team functioning                           | “How well team members work together in discharging the team’s responsibilities”   | Alexander et al. (1996, p38)   |
| Team performance                           | “How effectively the team fulfills the function/s it serves”   | Healey et al. (2006, p486)   |
| Teams                                      | “Social systems of two or more people that are embedded in an organization (context), whose members perceive themselves as such and are perceived as members by others (identity), and who collaborate on a common task (teamwork)”  | Hoegl (2005, p210)   |
| Teamwork                                   | “A dynamic process involving two or more professionals with complementary backgrounds and skills, sharing common health goals and exercising concerted physical and mental effort in assessing, planning, or evaluating patient care”                                      | Xyrichis and Ream (2008, p238)   |

## **ABSTRACT**

How does Human Resource Management (HRM) contribute to healthcare organizations and their functioning? What is the relationship between HRM, teamwork and clinical performance? We know that organizations deploy Human Resources (HR) departments and initiate HRM with the express purpose of improving performance, yet little is known about their associations, especially in the healthcare setting. HRM is to some extent a ‘black box’ which needs to be understood, thereby informing organizations on how to maximize the benefits of the HR function. This thesis contributes to this deficit in knowledge, examining team characteristics, job satisfaction and clinical performance and how these relate to HRM policy and practice. Essentially, it investigates the links between aspects of HRM with teamwork and performance.

A mixed method cross sectional study was conducted focusing on full service category rehabilitation services from public hospitals in Australia. This setting was selected for investigation because of the strong teamwork orientation and the lack of research comprehensively evaluating the contribution of HRM in this specific medical field. A total of 163 participants, comprising 152 rehabilitation clinicians and 11 managerial staff from seven hospitals were enrolled. A semi-structured questionnaire was administered to clinicians to determine their individual and team characteristics. Two measures of team performance were employed, namely: self reported job satisfaction, and compliance with clinical indicators defined by the Australian Council of Healthcare Standards. Twenty four focus groups and 18 interviews were conducted with clinicians and HR managers to investigate HRM policy and practice. Quantitative input from survey and clinical indicator data were analyzed using descriptive and inferential statistics while qualitative data from focus groups and interviews were thematically analyzed.

The results show that a holistic approach to HRM is related to teamwork and facets of performance. Influenced by local context, HRM has the potential to either positively or negatively affect teamwork, job satisfaction and clinical performance. HRM’s links to teamwork and performance were found to be significantly mediated by elements of efficiency, effectiveness, change, structure, service constraints, leadership, staffing, specialization and research. The tailoring of HRM approaches to take account of local organizational circumstances could contribute positively to desirable teamwork and performance outcomes.



## ACKNOWLEDGEMENTS

The grace of God is acknowledged for: inspiring my research journey, the providence in starting and navigating the process, and for granting the perseverance to bring this thesis to fulfillment. Appreciation to my beloved family, parents Rene and Shirley Pereira and siblings Adrian and Elizabeth for their blessings and support in embarking and completing this research journey.

My sincere and heartfelt appreciation to my supervisory team. Firstly, to Dr David Greenfield whose remarkable dedication, patience and encouragement have been a constant source of support and inspiration throughout the research journey. Secondly, to Professor Jeffrey Braithwaite for setting high expectations and for generously providing practical guidance in achieving excellence. Thirdly, to Dr Geetha Ranmuthugala for her persistent and kind supervisory support, especially in relation to quantitative analysis.

I am indeed grateful to the managerial and clinical staff from the participating hospitals that willingly gave their time and input during research sessions. I thank Associate Professor Ingela Thylefors for supplying original versions of the teamwork assessment indexes that were adopted for this research. Appreciation to Professor John Øvretveit for research input and help in obtaining translations for teamwork tools used in the study. My thanks to Professor Ian Cameron for advice on rehabilitation services classifications. I thank Universiti Sains Malaysia (USM) for the scholarship that made the study possible. I'd like to mention USM staff, Professor Zainul Zainuddin, Professor Ahmad Zakaria, Tuan Haji Ramli Osman, Puan Halimatun Saadiah and Encik Rohasreyn Hashim for their support during my candidature. Associate Professor Avvari Mohan and Dr Prakash Vel are acknowledged for their assistance in reviewing my initial research proposal. My thanks to instructors from the School of Public Health and Community Medicine for courses and training undertaken: Associate Professor Glenda Lawrence, Dr Nicola Man and Dr Van Nguyen for Epidemiology and Statistics for Public Health, Ms Sally Nathan for Qualitative Research Methods, and Dr Husna Razee for data management software, Nvivo. Thank you Dr Asela Olupeliyawa for being a great study mate and friend. I thank Dr Brahmaputra Marjadi and Dr Chinthaka Balasooriya for advice rendered in approaching the research student journey. To Associate Professor Julie Johnson, my appreciation for the opportunity to facilitate in the Clinical Governance and Risk Management module, it was certainly an enriching learning experience.

To my wonderful cubicle mates: Dr Jacqueline Milne, Jennifer Plumb and Janet Long, thank you for making the research journey a delightful experience. Appreciation to my colleagues at the Australian Institute of Health Innovation for all the advice, encouragement and friendship,

especially Deborah Debono, Sue Christian-Hayes, Dr Jo Travaglia, Dr Peter Nugus, Denise Tsiros, Margaret Jackson, Kate Tynan, Dr Marjorie Pawsey, Dr Alison Short, Dr Frances Cunningham, Anne Hogden, Dr Robyn Clay-Williams, Dr Wendy Lipworth, Dr Max Moldovan, Dr Reece Hinchcliff, Dr Pooria Sarrami, Dr Janice Wiley, Mary Potter-Forbes, Judie Lancaster, Dr Virginia Mumford, Anne Sinclair, Danielle Del Pizzo, Danielle Marks, Angus Liu, Stephanie Dick, Jackie Mullins, Dr Mei-Sing Ong, Margaret Reckmann, Sarah Gaskin, Sheree Crick, Elia Vecellio, Associate Professor Andrew Georgiou, Christopher Wu, Naomi Jackson, Diane Hindmarsh, Dr Ling Li, Yu Jia Julie Li, Amina Tariq, Dr Miew-Keen Choong, Dr Annie Lau, Dr Ying Wang, Dr Elin Lehnborn, Dr Stephen Anthony, Dr Adam Dunn, Dr Farah Magrabi, Diana Arachi, Vitaliy Kim, Jingbo Liu, Dr Oscar Perez Concha, Dr Roberto Forero, Dr Lixin Ou, Associate Professor Jack Chen, Dr Stephanie Hollis, Dr Kevin Chai, Agam Misra and Stefan Haunsberger.

My thanks to bosses and colleagues at the Learning Centre, the Student Equities and Disabilities Unit, and the Australian School of Business for the opportunity and inspiration to nurture my passion for teaching. Special mention for Dr Dominic Fitzsimmons, Associate Professor Sue Starfield, Valerie Caulcutt, Gwyn Jones, Maria Zueva, Dr Linda Burnett, Pam Mort, Tracey-Lee Downey, Mary Pianka, Helen Farrell, Dr Jamie Roberts, Bronwen Phillips, Rebecca Gray, Dr Anna Doukakis, Dr Michelle Jamieson, Dr Florence Chiew, Dr Francesca Mataraga, Robert Hartig-Prym, Sowbhagya Somanadhan, Lorraine Burdett, Anisha Gautam, Patricia Morgan, Myf Hudson, Wilfred Brandt, Isobelle Barrett-Meyering, Ehsan Azizi, Jacinta Kelly, Ash Barnwell, Hannah Brunson, Emilie Auton, Laurie Alsop, Geoff Maddox, Dr Nancy Kohn, Dr Hugh Bainbridge, Dr Bernard Gan, Dr Janis Wardrop, David Cheng and Dr Dhammika Abeysinghe.

Special thanks to Dr Jaya Reddy and Mary Vaz for facilitating my transition to life in Sydney. My appreciation to friends from Our Lady of the Sacred Heart Church, Randwick and through the university chaplaincy for all the prayers and moral support. They are: Fr Peter Hearn, Fr Tony O'Brien, Fr Tony Bolt, Fr Joshua Gopini, Fr Peter Hendriks, Fr Doug Smith, Fr Prasad Rao, Rocco Vigliante, Theresa Bowen, Kenji, Daichi, Sayako and Nobuko Konda, Ronny De Cruz, Joy Yip Chan, Dr Kristine Lim, Claudette Ashburner, Sr Nancy Fitzgerald, Sr Kath Ragg, Sr Philomene Tiernan, Pauline Roberts, Heather Hardy, Tricia Rowan, Joseph Chin, Carla Betalleluz, Sarah Beer, Caroline Simons, Cheryl Fernandez, Nicola Connors, Angela Teklic, Victor and Maria Kulundzic, Robert and Dr Justyna Kulik, Matthew and Sareta Lobo, Joseph and Mignonne, Dr Sulyni Tan, Christy Imam, Andria and Ariel Anwarisanto, Rita Ng, Felix Yohendi, Liz Clark, Cathy Hodgins, Brett Adamson, Mary Wang, Eliza Chen, Felicia Partadinata, Gregorius Owen, Katie Wu, Millie Liew, Dr Deborah Pike, Denise Barsoum, Br Krish Mathavan, Br Sandy Abbey, Br Tru Nguyen, Br

Kimi Vunivesilevu, Graham Upton, Corazon Caro, Greg Moyo, Sergio and Charity Zambrano, Francesco Varas, Juan Carlos, Nicola Bugin, Armando Ortega, Bart Mangioni, Dr Raed Raffoul, Joseph Budwee, Bernadette Sutanto, Marlina Prasetia, Dr Irene Bomba, Charmaine Gilden, Kirsty Gallon, Nada and Bianca Vucetic, Gai and Dr Michael Brydon, Tony and Randy Amidharmo, Caresa Santos, Maggie Rodrigues, Teresa Liu, Maria Chan, Maria Trinca, Tom Stanley, Benny Coyco, Cynthia Dewi, Juniarti Taufiq, Jo Smith, Tamara Ng, Janet Alexander, Dana G, Natalie and Joanne Dambiec, Carole Gan, Min Kong, Vivilia Widjaja, Yennie Fajar, Alyssa Natawardaya, Daniel Hill, Ana Palacio, Cecilia Figueroa, Patricia Yaji, Eileen Leyne, Tony Mattar, Sr Mary Sarah Galbraith, Christian Stephens, Adriel Moniz, Faustina Wong, Dr Shalini Nadaswaran, Germae Phua, Basil Woo, Samuel Liao, Paul Streater, Grace Ukich, Will Kerr, Li May, Dr Michelle Dunbar, Dr Chigozie Ezegebe, Fr Lam Vu, Fr Robert Stewart, Fr Luan Le, Fr Emmanuel Seo, Fr Peter Kwak, Fr Gesner Felix, Fr John Ssemaganda, Fr Matthew Solomon, Diana Hill, Richard and David Sofatzis, Roberto Keryakos, Ronnie Maree, Adela Ezcurra and Patrick Nguyen.

Thanks as well to my dance instructors, Derek and Betina Ocias, Beatrice Goh and Ian Hunter for the weekly recreation. Thanks to dance mates, Pann Pann Chung, Alice Ocias, Viya Huang, Sophie Xi Chen, Melanie Hou, Dr Adrian Low, Ci Ooi, Dr Lucky Joeng, Krishna Dermawan, Ricky Hui, Anita Xu, Kate Jiang, Nellia Ng, Oscar Lee and Ronda Lau, Francesca Zhang, Tina Gao, Amy Moreland, Silvana Collings, Luke Coffee, Julie Traino, Sunny Stenback, Dr Monica Ling and Westa Domanova for making the lessons enjoyable. Appreciation to my Malaysian friends in Sydney for the occasional outings and chats: Zaki Yahaya, Dr Nasarudin Rahman, Dr Ng Theam Foo, Dr Wang Shir Li, Aniek and Muzani, Jun Jabar, Dr Steven Lim and Dr Grace Teoh. I thank Robert Dillon for his kindness and understanding as my housemate at 71 Botany Street, Randwick.

To my former work colleague, Ms Saras Subra and former bosses Mrs Haema Sukumaran and Dr Chew Tek Ann, thank you for believing in my abilities. I am indebted to the late Professor Faridah Abdullah for her instruction during my undergraduate honours year. I'm grateful to Professor Ali Khatibi for his research supervision during my initial postgraduate studies. I thank Dr Kenny Teoh for his academic mentoring and guidance over the years. Last but not least, my thanks to my friends in Malaysia for their support and encouragement, especially Br Robert and Sr Monica Yoong, Mrs Saras Mahadevan, Fr Christopher Wee, Dr Mary Huang, Teo Shy Horng, Jean Lopez, Dr Leslie and Jennifer Than, Sabrina Empira, Caroline Peter Dabi, Vicky Vadiveloo, John Tasan, Veerappan Periakaruppan, Ng May Ching, Dr Michael Ng, Alvin Lee, Grace Wang Wan Chew, Nur Rahizan Ilaha, Ng Chien Fui, Fr William Michael, Fr George Harrison, Fr Julian Leow and all well wishers from Holy Family Church, Kajang and St Anne's Chapel, Serdang.

## PEER REVIEWED PAPERS ARISING FROM THE RESEARCH

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2012) *Healthcare teams and clinical performance in rehabilitation services*. The 8th International Organisational Behaviour in Healthcare Conference, Trinity College Dublin, Dublin, Ireland, April 15–18.

**Pereira D**, Greenfield D, Braithwaite J. (2010) *Can Human Resource Management influence team characteristics for healthcare performance in rehabilitation teams?* The Fourth International Doctoral Theses Conference, IBS, Hyderabad, India, September 24-25.

## PEER REVIEWED PUBLISHED ABSTRACTS ARISING FROM THE RESEARCH

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2012) *Improving healthcare quality through human resource management's association with team functioning and performance: a blueprint for the future*. International Society for Quality in Healthcare's (ISQua) 29<sup>th</sup> International Conference 'Advancing quality and safety for all; now and into the future', Geneva, Switzerland, October 21-24.

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2012) *Igniting job satisfaction in healthcare through Human Resource Management: a strategy to improve healthcare outcomes*. 10<sup>th</sup> Australasian Conference on Safety and Quality in Health Care 'Hot Topics from the Tropics', Cairns Convention Centre, Queensland, September, September 3-5.

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2011) *An evaluation of team characteristics, performance and Human Resource Management for rehabilitation services*. 7<sup>th</sup> Health Services and Policy Research Conference 'Opportunities for health services research: to inform, improve, and inspire', Adelaide, December 5-7.

**Pereira D**, Greenfield D, Braithwaite J. (2011) *Enhancing health service quality through improved Human Resource Management*. International Society for Quality in Healthcare's (ISQua) 28<sup>th</sup> International Conference 'Patient Safety: Sustaining the global momentum using e-health, health technology, education, research and policy', Hong Kong, China, September 14-17.

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2011) *Team characteristics, performance and human resource management: How are they associated in rehabilitation services?* School of Public Health and Community Medicine (SPHCM) 2011 Annual Research Symposium 'Advances in Public Health and Health Services Research at UNSW', Sydney, August 5.

**Pereira D**, Greenfield D, Braithwaite J. (2010) *Human Resource Management in healthcare organizations: Is there an alignment of perspectives between strategic and clinical levels?* School of Public Health and Community Medicine (SPHCM) 8<sup>th</sup> Annual Research Student Conference, University of New South Wales (UNSW), Sydney, October 22.

*Continued*

**Pereira D**, Greenfield D, Braithwaite J. (2010) *Healthcare human resource management: Different perceptions of policy and practice*. 5<sup>th</sup> Annual Emerging Health Policy Research Conference, The Menzies Centre for Health Policy, University of Sydney, Sydney, August 11.

**Pereira D**, Greenfield D, Braithwaite J. (2009) *The association between team characteristics, performance and Human Resource Management (HRM) in rehabilitation teams*. School of Public Health and Community Medicine (SPHCM) 7<sup>th</sup> Annual Research Student Conference, University of New South Wales (UNSW), Sydney, November 23.

## **PEER REVIEWED ABSTRACTS ARISING FROM THE RESEARCH**

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2013) *The role and potential of Human Resources departments in healthcare organizations*. International Society for Quality in Healthcare's (ISQua) 30<sup>th</sup> International Conference 'Quality and Safety in Population Health and Healthcare', Edinburgh, United Kingdom, October 13-16.

\*Abstract accepted for presentation.

**Pereira D**, Greenfield D, Ranmuthugala G, Braithwaite J. (2012) *Inspiring performance in healthcare through Human Resource Management*. Australian College of Health Service Management (ACHSM) 2012 International Annual Congress 'Inspiring Concepts in Health Management - Surfing the Crest of the Wave', Marriott Surfers Paradise Resort & Spa, Gold Coast, Queensland, August 15-17.

**Pereira D**, Greenfield D, Braithwaite J. (2009) *The association between team characteristics, performance and Human Resource Management (HRM) in rehabilitation teams*. Society of Health Administration Programs in Education (SHAPE) Symposium 2009, Adelaide, July 8-10.

\*Winner of 2009 Dr Mary Harris Student Bursary Award.

## **Chapter 1: Introduction**

### **1.1 Introduction**

How does Human Resource Management (HRM) contribute to healthcare organizations and their functioning? What is the relationship between HRM, teamwork and clinical performance? We know that organizations deploy Human Resources (HR) departments and initiate HRM with the express purpose of improving performance, yet little is known about their associations, especially in the healthcare setting. HRM is to some extent a 'black box' which needs to be understood, thereby informing organizations on how to maximize the benefits of the HR function. This thesis contributes to this deficit in knowledge, examining team characteristics, job satisfaction and clinical performance and how these relate to HRM policy and practice. Essentially, it investigates the links between aspects of HRM with teamwork and performance.

The study is established on the premises that team characteristics influence performance, and HRM affects performance through influence on team characteristics and without team characteristics as an intermediary. The research adopts a quantitative approach to evaluate the association between team characteristics and performance, while a qualitative approach is utilized in determining HRM policy and practice. The mixed methods design was chosen to triangulate findings and promote both rigour and depth in the findings. Combining quantitative and qualitative findings contributed towards ascertaining HRM's influence on team characteristics and performance. The research overview presented in this introductory chapter covers: 1.2 Scope of the study; 1.3 Rationale for the study; 1.4 Significance of the study; 1.5 The study aims and research questions; 1.6 Methodology; and 1.7 Structure of the thesis. I begin with the scope of the study which puts forward, defines and links the selected research constructs.

## 1.2 Scope of the study

Teams have been defined as “social systems of two or more people that are embedded in an organization (context), whose members perceive themselves as such and are perceived as members by others (identity), and who collaborate on a common task (teamwork)” (Hoegl, 2005, p210). It is common to use teams to deliver healthcare (Eve, 2004, Gene-Badia et al., 2008, Mickan and Rodger, 2005), hence making teamwork a process synonymous with the execution of healthcare services. While the definition of teams provides an indication of membership and purpose, it is also important to differentiate the term from teamwork which considers how team members work together (Grumbach and Bodenheimer, 2004). Teamwork in the context of healthcare can be defined as “a dynamic process involving two or more professionals with complementary backgrounds and skills, sharing common health goals and exercising concerted physical and mental effort in assessing, planning, or evaluating patient care” (Xyrichis and Ream, 2008, p238). Some of the other terms which are associated with teams in healthcare are “collaboration” (Larson, 1999, Zwarenstein and Bryant, 2000) and “working together” (Baggs and Schmitt, 1997). Being able to describe a team is the first step to answering which types of multidisciplinary teams are most effective in different settings (Øvretveit, 1996).

With teams being this study’s unit of analysis, teams are evaluated using a comprehensive characteristics approach. Team characteristics in this study is holistically defined as team elements determined by organizational and service constraints, demographic elements contributing towards team composition, and aspects of teamwork processes and relationships (Anderson and West, 1996, Borrill et al., 2000, Shortell et al., 2004). *Team characteristics* in this study are divided into three categories, namely: *structural team characteristics* (e.g., size and indication of team age/experience); *individual characteristics of team members* (e.g., the nature of the people comprising the team and their clinical experience); and *team functioning characteristics* (e.g., teamworking relationships and how the team performs). The categories and their respective variables were defined based on their relevance and frequency in healthcare team research literature.

Structural team characteristics are assumed to be team characteristics determined by organization or service context and constraints (Gene-Badia et al., 2008, Temkin-Greener et

al., 2004). In this study structural team characteristics cover team size and team tenure. Size provides a view of clinical staff numbers within a team, while team tenure reflects the length of time a team has been together. Individual characteristics of team members pertain to demographic or composition information of the team (Leggat, 2007, Goni, 1999). Individual characteristics of team members evaluated in this study are gender, age, profession, country of professional training, professional healthcare experience, rehabilitation team experience and current rehabilitation team experience.

Team functioning has been defined as “how well team members work together in discharging the team’s responsibilities” (Alexander et al., 1996, p38). Team functioning characteristics for the study reflect various aspects of processes and interaction among team members. This study evaluates three groups of team functioning characteristics, namely integration, efficiency, and climate. Team integration will be assessed on a continuum which assigns a team type categorization. The team categorization of multiprofessional, interprofessional and transprofessional reflect low, medium and high levels of integration among team members (Thylefors et al., 2005). The assessment of team efficiency will review team members’ attitudes towards goal achievement and evaluation of team climate focuses on social and task aspects of teamwork. Indexes developed by Thylefors et al. (2005) were adopted for the evaluation of team functioning and are elaborated further in the methods chapter. Teams are often symbolized as complex open systems which utilize resources, communicate within the membership and produce outcomes (Mickan and Rodger, 2005). Being open systems, teams are subject to both internal and external influences. The study aims to correlate the three defined categories of team characteristics with performance outcomes and HRM which is an external influence on the team’s open system.

Teams are a form of organizational design putatively useful for improving healthcare performance (Goni, 1999), however evidence as to which team type functions best is unclear (Long et al., 2003). A contingency or situational approach is suggested with respect to the choice of team organization (Thylefors et al., 2000). In this study, services or departments are considered as the team unit under examination. This is consistent with other studies in the healthcare field (Morey et al., 2002, Herrman et al., 2002, Wheelan et



al., 2003). Rehabilitation services, also called rehabilitation departments, are structured and classified as multidisciplinary teams (Wade and de Jong, 2000, Long et al., 2003, Strasser et al., 2008). This study focuses on Australian rehabilitation services categorized as full service inpatient providers in ascertaining team characteristics which may translate to performance variations. Rehabilitation services have been classified as unsupervised allied health service, supervised allied health service, specialist service and full service (Graham and Cameron, 2008). The research focuses on rehabilitation services categorized as full service. These offer the greatest professional diversity, size and range of care compared to the three other types of rehabilitation services (Graham and Cameron, 2008). For simplicity, in this thesis they are referred to as rehabilitation services. Rehabilitation has been comprehensively defined as:

“a well planned, goal-oriented, time-limited process, where several professions or services cooperate in assisting individuals to use their own efforts to achieve best possible functioning and coping capabilities, to become independent and to participate in society” (Kjeken et al., 2007, p598).

Rehabilitation services aim to optimize the activity and participation of patients with restrictions due to both acute and chronic conditions (Graham et al., 2008). As the selected rehabilitation category type provides a full range of rehabilitation services (Graham and Cameron, 2008), it allows the evaluation of rehabilitation teams with the highest professional diversity. The other rehabilitation services categories are either focused services or services not directly led by a medical rehabilitation specialist (Graham and Cameron, 2008). The decision to focus on rehabilitation services was determined by the strong teamwork emphasis given to this medical field (Gibbon et al., 2002, Mullins et al., 1994, Nelson et al., 2008, Strasser et al., 2008, Shaw et al., 2008). Integrated team approaches have been considered the standard form of rehabilitation treatment for over five decades (Mullins et al., 1999) and today, rehabilitation professionals generally agree that team care is the most apt way to treat the broad array of biopsychosocial needs of patients with chronic disabling conditions (Smits et al., 2003). Due to restrictions and constraints of privately funded healthcare organizations in approving data collection, rehabilitation services in public hospitals were selected to ensure ease of research access. Participating

hospitals included both public and private owned organizations, but all seven hospitals were classified in this study as public hospitals due to their public funding and provision of public healthcare services.

Healthcare performance measurement techniques continue to evolve (Booth, 2006). Few doubt that the focus on measurement has advanced the quality of patient care (Spath, 2007). Team performance can be defined as “how effectively the team fulfills the function/s it serves” (Healey et al., 2006, p486). Team performance in this research is measured using rehabilitation medicine clinical indicators, collected by the Australasian Rehabilitation Outcomes Centre (AROC), and the overall job satisfaction scale by Warr et al. (1979).

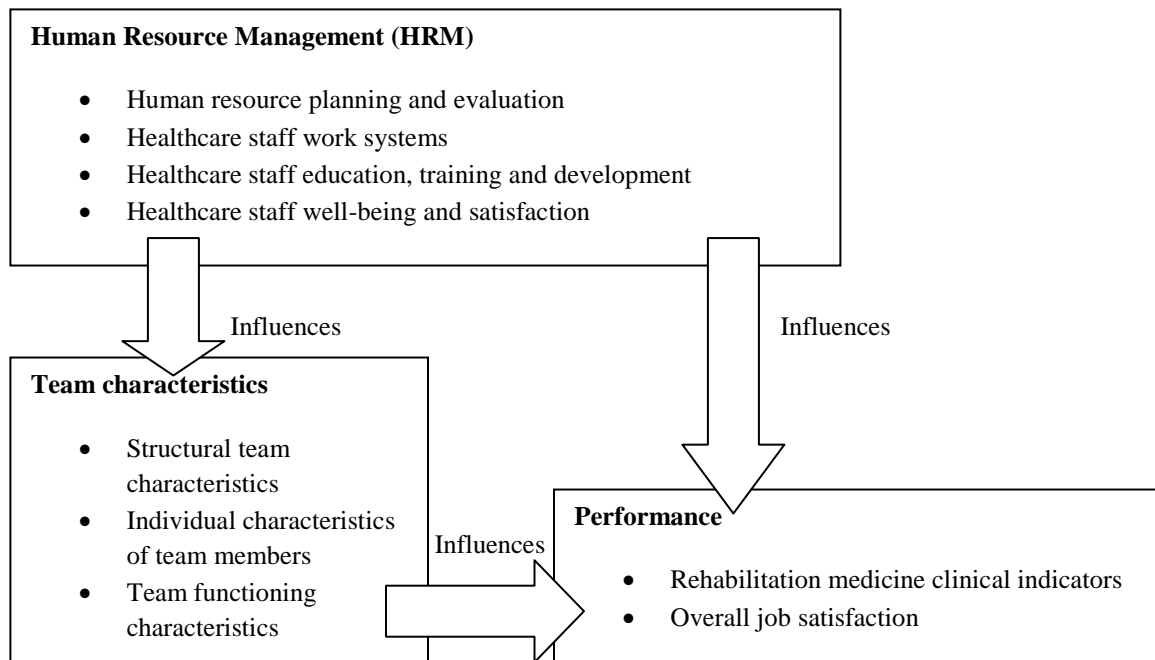
A clinical indicator is “a measure of the clinical management and/or outcome of care” (Collopy, 2000, p211). Indicators in healthcare have been described as “quantitative measures that can be used to monitor and evaluate the quality of important governance, management, clinical and support functions that affect patient outcomes” (Mainz et al., 2009, p501). The availability of rehabilitation medicine clinical indicators and their accessibility make them an ideal choice for measuring performance outcomes in rehabilitation teams. As a concerted effort from multiple disciplines is required for the delivery of rehabilitation services (Mullins et al., 1994), rehabilitation medicine clinical indicators are uniquely a reflection of outcomes that result from a team effort. This contrasts with clinical indicators from other medical fields which might slant towards reflecting the performance of an individual team member or a particular profession, or hospital wide clinical indicators which reflect performance of the health organization as a whole. Indicators for this study can be categorized as process and outcome indicators. Four indicators address the process of patient care, while two indicators address the outcomes of patient care. Job satisfaction used as a self-reported performance measure for the study, has been defined as “the degree to which a person reports satisfaction with intrinsic and extrinsic features of the job” (Warr et al., 1979, p133). Job satisfaction is not only seen as connected to teamwork (Moore et al., 2006, Baggs and Schmitt, 1997, Goni, 1999, Robertson and Finlay, 2007) but also a key measure of HRM efforts (West et al., 2006, Boselie et al., 2005, Purcell et al., 2003). The overall job satisfaction scale (Warr et al., 1979) is a comprehensive tool that evaluates job satisfaction based on 15 facets (Lu et al.,

2007). The scale has good psychometric properties, has been used in healthcare contexts worldwide (e.g., Proudfoot et al., 2007, Morrison, 2008, Rout, 1999, Cooper et al., 1989), and it may be freely used as well as tailored according to context (Warr et al., 1979).

HRM broadly refers to the management of people within the organization (Hyde et al., 2006). HRM can be broadly defined as “all the activities of management in respect of managing employees” (Boxall, 1992, p62). HRM covers management practices such as recruitment, selection, induction, training, appraisal and the design and application of reward systems which aim to enhance organizational performance by improving the performance of individuals within the organization (Michie and West, 2004). As the organization within which a healthcare team functions can influence team effectiveness in a variety of ways (Borrill et al., 2000), the HRM dimension of this research aids in evaluating managerial influence on healthcare teams. The HRM field in this research is covered using four areas: HR planning and evaluation; healthcare staff work systems; healthcare staff education, training and development; and healthcare staff well-being and satisfaction. The HRM area, healthcare staff well-being and satisfaction covers managerial efforts promoting, for example, the provision of performance incentives and the creation of development opportunities. The HRM area therefore differs from overall job satisfaction used as a performance measure in this study. As detailed above, overall job satisfaction serves as an output measure for the input constructs of HRM and team characteristics.

Having outlined the core constructs in the thesis, Figure 1.1 puts this together and provides an overview of study elements and investigated pathways of influence. The study’s theoretical framework emerges from the review of relevant literature and is discussed in more detail in the next chapter. The connection between specific variables and their role in the defined framework is subsequently presented in the methodology chapter’s articulation of specific study elements (Section 3.3). Briefly, the figure synthesized from the literature, suggests that HRM influences team characteristics and performance, and team characteristics influence performance. The purpose of this study is to examine these relationships. This research undertakes this endeavour by exploring associations rather than causality. After the overview diagram, we move on to the pertinence of the research constructs applied to healthcare.

**Figure 1.1:** Variables adopted for study's theoretical framework



### 1.3 Rationale for the study

By explaining the relevance of the selected research constructs, I aim to highlight the practicality of this study. Teamwork is widely regarded as an important component of effective healthcare (Stoller et al., 2004, Brown and Richardson, 2006, Barrere and Ellis, 2002, Zwarenstein and Bryant, 2000, Mickan and Rodger, 2005). Benefits of effective team functioning in healthcare include improving patient care, staff well-being and controlling costs (Baggs and Schmitt, 1997), job satisfaction (Moore et al., 2006) and overcoming the difficulties and stresses of the job (Robertson and Finlay, 2007). While multidisciplinary teams are a crucial component in the delivery of healthcare (Atwal and Caldwell, 2005), it is acknowledged that interactions in healthcare teams can also be detrimental to team outcomes (Zwarenstein and Bryant, 2000). Consequences of poor healthcare team functioning include unhealthy work environments and poor patient outcomes (Larson, 1999), poor staff morale, loss of learning opportunities, a tendency for staff to work as a group of individuals rather than a team and reduced job satisfaction (Aston et al., 2005). We can see that a healthcare team may or may not produce desirable outcomes and can

have negative consequences. This study is positioned to explore how team processes and outcomes vary among teams using rehabilitation services as the exemplar.

The unique role of rehabilitation in healthcare can be observed in its goal of returning physical functioning to individuals in a way reflective of their pre-impairment ways of life (Warren and Manderson, 2008). We can see that the rehabilitation niche exists as people with complex disabilities are best managed by an interdisciplinary group of professionals with complementary skills to address the biopsychosocial determinants of functions (Strasser et al., 2008). Rehabilitation services are required for stroke survivors (Becker and Kaufman, 1995), fractures (Bunting and Shea, 2001, Randell et al., 1995), pain management (Watson et al., 2004), brain injury (Duckett, 1996), spinal injury (Snyder et al., 2006), amputations (Warren and Manderson, 2008) and cardiac conditions (Sarrafzadegan et al., 2008). The provision of rehabilitation services complements other medical disciplines such as neurology (England et al., 2009), cardiology (Genardini et al., 2008), paediatrics (Saleh et al., 2008) and orthopaedics (Kulig and Burnfield, 2008).

Rehabilitation focuses on improving patient quality of life (Bertelsen et al., 2009, Boiko et al., 2008, Kuptniratsaikul et al., 2009, Borglund, 2008). This can be observed in a number of studies. For stroke patients, once the acute phase is over, physicians usually prescribe rehabilitation in order to maximize their patients' return of function and enable them to learn modes of substitution for functional loss (Becker and Kaufman, 1995). Stroke survivors referred to multidisciplinary inpatient rehabilitation programs attain better outcomes compared to the care provided on general medical wards (Barreca and Wilkins, 2008). Following lower limb amputation, rehabilitation is deemed essential to improve the amputee's quality of life (Kelly and Dowling, 2008). Rehabilitation of spinal cord injury patients aims to help them achieve a satisfactory quality of life (Sand et al., 2006). A standard cardiac rehabilitation program is held to be effective in improving functional capacity, health-related quality of life and reduces hospital readmission for patients with congestive heart failure (Chan et al., 2008).

Outcome assessments are important to verify the extent to which predetermined rehabilitation team goals are reached (Smits et al., 1997). This is why this study evaluates performance outcomes using rehabilitation medicine clinical indicators and overall job

satisfaction. Clinical indicators are usually developed for areas of clinical importance. Where data is available within the healthcare organization, the indicator should be acceptable to the providers whose practice was to be assessed and any quantitative measure established should be achievable (Collopy, 2000). Given the stringent criteria used in the development of clinical indicators, rehabilitation medicine clinical indicators should be valid and reliable measures to provide evidence of the efficacy of care received by rehabilitation patients.

The use of job satisfaction as the second performance measure relates to the sustainability and continuity in the level of care given by team members. High clinician job satisfaction can mitigate against the consequences of work pressures (Visser et al., 2003) and contribute towards professional commitment (Lu et al., 2002). Lack of job satisfaction among healthcare workers has been linked to absenteeism (Siu, 2002), burnout (Visser et al., 2003), turnover (Lu et al., 2002) and intention to leave (Estryn-Behar et al., 2007). An interface between job satisfaction and healthcare HR issues supports these findings. In a healthcare study by Janus et al. (2008), job satisfaction was linked to participation in decision making, opportunities for continuing education, job security, extent of administrative work, collegial relationships, access to specialized technology, financial incentives, interaction with colleagues and cooperative working relationships with colleagues and management. Aspects of job satisfaction such as job security, opportunities for continuing education and financial incentives, though beyond the direct influence of team working, are important in the delivery of healthcare. The delivery of healthcare relies upon the human capacity and capabilities of healthcare organizations to train, develop, deploy, manage and engage their workforce effectively (Hyde et al., 2006). Leading organizations have seen that devoting proper attention to HR issues is often followed by high productivity and better competitiveness (Zairi, 1998). This study's inclusion of a HRM facet thus enables an evaluation of the relationship between team characteristics, performance and the managerial function charged with HR issues.

HRM is synonymous with the formal strategies developed by organizations for people management and their alignment to broader organizational strategies (Michie and West, 2004). It has been proposed that HR policies and practices are likely to influence patient

care quality by affecting both technical and interpersonal aspects of quality care (West et al., 2006). An analysis of Australian, British and American rehabilitation service standards revealed that HRM is considered relevant to a general rehabilitation service (Graham et al., 2008). In a study on improving health through HRM, it has been argued that unless people management issues are taken fully into account, national initiatives are likely to be less effective in supporting the delivery of local services (Hyde et al., 2006).

The challenge in researching HRM in the health sector is to draw on non-clinical research methods to assess the HRM 'inputs' whilst attempting to identify appropriate and sector-specific measures of process, output or outcome (Buchan, 2004). This research meets the challenge using a qualitative evaluation of HRM inputs, a quantitative evaluation of team characteristics and has both a sector specific and a general measure of performance. The next section elaborates how the study contributes to the body of knowledge.

#### **1.4 Significance of the study**

From previous healthcare studies (Shortell et al., 2004, Borrill et al., 2000, Gene-Badia et al., 2008, Goni, 1999, Proudfoot et al., 2007), we know that different variables of team characteristics influence one another and influence different elements of performance depending on context and setting. There are many types of healthcare teams, each with different membership and different ways of matching a person's needs to team practitioner's skills and abilities (Øvretveit, 1996). Since a contingency or situational approach is advocated for the organization of teams (Thylefors et al., 2000), the study focuses on a specific field of medicine in exploring team characteristics. Team functioning characteristics have been linked to performance in rehabilitation services (Strasser et al., 2005). Database searches however, reveal a lack of research that comprehensively evaluates team characteristics in Australian rehabilitation services. Thus the study contributes to the healthcare literature by analyzing the relationship between team characteristics and performance in Australian rehabilitation services categorized as full service inpatient providers from public hospitals.

This research provides a comprehensive quantitative evaluation of three categories of team characteristics. Structural team characteristics, individual characteristics of team members and team functioning are taken into account. Thylefors et al.'s (2005) indexes are used to ascertain team functioning characteristics. Thylefors et al.'s (2005) team type index, perceived efficiency index and team climate index give a broad coverage of team functioning elements highlighted in literature on healthcare teams. As far as it can be ascertained, the selected indexes of Swedish origin have not been correlated with overall job satisfaction and rehabilitation medicine clinical indicators in an Australian context.

The inclusion of HRM in this study adds significance as studies on HRM in the healthcare sector make up only two percent of HRM performance studies worldwide (Hyde et al., 2006). Given the importance of managing people in healthcare (Michie and West, 2004) and HRM's ability to impact on performance in other sectors (Purcell et al., 2003), the lack of research attention towards HRM in healthcare is surprising. However, it could be explained by healthcare's unique organizational context and sector specific measurement of performance (Buchan, 2004). Since this research focuses on public rehabilitation services which facilitates access to rehabilitation medicine clinical indicators, this presented an ideal scenario for assessing HRM's link with performance in healthcare using team characteristics.

Studies have shown HRM to have a role in encouraging teamwork in healthcare (West et al., 2006, West et al., 2002). However, the association between HRM and team characteristics has rarely been researched in the healthcare sector or specifically in rehabilitation services. Importance should be given to understanding how HRM practices motivate employees to adopt desired attitudes and behaviours that in the collective can help enhance organizational performance (Harris et al., 2007). The study aids in closing the gap in defining and assessing the role currently played by HRM in influencing a comprehensive range of team characteristics. Findings and conclusions of this study offer feedback in justifying and prioritizing managerial attention towards specific team characteristics to obtain desired levels of performance for rehabilitation services.

The study design which strives to link HRM policy and practice with good or poor teamwork and positive or negative performance outcomes enables a 'best fit' perspective of



HRM (De Leede and Looise, 2005) in the context of rehabilitation services from public hospitals. The study therefore differs from an evaluation of HRM 'best practice'. A 'best practice' approach to HRM prescribes standardized strategies for the management of staff which are deemed to promote high performance (Arthur, 1994, Macduffie, 1995). However, the adoption of standardized HR practices across healthcare organizations may not be suitable or relevant in matching contextual requirements, constraints and needs of stakeholders (Stanton et al., 2004). A 'best fit' approach to HRM advocates for HR strategy to be integrated with its organizational or environmental context to ensure effectiveness (Khilji and Wang, 2006). Approaching the management of staff from a 'best fit' contingency perspective (Hughes, 2002) is in line with the view that HRM is not a universal and perfect system which can be applied equally to every organization and changing environment (De Prins and Henderickx, 2007). Findings from this study contribute towards the 'best fit' niche of healthcare HRM by informing on the contextual influencers and efficacy of different HRM approaches for rehabilitation services.

A qualitative assessment was adopted in ascertaining whether HRM plays or could play a direct role in influencing team characteristics. The method of administering questionnaires to HR directors or managers in previous studies (West et al., 2006, West et al., 2002) has been criticized for not obtaining worker feedback on HRM (Harris et al., 2007). Thus, this research not only interviews HR directors and managers but also conducts focus group and interview sessions with team members of the rehabilitation services. This approach adds methodological depth and complements the quantitative approach used to evaluate team characteristics and gathers valuable feedback data. Thus the research attempts to contribute an explanation on HRM's link to performance in healthcare which is still considered a 'black box' (Purcell et al., 2003). The situation discussed so far leads to the articulation of the specific aims and research questions of the study.

### **1.5 The study aims and research questions**

The study attempts to achieve the following aims in the context of rehabilitation services:

- (a) To examine the relationship between team characteristics and performance; and

- (b) To investigate HRM's influence on performance, both through and without team characteristics as an intermediary.

The following questions are to be answered in achieving the study aims:

- (i) What is the association between team characteristics and performance in the Australian rehabilitation context?
- (ii) To what extent does HRM influence team characteristics and performance in the study context?
- (iii) Can any HRM influence on team characteristics that are connected with performance explain the link between HRM and performance?
- (iv) How and in what ways does HRM influence rehabilitation service performance without team characteristics as an intermediary?

## **1.6 Methodology**

This research study uses a mixed methods approach as an overarching design. Four methods are used: a questionnaire survey; individual and focus group interviews; document analysis; and secondary database analysis. The evaluation of team characteristics and overall job satisfaction was combined in a survey questionnaire administered to clinical staff. Interviews and focus groups with managerial and clinical staff using a semi-structured format were carried out in examining HRM policy and practices. Documentary analysis of administrative records was undertaken for contextual hospital and service information and structural team characteristics data. Secondary database analysis of rehabilitation medicine clinical indicators data enabled assessment of clinical performance.

The adopted cross-sectional approach qualifies associations rather than causality between this study's constructs and variables (Mann, 2003). Demonstrating causality among research variables requires a longitudinal approach (Marquis et al., 1983), which was beyond the scope of this doctoral study. The cross-sectional approach was suitable in supporting the study aims and answering the research questions. Standardizing the sampling frame enabled structural similarity and comparability of the participating rehabilitation services, therefore reducing confounding elements.

In this study, quantitative and qualitative methods complemented each other. Significant and unique findings from the quantitative and qualitative approaches were integrated in line with the study's theoretical framework. It is recognized that quantitative and qualitative approaches represent different paradigms (Sale et al., 2002), and some scholars advocate for either quantitative or qualitative methods as the definitive research approach (Morgan, 1998). While mixed methods findings could be open to differing interpretations and alternative subjectivity (Freshwater, 2007), the adopted approach offers benefits not attainable if only a quantitative or qualitative paradigm was utilized. The use of mixed methods in this study provides a more complete analysis (Creswell et al., 2004), obtains a broader picture of a phenomenon (O'Cathain et al., 2007) and offers a justifiable third pragmatic paradigm (Johnson et al., 2007).

### **1.7 Structure of the thesis**

This thesis is presented in six chapters. The present chapter, Chapter 1, provides an introductory overview of the research. Literature relevant to the research is reviewed in Chapter 2. Chapter 3 describes the methodology by which the research is conducted. Chapters 4 and 5 present the research findings. Chapter 4 covers findings that result from evaluating team characteristics and performance. HRM findings of the study are presented in Chapter 5. Chapter 6 assesses the findings in context, provides an extended discussion, and teases out the implications of the findings.

### **1.8 Conclusion**

This introduction chapter has described the scope of the research, elaborated on the importance of the selected research constructs, explained the significance of the research, presented the specific research aims, briefly explained the research methodology and laid out the flow of the thesis. The next chapter provides a review of literature relevant to the research aims and questions.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter reviews relevant literature pertinent to the study. The literature review provides a research foundation from which the study's theoretical framework is drawn and methodology is shaped. The literature review chapter covers: 2.2 Overview of HRM literature; 2.3 HRM and organizational performance; 2.4 Teamwork; 2.5 Theoretical framework; 2.6 Healthcare literature review process; 2.7 Team characteristics in healthcare; 2.8 Assessing healthcare team performance; 2.9 HRM in healthcare; and 2.10 Rehabilitation services.

### **2.2 Overview of HRM literature**

The field of HRM is acknowledged to have grown out of and to have largely replaced the older domain of personnel management (Lundy, 1994, Strauss, 2001, Boxall, 1992, Steyaert and Janssens, 1999, Huselid et al., 1997, Budhwar and Sparrow, 1997, Kerfoot and Knights, 1992). Personnel management, with its roots in scientific management (Guest, 1990, Kaufman, 2000, Townley, 1993, Gronroos, 1994, Deci, 1972, Abrahamson, 1997), was primarily associated with employee compliance and control (Guest, 1991). The application of scientific principles to rationalize personnel practices in production processes resulted in technical mechanisms to improve efficiency and standardization such as time and motion studies, job analyses, codification of job requirements, job descriptions and job training (Baron et al., 1986). Personnel management's foundations in modern bureaucratic work control (Baron et al., 1988, Abernethy and Brownell, 1997, Storey, 1985, Hood, 1991, Armstrong, 1985) resulted in an emphasis on elements of formality (Hodgson, 2004) and systematization (Storey, 1993). The elements of formality include impersonal discipline, rational expertness, clearly defined patterns of activity and acknowledged status that are identifiable in civil service, military and large organizational structures (Saxberg and Slocum, 1968). Systematization focuses on the meticulous documentation of production costs, labour and inventory controls, and the assignment of overhead expenses,

especially in the factory environment (Nelson, 1974). Personnel management approaches may be applicable from a transaction cost economics perspective where costs associated with managing employees are through market arrangements (Lepak and Snell, 1999).

As personnel management attempted to reduce labour to the status of exchangeable units (Townley, 1995), the approach is not appropriate in leveraging the potential of professional employees with unique skills (Saxberg and Slocum, 1968, Harrisonl, 1994, Scheid-Cook, 1990). This hallmarks of professional groups, amongst others, are relative levels of autonomy (Engel, 1970, Keenan, 1999) and independent decision making (Greenhalgh et al., 2004). When employee skills are used in team based processes or unique operational procedures that involve idiosyncratic, personalized knowledge, such skills are not likely to be found in the open labour market (Lepak and Snell, 1999). The personnel management approach of regarding employees as commodities therefore becomes outmoded in a knowledge driven, professionalized society (Adler, 2001). A further weakness of personnel management is traceable to its neglect of human behaviour (Dunnette and Bass, 1963). Nevertheless the principles and shortcomings of personnel management, once increasingly realized, paved the way for a more strategic approach to staff management (Boxall, 1992).

Thus, while personnel management focused on the administration of organizational employees (Baron et al., 1986, Gray and Jenkins, 1995, Kellough and Selden, 2003, Baird and Meshoulam, 1988, Martell and Carroll, 1995), it was predicted “that the personnel man [sic] of the future will be an expert in the difficult and complex science of human behavior” (Dunnette and Bass, 1963, p130). It was also posited, as organizational psychology and organizational theory developed, that much of behavioural science would become applicable to industry, work and organizations (Landsberger, 1967). HRM takes personnel management principles and techniques and focuses on the challenge of understanding human behaviour in organizations (Mahoney and Deckop, 1986). HRM’s approach, with its combination of behavioural science theory and techniques (Guest, 1990) strives for employee commitment (Guest, 1991) and designing organizational structures with appropriate levels of bottom-up and top-down features (Arthur and Boyles, 2007). HRM’s behavioural perspective assumes that effective employment practices can positively influence employee attitudes and behaviours (Wright and McMahan, 1992); and employee

behaviours are recognized as playing a central role in moderating HRM policies and practices (Martín-Alcázar et al., 2008). A social science analysis of HRM recognizes the importance of ‘the relationship between human resourcing activities and extra-organizational patterns of culture, power and inequality’ (Watson, 2004, p450).

The shift in the mid 1980s from personnel management ideology to more broadly based HRM principles signified a shift towards unifying the managerial activities and practices directed at employees under common frameworks (Mahoney and Deckop, 1986). The wide acceptance and current trend of aligning HRM with organizational strategy often provides the basis by which HRM policy and practice are framed and shaped (Schuler et al., 1993, Lundy, 1994, Francis and Keegan, 2006). HRM’s overlap with strategic management stems from human resources being considered a source of sustained competitive advantage that can be valuable and rare (Wright et al., 1994).

A central tenet of HRM is the assumption that employees are the single most important asset of the organization (Poole and Jenkins, 1997). At the very least this is now normatively accepted in much HRM practice (Wright et al., 2001). It has been proposed that:

“the key role of strategic HRM is to ensure fit among a subset of strategically relevant variables while simultaneously seeking to build generic organizational capabilities that can be applied toward both discovering and implementing a variety of diverse strategic initiatives” (Wright and Snell, 1998, p767).

The features of successful strategic HRM are said to include HR practices (Rousseau and Wade-Benzoni, 1994), employee skills development (Lepak and Snell, 1999) and the shaping of employee behaviours (Edgar and Geare, 2005). Organizational capabilities that strategic HRM strives to build might cover areas of organizational learning (Pucik, 1988), adapting to change (Wright and Snell, 1998) and influencing positive internal relations (Ferris et al., 1998) and relationships with clients (Saá-Pérez and García-Falcón, 2002). The strategic initiatives implemented through HRM may focus on business problems (Becker and Gerhart, 1996), the path of globalization (Wright et al., 2005) and organizational innovation (Shipton et al., 2006).

So, the activity of shaping employee behaviour in the light of organizational requirements was originally largely the responsibility of the personnel department (Purcell and Gray, 1986, Tsui, 1984, Tsui and Milkovich, 1987) and later its successor the HR department (Greer et al., 1999, Galang and Ferris, 1997). However, while HRM's role has taken on these strategic dimensions (Huselid et al., 1997), paradoxically HRM responsibilities are also increasingly being devolved or decentralized (Mesner Andolšek and Štebe, 2005) to managers at middle (McConville, 2006, McConville and Holden, 1999) and operating levels (Fisher, 1989, Holt and Brewster, 2003) of organizations.

The devolution of HRM arises from the belief that departmental managers and supervisors are integral in implementing HR strategy, motivating and nurturing the workforce, and providing expertise during changes of management control systems (Poole and Jenkins, 1997). However, the devolution of HRM responsibility to line level managers can be problematic if their HR roles are simply prescribed without any genuine autonomy to manage subordinates (Hope-Hailey et al., 1997). Additionally, as HRM application differs among organizations, and HRM responsibilities cut across organizational levels (Strauss, 2001), it has been considered by some commentators to be dysfunctional to divide HRM into strategic and functional components (Wright and Snell, 1998). Because HRM is practiced in diverse settings across multiple industries, organizational cultures and structures, and localized settings, clearly contextual variables dictate different roles for the HR department and different practices of HRM (Hope-Hailey et al., 1997). Based on the wide range of activities, extent of centralization and decentralization of HRM within organizations, and multiple other local features, HRM is accurately described as “a series of mutually implicated phenomena which are in the process of becoming” (Keenoy, 1999, p16). Notwithstanding this, there is a common picture of what HRM's scope is. The range of policies and activities generally covered under HRM include employee selection and recruitment (Ruona and Gibson, 2004, Hsu and Leat, 2000, Tsaur and Lin, 2004), job design (Lundy, 1994, Dorenbosch et al., 2005, Paul and Anantharaman, 2004), job appraisal (Michie and Sheehan, 1999, Huang, 2000, Cardy et al., 1995), training (Meyer and Smith, 2000, Koubek and Brewster, 1995, Minbaeva et al., 2003), reward systems

(Guest, 1987, Bowen and Ostroff, 2004, Easterby-Smith et al., 1995, Liu et al., 2007) and employee well-being (Guest, 2002, Turner et al., 2008, Van De Voorde et al., 2011).

### **2.3 HRM and organizational performance**

Building on this outline, we can begin to trace what we know about HRM's link with organizational performance. HR managers and scholarly proponents of HRM have long advocated that HRM enhances performance (e.g., Liu et al., 2007, Guest et al., 2003, Huselid, 1995, Arthur, 1994). In justifying efforts towards HRM policy and activities, linking HRM with organizational performance has become a contemporary research issue (Guest, 1997, Fleetwood and Hesketh, 2006, Purcell and Hutchinson, 2007, Marchington and Zagelmeyer, 2005).

The HRM-performance relationship has been studied from a variety of perspectives, evaluating various HR practices against a range of performance outcomes (Paauwe, 2009). There is growing evidence to suggest HRM is an important predictor of organizational performance (e.g., Shipton et al., 2006, Wright et al., 2003, Guthrie, 2001). Studies in the field have linked quantitatively assessed HRM 'best practice' with: manufacturing performance (Arthur, 1994, Macduffie, 1995); financial performance (Delery and Doty, 1996); and lower employee turnover, greater productivity and corporate financial performance (Huselid, 1995).

A key study by Guest et al. (2003) had mixed results with 'high commitment' or 'high performance' HRM practices being associated with lower employee turnover and higher profit but not higher productivity. Research has highlighted that 'best fit' HRM approaches (Paauwe and Boselie, 2005) are neglected in favour of 'best practice' HRM perspectives (Marchington and Grugulis, 2000) in assessing HRM's link with performance. HRM 'best practice' would assume that there is an identifiable set of universal practices for managing employees (Becker and Gerhart, 1996), while HRM 'best fit' would imply it is appropriate for HRM to be tailored according to different organizational contexts (De Leede and Looise, 2005). The neglect of 'best fit' research approaches may be tied to the predominantly quantitative approaches in assessing HRM-performance links. The



quantitative path of assessing HRM ‘best fit’ with performance presents “huge difficulty in modeling all of the factors and estimating their interconnection, let alone coping with change” (Purcell, 1999, p34).

Nevertheless, this contingency approach to HRM (Snell and Youndt, 1995) and the best fit approach certainly merit examination given that organizations may not always implement best practice and that there is often a discrepancy between policy and practice (Truss, 2001). Using qualitative approaches that take into account contextual conditions and constraints (Connell et al., 2001) presents a complementary option to quantitative assessments of HRM. The statistically weak relationships and ambiguous results with quantitative approaches (Paauwe and Boselie, 2005) can probably be supplemented by qualitative methods (Victor, 2005).

Another critical issue in the lingering debate on HRM-performance research evidence is incomplete HRM theory (Boselie et al., 2005, Guest, 2001). The issue of theory is linked to the perspective of predetermining what would constitute ‘best practice’ or ‘best fit’ approaches to HRM areas (Guest, 1997). It is more likely that the perceived lack of theory actually represents a lack of consensus on the nature of HRM as there is no universal catalogue of approaches to defining HRM and its constructs (Paauwe and Boselie, 2005). While a diversity of practices have been studied, the recurring components most frequently included in conceptualizations of HRM are: training and development; pay and reward schemes; performance management incorporating appraisal; and recruitment and selection (Boselie et al., 2005). While these four functions of HRM, taken together, do not constitute in the minds of most scholars a theory of HRM, they can collectively presume to account for a substantial amount of what HRM does.

Until the formulation of definitive HRM theory, these four components can be seen as reflecting HRM’s strategic focus (Batt, 2002). Collectively they provide a comparative framework in ensuring critical elements of HRM are given due assessment in research studies. With regards to the issue of selecting a theoretical account in explaining the HRM-performance link, a vast array of theories, approaches, perspectives, models and maps have been advanced (Fleetwood and Hesketh, 2006). The three most popular choices seem to

have been contingency theory, resource based view (RBV) and the abilities, motivation, opportunity (AMO) framework (Boselie et al., 2005).

Contingency theory and RBV provide organizational level models of HRM mostly applied to business performance while the AMO framework studies employees at the individual level (Paauwe, 2009). These three popular theoretical models and most other conjectures or hypotheses concerning the HRM-performance link can be harnessed for quantitative research assessments (Kaufman, 2010). It should be remembered though, that when theoretical assessments of the HRM-performance link results in the derivation of statistical associations, such associations still constitute neither theory nor causality in terms of the relationships assessed (Hesketh and Fleetwood, 2006).

Important questions concerning the conditions, mechanisms of determined HRM-performance relationships and any unintended consequences of HRM practices will require additional investigations (Wall and Wood, 2005). Typically, triangulated designs will be the most apt research approach given the challenges in showing causation because of the multiplicity of variables, contested definitions and uncertainty in derived theory.

Some examples can help to appreciate the point being made here. The selection of sources for assessing HRM practices (Wright et al., 2003) and the selection of performance measures (Paauwe and Boselie, 2005) are often debated in determining the HRM-performance link. In sourcing research information, HRM data obtained at an organization's headquarters may not be generalizable to its branches for the reason of centrally enforced policy not necessarily reflecting practice at other divisions (Guest, 1997). Interviewing HR directors and managers on organizational HRM might not convey actual practices which is more accurately described by analyzing what employees do (Gerhart et al., 2000). Making vital distinctions between HRM policies and practices (Wright and Boswell, 2002) could be determined though the selection of multiple employees affected and influenced by organizational HRM (Wright et al., 2003). Failing to consider employee attitudes towards management processes might be a shortcoming in comprehending HRM's link with performance (Guest, 2002).

The selection of performance outcomes in evaluating the HRM-performance link has to date largely focused on financial or profit measures (Boselie et al., 2005). It is however hard to accurately or conclusively make causal associations between HRM and financial data due to other mediating factors, timing of measurements as well as the cross sectional design of most studies (Wright et al., 2003). The focus on financial measures also does not accurately reflect HRM's influence given that financial indicators are influenced by internal and external factors that can be unrelated to employees' activities (Paauwe and Boselie, 2005). Adopting a basket of non financial performance measures such as employee outcomes (Dyer and Reeves, 1995), quality (Arthur, 1994), productivity (Macduffie, 1995) and worker satisfaction (Guest, 2002) can provide a more holistic and balanced understanding of HRM's organizational potential.

Despite the issues and challenges in assessing the link between HRM and performance, understanding HRM's potential effects continues to be a critical and challenging issue for academics, practitioners and policy makers (Marchington and Zagelmeyer, 2005). Data-gathering approaches such as in-depth interviews, case studies (Hesketh and Fleetwood, 2006) and contextual analyses (Paauwe, 2009) have been suggested and applied in attempting to unravel mechanisms underlying HR practices and as alternatives to quantitative assessments of the HRM-performance link.

As senior HR practitioners do not tend to question HRM's link with performance (Marchington and Zagelmeyer, 2005), instead tending to accept that there is a positive effect, attention has moved beyond demonstrating the link to explaining how HRM impacts upon organizational performance (Bowen and Ostroff, 2004, Lytras and Pablos, 2008, Theriou and Chatzoglou, 2009). Some of the recently proposed explanations for HRM's link with performance include work climate (Gelade and Ivery, 2003), work structures (Becker et al., 1997), line managers (Wright and Nishii, 2007) and knowledge management (Theriou and Chatzoglou, 2009). Going back to the foundations of HRM in the behavioural sciences (Grieves and Redman, 1999) and exploring HRM's role in promoting team behaviours (Chi et al., 2009) could offer insights into the HRM-performance link. HRM policy has in recent times increasingly focused on encouraging team based employee behaviour (Ángel and Sánchez, 2009, Browning et al., 2009, Searle and Ball, 2003).

Instead of continuing on the causality path to assessing HRM's link with performance, assuming *a priori* that it does, the existing literature has guided this study towards adopting an explanatory approach. Taking an explanatory approach was collectively determined by HRM's origins in behavioural science (Hoobler and Johnson, 2004), HRM's potential in promoting teamwork (Stevens and Campion, 1994) and the lack of research pertaining to intermediate linkages in the relationship between HRM and performance (Bowen and Ostroff, 2004, Savaneviciene and Stankeviciute, 2010). This study seeks therefore, on the basis of the literature, to examine linkages between HRM and performance mediated by teamwork. This focus forms one of the research questions for this thesis. Understanding the background to teamwork, the next core construct, is thus the task to which we now turn.

## **2.4 Teamwork**

Teamwork in organizations has evolved from being conceptualized as a group based division of production labour (Hummels and de Leede, 2000, Heywood and Jirjahn, 2004) to a transprofessional approach (Emilsson, 2011, McCallin, 2001). The early use of teams at the production level (Van Zelst, 1952, Sprunger, 1961, Gekoski, 1952) emphasized some foundational elements of teamwork such as structure (O'Reilly and Roberts, 1977), supervision (Komaki et al., 1989), team goals (French and Hollmann, 1975), communication (Nagi, 1975) and cohesion among members (Greene, 1989). The structuring and supervision of teamwork reflects the managerial desire for control over human interactions to achieve organizational effectiveness (Tannenbaum, 1962). The alignment of team goals with organizational aims shapes team behaviour towards desired organizational results (Ouchi, 1979). Communication can facilitate teamwork by improving decision making and relationships (Baird and Bradley, 1978), while team cohesion underpins the stability of a team's membership (Festinger, 1950).

Quality circle programs involving manufacturing workers forming groups devoted to solving problems in their area of responsibility, were implemented on a large scale basis in Japan between 1955 to 1960 (Munchus, 1983) and proved ineffective in succeeding decades (Hill, 1991). The adoption of quality circles by Japanese car maker Toyota

overlapped with the decision to implement total quality control as a company-wide strategy in 1961 (Gronning, 1997). By the 1980s, quality circles were widely adopted to complement western production teams (Saraph et al., 1989) due to desires for increased employee problem solving (Griffin, 1988) and quality improvement (Munchus, 1983) through employee participation (Barrick and Alexander, 1987). Typical quality circles initially involved volunteer blue collar workers in factory settings (Ferris and Wagner, 1985). The focus of quality circles was limited to issues of product quality improvement and cost reduction (Steel et al., 1985). In some scenarios, quality circles were without sufficient autonomy to enact necessary changes due to traditional upper managerial dominance (Meyer and Scott, 1985). However, the application, scope and authority of some quality circles increased (Frances, 1997) to cover aspects such as job enlargement (Yong and Wilkinson, 2002), employee development (Park, 1991), innovation performance (Laursen and Foss, 2003) and they were applied in professional white collar settings (Beyer et al., 2003). While the use of quality circles is no longer widespread, some of these characteristics of quality circles have been passed on to later forms of teamwork (Dale et al., 2001).

Traditional product development teams comprised employees from marketing, engineering and manufacturing (Griffin and Hauser, 1992). The task of creating new products for consumers was predominantly a series of handovers between the functions throughout the development process (Bessant and Francis, 1997). In recent times, product development teams have evolved and become more comprehensive to include members from other domains such as sales (Lovelace et al., 2001), research and development (Ancona and Caldwell, 1992), finance (Olson et al., 1995), HR (Wright et al., 2001) and information technology (Henderson and Venkatraman, 1993). Employees collaborate in teams for the purpose of new product development (Aronson et al., 2006) or innovating existing into superior products (Holland et al., 2000). Product developments can also become a more integrated effort (Ancona and Caldwell, 1992) where emphasis is placed on the communication and sharing of knowledge across functional boundaries (Carlile, 2002). Product development teams of today reflect a departure from simply having a 'relay race' handover relationship (Karagozoglu and Brown, 1993, Turner, 1985) between a few

functions (Eppinger et al., 1994) to also incorporating a more holistic ‘rugby team’ cooperation model between team members (Takeuchi and Nonaka, 1986) from a diversity of different functions (Keller, 2001). Given the complexity, scope and challenges facing product development teams such as fast-changing technologies (Kotabe and Swan, 1995), short product life cycles (Handfield et al., 1999) and global competition (Kotabe and Murray, 1990), it has been advocated that relative autonomy, resources and support from senior management are essential for such teams to achieve successful and innovative outputs (Barczak and Wilemon, 1992).

To deal with time sensitive tasks efficiently and effectively, highly-skilled professionals from different technical specialties have often been brought together in action teams (Hershock et al., 1994). Examples of action teams are quality teams (Blest et al., 1992), flight deck teams and musical ensembles (McKinney et al., 2004), surgery teams (Edmondson, 2003), negotiation teams (Polzer, 1996), sports teams and military combat units (Sundstrom et al., 1990). By the 1990s, self-managed teams had become popular conceptualizations in Western organizations given the need for enhancing employee productivity, product innovation and quality management (Chaston, 1998).

How much self-management was allowed differed, depending on context. The self-managed form of cooperative teamwork to accomplish complex, multiple and interdependent tasks (Appelbaum et al., 1999) is characterized by team members being empowered to produce an entire product or service with minimum or no supervision (Yang, 1996). Self-managed teams have either a designated leader or a collective sense of shared leadership (Solansky, 2008). Self-managed teams are common in manufacturing (Butler Jr et al., 1999, Rafferty and Tapsell, 2001, Elloy et al., 2001) and service industries (Yeatts et al., 2004, Cohen et al., 1996, Bretthauer, 2004).

While having professionals from different disciplinary backgrounds is common in self-managed teams (Uhl-Bien and Graen, 1992, Drinka, 1996, Stoker et al., 2001), the interchangeable nature of team roles (King et al., 2009) and the transferability of knowledge between roles in some self-managed teams (Della Chiesa et al., 2009) has resulted in the overlap and blurring of professional boundaries (François, 2006, Whiteside et al., 2011, Klein, 2008). Cross professional teamwork is popular across a diversity of

industries and sectors (Northcraft et al., 1995, Randel and Jaussi, 2003, Denison et al., 1996) that include chemical and mineral processing (Martin et al., 2005, Horton, 1999, Iyengar, 1988), healthcare (Hall, 2005, Cott, 1998, Solheim et al., 2007), education (Flowers et al., 2000, Iver, 1990, Miller and Stayton, 1998), research (Stone, 1969, Slatin et al., 2004, Austin et al., 2008), and the public sector (Athanasaw, 2003, Patrashkova-Volzdoska et al., 2003, Pablo et al., 2007).

Terminology to categorize the team relationship between different groups of professionals has not been standardized (McCallin, 2001, Øvretveit, 1996). However, the level of collaborative interactions across disciplinary boundaries could provide a means for differentiating teams with mixed professional compositions (Batorowicz and Shepherd, 2008). Multidisciplinary teamwork brings together individuals from different professions, yet their interactions might be limited to handovers (Hughes, 2012) and their roles may be constrained to professional silos (Sorrells-Jones, 1997). In interdisciplinary or interprofessional teamwork, tasks may be interconnected (Pahl and Grote, 1996) and therefore require more interaction and cooperation between different groups of professionals (Sicotte et al., 2002). A transdisciplinary model of teamwork emphasizes the mutual sharing and evaluation of information among members (King et al., 2009) and as a consequence might involve traditional discipline boundaries becoming less distinct, and consensus building among members (Stepans et al., 2002). With common, integrated and mixed focuses on efficiency (Bendifallah and Scacchi, 1989, Powell, 2000, Capella et al., 2010), effectiveness (Hirschfeld et al., 2006, LePine et al., 2008, Towry, 2003), productivity (Tohidi and Tarokh, 2006, Moses and Stahelski, 1999, Wheelan et al., 2003), quality (Hoegl and Gemuenden, 2001, Easley et al., 2003, Thomas et al., 2006), innovation (Hoegl and Parboteeah, 2006, Hauschildt and Kirchmann, 2001, Mudambi et al., 2007) and interprofessional collaboration (Zwarenstein and Reeves, 2006, Atwal and Caldwell, 2002, Kvarnstrom, 2008), organizational teamwork of today contextually reflects a blend or combination of elements from the early development of teams to current applications across industries and professional disciplines (Tannenbaum et al., 2012, Keeton et al., 2012).

Some of the aspects studied and given attention in modern teamwork literature include stages of development (Farrell et al., 2001, Shaw and Barrett-Power, 1998, Rickards and

Moger, 2000, Miller, 2003), climate (Bower et al., 2003, Gil et al., 2005, Burningham and West, 1995, Pirola-Merlo et al., 2002), values (Keyton and Beck, 2008, Drach-Zahavy, 2004, Schaubroeck et al., 2007, Berchicci and Tucci, 2010), integration (Baiden et al., 2006, Smith and Offodile, 2008, Kratzer et al., 2004, Swink, 1999), and leadership (Kozlowski and Doherty, 1989, Zaccaro et al., 2001, Sivasubramaniam et al., 2002, West et al., 2003). Essentially, the stages of group development model proposed that teams go through a process of forming, storming, norming and performing (Tuckman and Jensen, 1977) before achieving functional effectiveness (Mackey, 1999).

The group development model offers insights on the challenges of building cohesive teams as each stage is characterized by different behavioural patterns and interactions among team members (Hope et al., 2005). The forming stage of group development involves the defining of goals and objectives by team members (Hall and Weaver, 2001). During the storming stage, team members may experience conflict with one another due to individual differences in evaluating criteria and solutions for assigned tasks (Goltz et al., 2008). If they get to this point, team members start to reach consensus for achieving tasks in the norming stage and the performing stage sees the team fulfilling its goals and being productive (Russ and Dickinson, 1999).

Team climate reflects individual team member perceptions of their work environment and influences how team members behave collectively (Tse et al., 2008). Commonly assessed under team climate are facets and values of task orientation, vision and group goals, participative safety and group norms, and support for innovation (Loo and Loewen, 2002). Values such as shared vision, supportive culture, group tasks and common rewards have been hypothesized to promote cooperative interdependence and interaction among team members (Tjosvold and Tsao, 1989).

The shaping of team values could therefore have the potential to either enhance or inhibit communication and collaboration among team members (Clark, 1997). Team integration that has been promoted through mechanisms such as team-based rewards and job rotation (Hauptman and Hirji, 1999), is intended for teams to make the optimal use of all their members (Amason et al., 1995). It is recognized that while interfunctional team integration is difficult to accomplish, achieving such integration is said to provide a source of



competitive advantage that is vital to the development, design and implementation of innovations (Hitt et al., 1993). Team leadership contributes to team effectiveness in developing trust, confidence, accountability and commitment among team members (Katzenbach and Smith, 2005). The charismatic leadership style that is dominant in Asian countries has been linked to team member satisfaction (Cheung et al., 2001).

Given the prominent attention teamwork has received in the organizational context, it is a logical extension for teamwork to be studied in relation to performance (Salas et al., 2010, Dunphy and Bryant, 1996). Studies have used cross sectional (Sexton et al., 2000, Hoegl et al., 2003, Rafferty et al., 2001), longitudinal (Hoegl et al., 2004, Sivasubramaniam et al., 2002, Easley et al., 2003) and interventional (Morey et al., 2002, Woolley, 1998) research designs. Many empirical studies have adopted quantitative approaches with teamwork surveys and numerically assessed or available performance data (Delarue et al., 2008, Salas et al., 2008, Hoegl and Gemuenden, 2001, Jehn and Bezrukova, 2004, Schaubroeck et al., 2007). Qualitative approaches have also been utilized in trying to provide explanatory evidence for teamwork's link with performance (Reader et al., 2009, Idvall and Rooke, 1998, Bradley et al., 2009).

The measurement of teamwork often focuses on aspects associated or synonymous with team behaviour (Driskell and Salas, 1992, Shapiro et al., 2004, Morey et al., 2002), team functioning (Stout et al., 1994, Strasser et al., 2005, Matveev and Nelson, 2004), team quality (Hoegl and Gemuenden, 2001, Seers, 1989, Easley et al., 2003) and team climate (Davenport et al., 2007, Kim and Lee, 1995, Gil et al., 2005). Performance outcomes commonly assessed in relation to teamwork have included attitudinal outcomes (Chakraborti et al., 2008, Dagnone et al., 2008, Gary et al., 2002) such as job satisfaction (Griffin et al., 2001, Thomas et al., 2003) and commitment (Gibson and Zellmer-Bruhn, 2001, Dunin-Keplicz and Verbrugge, 2003), behavioural outcomes (Rasmussen and Jeppesen, 2006, Edmondson, 1999, Wallin et al., 2007) which can cover absenteeism (Heywood and Jirjahn, 2004) and turnover (Mayo and Lombard, 1944, Kalisch et al., 2007), operational outcomes (Mar Fuentes-Fuentes et al., 2004, O'Hara and Roth, 2006) that include productivity (Tohidi and Tarokh, 2006, Horsfall and Arensberg, 1949) and efficiency (Powell, 2000, Siassakos et al., 2011), and financial outcomes (Devaro, 2006,

Payne et al., 2009) connected with profitability (Ezzamel and Willmott, 1998, Mattick and Miller, 2006) and costs (Ratto et al., 2002, Grace, 2004).

Research on the teamwork and performance link overwhelmingly suggest associations between components and aspects of teamwork with various measures of performance (Salas et al., 2008, Chiochio et al., 2012, O'Leary et al., 2012, Burtscher and Manser, 2012, Collins and Collins, 2011). Findings on team behavior and organizational performance have highlighted the need to reduce socially undesirable or dysfunctional team behaviours (Cole et al., 2008). Useful research has pointed attention towards nurturing and coordinating effective team relationships to avoid adverse consequences such as destructive conflict among employees (De Dreu and Weingart, 2003), resistance to organizational driven change (Vallas, 2003) and poor team performance (Cole et al., 2008). Team functioning elements of communication and sharing of information have been found to be significantly associated with team performance (Fischer et al., 2007). The quality of teamwork has been shown to be an important factor influencing innovative team performance (Hoegl et al., 2007) and strong team climate has been connected to good financial performance over time (González-Romá et al., 2009).

Studies on teamwork's link with performance should be subject to evaluation, noting commonly highlighted research limitations that include team member response and participation rates in determining ideal or representative team samples (Timmerman, 2005, Baruch, 1999, Roth and BeVier, 1998), the appropriateness of performance measures for reflecting team outcomes (Fowlkes et al., 1994, Bowers et al., 1992, Rosen et al., 2008), the suitability of quantitative analysis methods for determining significant findings and associations (Rothrock et al., 2009, Wheelan et al., 2003, Adelman et al., 1998) and the contextual moderation arising from organizational influences on teamwork-performance research findings (Delarue et al., 2008, Mendibil and MacBryde, 2006, Mickan and Rodger, 2000).

Given the potential of teamwork to beneficially or adversely affect organizational outcomes, much research has been carried out seeking to determine factors mitigating the relationship between teamwork and performance (e.g., Salas et al., 2008, Sundstrom et al., 1990, Reagans et al., 2004, Michan and Rodger, 2000). Some of the factors commonly

identified as having an influence on teamwork and team performance include team composition (Bell, 2007, LePine, 2003, Goll et al., 2001), team processes (Poulton and West, 1999, Somech, 2006, Brannick et al., 1993), leadership (Lloréns Montes et al., 2005, Schaubroeck et al., 2007, Dirks, 2000), reward and recognition (Cacioppe, 1999, Stokes, 1995, McAdams, 2000), training and development (Castka et al., 2003, Boaden and Leaviss, 2000, Morey et al., 2002) and organizational structure (Tata and Prasad, 2004, Heinemann and Zeiss, 2002, Carayon and Smith, 2000).

A wide range of research findings and recommendations highlights the many ways in which teamwork is linked with organizational performance, and how teams are shaped and influenced for desirable outcomes. Overall, the direction of the research is positive: depending on circumstances, effective teamwork is related to good performance (Salas et al., 2008, Mathieu et al., 2008, Mattick and Miller, 2006). Personality traits associated with team composition have been found to predict team job performance (Neuman et al., 1999). Another study has indicated that the degree of task or project complexity should be given due consideration in determining the diversity of team composition (Higgs et al., 2005). Communication and cooperation elements of team processes have been consistently connected with positive effects on team performance (Stock, 2004).

Studies on leadership have indicated that certain decentralized structures of leadership contribute to team performance (Mehra et al., 2006), and that a transformational leadership style can mediate the relationship between a leader's personality and team performance (Lim and Ployhart, 2004). Among the numerous ways of rewarding teamwork are bonuses, recognition awards, provision of resources and appropriate work allocations (Brown, 1996). Gain sharing as a form of reward has been demonstrated to be effective in promoting organization wide teamwork in numerous manufacturing and service organizations (Debettignies, 1989).

The development of teams through interaction training has been found to have a positive association with shared mental models among team members, which in turn can translate to good team communication and team performance (Marks et al., 2000). A report on staff working under a matrix structure highlighted the use of training modules which emphasized the learning of effective team behaviours within the organizational structure (Kuprenas,

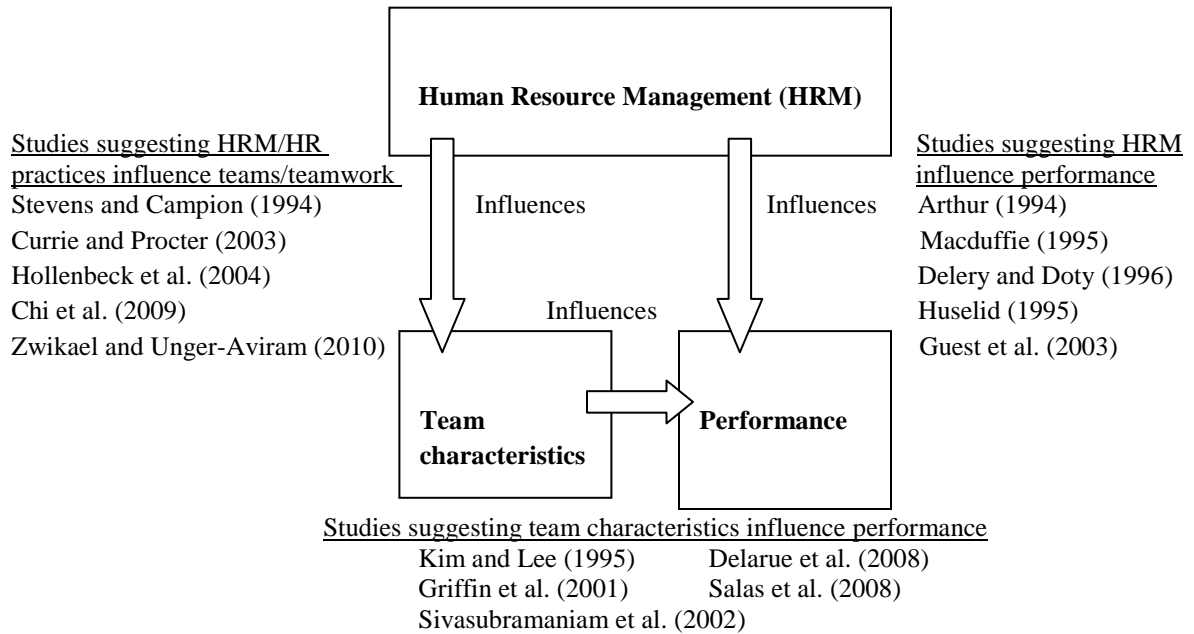
2003). In contrast, another study indicated the need for organizational structure to accommodate team processes in realizing the potential of teamwork (Donnellon, 1993).

In summary, the relationship of teamwork with a broad range of organizational attributes has affirmed the use of teamwork as a viable intermediary variable to explore in providing answers to HRM's link with performance in this healthcare study. The term 'team characteristics' defined in Chapter 1, and explained here, was adopted in this study to provide a comprehensive term covering the various elements of teamwork, and the grounding of teamwork in the structure and composition of teams. Adopting team characteristics to examine HRM's link with performance resulted in the development of this study's theoretical framework.

## **2.5 Theoretical framework**

The research framework is presented in Figure 2.1. The framework highlights the pathways in which the general team characteristics, performance and HRM associations are to be investigated. This framework diagrammatically represents the two study aims which build upon existing research literature. The literature cited in the previous sections and expanded here highlights the influence of HRM on performance (Arthur, 1994, Macduffie, 1995, Delery and Doty, 1996, Huselid, 1995, Guest et al., 2003), and the influence of team characteristics on various performance outcomes (Kim and Lee, 1995, Griffin et al., 2001, Sivasubramaniam et al., 2002, Delarue et al., 2008, Salas et al., 2008). Existing research and theory on HRM's association with teams and teamwork (Stevens and Campion, 1994, Currie and Procter, 2003, Hollenbeck et al., 2004, Chi et al., 2009, Zwikael and Unger-Aviram, 2010) strengthens the case for investigating team characteristics as an intermediary in providing explanations for the HRM-performance link.

**Figure 2.1:** General theoretical framework guiding study's evaluation of the association between team characteristics, performance and HRM



The studies on HRM's link with performance have provided a variety of managerial insights from various industries. The United States (US) steel industry study by Arthur (1994) showed that specific combinations of HR policies and practices promoting employee commitment, could predict higher productivity, lower scrap rates and lower employee turnover. High commitment HR practices namely, contingent compensation and `extensive training, were linked to automobile plant manufacturing performance (Macduffie, 1995). The impact of HRM on financial performance was observed in a banking industry study which showed the efficacy of HR practices such as profit sharing, results oriented appraisals and employment security (Delery and Doty, 1996). A strong association between high performance HR practices of information sharing, training and performance based compensation with employee outcomes of turnover and productivity, and corporate financial performance was demonstrated in Huselid's (1995) seminal study of nearly 1000 US firms. Similarly, the HR practices of recruitment, training, appraisal, compensation flexibility, job designs incorporating employees into teams, and two-way communication were linked with productivity and financial performance measures in a

study of 366 United Kingdom (UK) companies (Guest et al., 2003). The existing HRM-performance studies provide a foundation on which this study seeks to build in the Australian healthcare context.

Team characteristics provide the explanatory domain in this study's efforts to bridge understanding of the HRM-performance link. The choice of team characteristics for this study is rooted in the existing studies linking teams and teamwork to various organizational performance outcomes across different contexts. The need for a holistic approach to teamwork can be observed in a study of Korean research and development teams, where autonomy combined with a low change orientation was found to have a negative relationship with innovation performance (Kim and Lee, 1995). The study of 48 manufacturing companies by Griffin et al. (2001) showed individual perceptions of supervisor support and the attitudinal performance outcome of job satisfaction to be moderated by the extent of teamwork at the company level of analysis. Another study conducted at a US university indicated that leadership within teams of students was a predictor of team potency and instructor assessed team performance over time (Sivasubramaniam et al., 2002). A review of 31 teamwork-performance survey-based research studies by Delarue et al. (2008) found that teamwork is positively linked to attitudinal, behavioural, operational and financial dimensions of organizational performance.

A review of team performance literature spanning 50 years emphasized the importance of shared cognition among team members and team training in promoting team performance (Salas et al., 2008). Noting the range of team and teamwork elements evaluated in relation to performance outcomes guided this study in adopting a holistic coverage of team characteristics in providing answers for HRM's influence on performance. The scope and breadth of performance outcomes associated with teams, or influenced by teamwork, provides a basis for using team characteristics to bridge the domains of organizational performance and HRM.

Existing literature connecting HRM with the use of teams and various aspects of teamwork in organizations adds support to this study's premise of determining whether HRM has an influence on team characteristics, and whether HRM's influence on team characteristics

translates to performance outcomes. Teamwork skills such as conflict resolution, problem solving, communication, goal setting and planning have been suggested to have implications for HR system aspects of selection, training, performance appraisal, career development, compensation and job analysis (Stevens and Campion, 1994). A UK public sector study by Currie and Procter (2003) indicated the need for modification in HR policies and practices to a more facilitative rather than autocratic style for supporting teamwork.

The need for further research on HRM's influence on teams is emphasized by Hollenbeck et al.'s (2004) analysis which indicates that despite HRM's adoption of team-level phenomena, there exists critical team functioning and HR practice knowledge gaps in the areas of team composition, training and task design. Nevertheless, investigating HRM's influence on team characteristics is a promising prospect as existing studies point towards HR practices having positive associations with teams. The beneficial HRM influence on team characteristics variables include moderating the link between team composition and team innovation (Chi et al., 2009), and providing team development which translates to project success (Zwikael and Unger-Aviram, 2010). This study consequently aims to fill a gap in examining HRM's influence on a comprehensive range of team characteristics.

The derived theoretical framework, rooted in existing literature, provides a strong foundation for adopting the study's investigations. Details of the specific elements and variables adopted in evaluating the association between the three study domains will be provided in the methodology chapter. The study's healthcare literature review methodology is presented next.

## **2.6 Healthcare literature review process**

The general HRM and teamwork literature review presented in the previous sections provided a platform for directing the study's review of the healthcare literature. In particular, it shaped understanding of what we know about teamwork in a general sense, and highlighted the potential of teamwork in providing an explanation for HRM's link with performance. The review of healthcare literature began by focusing on research concerning

team characteristics in healthcare. Preliminary searches identified a large and diverse literature on this focused topic alone. Therefore a systematic search within five well-known healthcare literature databases was carried out initially in 2008 to ensure comprehensive coverage of the literature. Using variations of teamwork and team terms, references were downloaded from the five databases into Endnote X2 reference software (this software was later upgraded to Endnote X5). The following table shows the databases searched and the search terms used to create a reference pool.

**Table 2.1:** Search findings used to generate reference pool for ensuring significance of research

| No | Search term   | Numbers of articles found in databases |        |        |                  |           |          |
|----|---|--|--------|--------|------------------|-----------|----------|
|    |   | MEDLINE                                | EMBASE | CINAHL | SWA <sup>‡</sup> | PSYCHINFO | COMBINED |
| 1  | Hospital* team*   | 118                                    | 56     | 62     | 6                | 3982      | 4224     |
| 2  | Hospital* teamwork*   | 1                                      | 0      | 3      | 0                | 185       | 189      |
| 3  | Health service* team*   | 7                                      | 5      | 6      | 0                | 6598      | 6616     |
| 4  | Health service* teamwork*                                     | 0                                      | 0      | 0      | 0                | 342       | 342      |
| 5  | Healthcare team* or Health care team*                         | 2105                                   | 1014   | 1537   | 40               | 6450      | 11146    |
| 6  | Healthcare teamwork* or Health care teamwork*                 | 2                                      | 2      | 5      | 0                | 403       | 412      |
| 7  | Health team*  | 773                                    | 451    | 502    | 30               | 12235     | 13991    |
| 8  | Health teamwork*  | 1                                      | 2      | 1      | 0                | 672       | 676      |
| 9  | Medical team*   | 837                                    | 574    | 311    | 10               | 5244      | 6976     |
| 10 | Medical teamwork*   | 4                                      | 0      | 0      | 0                | 291       | 295      |
| 11 | Patient care team*  | 28032                                  | 40     | 53     | 1                | 2132      | 30258    |
| 12 | Patient care teamwork*  | 1                                      | 1      | 4      | 0                | 133       | 139      |
|    | Total   | 31881                                  | 2145   | 2484   | 87               | 38667     | 75264    |
|    | Journal pool from combined total after removal of duplicates. |  |        |        |                  |           | 49334    |

<sup>‡</sup> Social Work Abstracts

Search time lines in the relevant databases included all years until August end 2008 except for the PSYCHINFO database. Due to a technical constraint, searching in the PSYCHINFO database was slightly delayed. The search timeline for the PSYCHINFO database was all



years until October 2008. MEDLINE and EMBASE searches were limited to English Language and Human category options. CINAHL searches were limited to English using the language option. The SWA and PSYCHINFO databases did not have similar options for limiting the searches. The databases provided output for both singular and plural variations of the search terms with the use of asterisks at the end of search term words. The asterisk after the word 'hospital' was omitted in terms 1 and 2 for PSYCHINFO database searches since it did not provide additional output.

Systematic searching within the saved reference pool ensured the originality of the conceptualized study (Table 2.2). Searching the team characteristics reference pool at the intersection of the study's main domains - performance or outcomes and HRM - resulted in the identification of three articles after removal of a duplicate. The three identified articles focused on the influence of team learning and development on healthcare outcomes (Lankau, 1997, Alonso et al., 2006, Vashdi et al., 2007). It is noted that learning and development falls under the HRM area of staff training and education. However, the search revealed no prior research studying the association between team characteristics and a holistic coverage of HRM in influencing healthcare performance.

Further searching was carried out within the team characteristics research reference pool of 'performance' and 'outcomes'. The search terms used were derived from this study's general review of teamwork literature discussed earlier. Assessing the narrowed pool of references guided the search for additional healthcare literature relevant to the study's conceptual framework.

**Table 2.2:** Results for systematic searching within team characteristics journal pool

| Teams/<br>team work<br>Reference<br>pool total | Number<br>after<br>narrowing<br>of pool<br>using<br>search<br>term<br>‘research’ | Searching within ‘research’ pool results     |                            |                       | Focusing of ‘performance’ and ‘outcomes’ articles results from ‘research’ reference pool on the study’s conceptual framework |  |                      |
|--|--|--|----------------------------|-----------------------|--|--|----------------------|
|  |  | Search term/s                                |                            | Number of<br>articles | Search term/s  | Number of articles under the previously saved groupings                                |                      |
|  |  |  |                            |                       |  | ‘performance’<br>n=632   | ‘outcomes’<br>n=1823 |
| 49334  | 12828  | Main<br>study<br>domains<br>search<br>term/s | ‘performance’              | 632                   | ‘composition’  | 9  | 7                    |
|  |  |  |                            |                       | ‘stages’   | 11   | 23                   |
|  |  |  | ‘outcomes’                 | 1823                  | ‘climate’  | 13   | 25                   |
|  |  |  |                            |                       | ‘values’   | 23   | 50                   |
|  |  |  | ‘HRM’                      | 7                     | ‘integration’  | 13   | 62                   |
|  |  |  | ‘performance’<br>and ‘HRM’ | 2                     | ‘rehabilitation’   | 44   | 156                  |
|  |  |  | ‘outcomes’<br>and ‘HRM’    | 1<br>(+1 Duplicate)   |  |  |                      |
|  |  |  |                            |                       | Total under each<br>previously saved group   | 113  | 323                  |
|  |  |  | ‘rehabilitation’           |                       | 882  | Cumulative<br>total from searching within<br>‘performance’ and<br>‘outcomes’ groupings | 436                  |

Reference lists and key words from the narrowed pool of 436 articles were 'hand searched' to provide up to date coverage of research relevant to team characteristics. In total, 88 papers were selected for detailed review. Hand searching is a recognized tool in the systematic review process as studies may be missed in the electronic searching process (Armstrong et al., 2005). With advice from experts in the field, contemporary seminal research literature (e.g., Borrill et al., 2000, Anderson and West, 1996) concerning team characteristics in healthcare were also identified by reviewing relevant literature. Separate manual searches and snowballing (see Greenhalgh and Peacock, 2005) of references were conducted to explore literature related to other variables connected to the study's research aims. In reviewing complex and heterogeneous evidence, snowballing might have a better yield per hour spent compared to a protocol driven search strategy and it is likely to identify important sources that could otherwise be missed (Greenhalgh and Peacock, 2005). The use of separate manual searches and snowballing was necessary as the different facets of this study have varying degrees of overlap with team characteristics.

Facets of performance and HRM have been studied both independently of team characteristics and also in relation to team characteristics. Searches for literature pertaining to the main study domains of team characteristics, performance and HRM continued to be carried out in the initial five healthcare databases, and in other scholarly electronic search engines and websites. These searches were periodically conducted between the commencement of the study in 2008 and completion in 2012. While these searches identified articles that were relevant in updating the healthcare literature coverage, there were no subsequent studies matching the research design or combined variable coverage that was finalized for this thesis.

The comprehensive range of search strategies employed (that is, searching within databases, hand searching, expert advice in reviewing literature, separate manual searches and snowballing of literature, and periodical updating of literature) helped ensure the broad research domains, specific elements and study context were given appropriate attention. The literature review resulted in finalizing specific study variables and research tools within the broad areas of team characteristics, performance and HRM. The study aims were to be achieved in rehabilitation services. The focus on rehabilitation services for this study was based on research and overview literature

which strongly emphasizes the role of various team characteristics in rehabilitation services (Strasser et al., 2005, Gibbon et al., 2002, Mullins et al., 1999, Mullins et al., 1994, Wright, 1959). Literature pertaining to team characteristics in healthcare is explored in the following section.

## **2.7 Team characteristics in healthcare**

As the study's first aim is to examine team characteristics' role in influencing healthcare performance, this literature review explored the scope of team characteristics in healthcare. My analysis of the literature groups team characteristics under three broad categories: structural team characteristics; individual characteristics of team members; and team functioning characteristics.

Structural team characteristics are usually determined by the healthcare organization's context, individual characteristics of team members principally reflect the team's composition, and team functioning characteristics relate to the various interpretations of how the team works collectively. These groups of team characteristics have been studied independently (Cashman et al., 2004, Thylefors et al., 2005), in relation to one another (Goni, 1999, Williams and Laungani, 1999) and in relation to measures of healthcare performance (Temkin-Greener et al., 2004, Shortell et al., 2004, Goni, 1999, Proudfoot et al., 2007, Deloach and A., 2002). Variables in all three groups of team characteristics have displayed the potential to influence one another (Shortell et al., 2004). A study of primary health care teams by Goni (1999) revealed that there is a positive relationship between some of the individual characteristics of the team members and team design variables. A study of Australian general practices found that practices with better team climate tended to have fewer staff and in particular, fewer non-clinical staff (Proudfoot et al., 2007). An overview of the three defined categories of team characteristics is presented in this section.

### **2.7.1 Structural team characteristics**

Structural team characteristics in this study cover team characteristics influenced by the healthcare organization constraints and can also be affected by the situation or context.

Such factors are usually beyond the control of team members. Characteristics of interest vary from study to study. The primary healthcare team structural factors studied by Gene-Badia et al. (2008) were experience, setting (urban or rural), geographical dispersion, teaching activities and managerial structure. In a study on the Program of All-Inclusive Care for the Elderly (PACE) by Temkin-Greener et al. (2004), team structure characteristics considered were the team's professional experience, team's PACE experience, mean age, percent female and ethnic diversity index. It should be noted that some of the structural team characteristics used can be standardized in a cross sectional study. For example, a study that focuses on teams in a specific urban location might not require consideration of geographical dispersion and setting.

One structural team characteristic common across studies is team size (Shortell et al., 2004, Deo et al., 1997, Poulton and West, 1999, Borrill et al., 2000). While some studies find team size influencing team functioning (Williams and Laungani, 1999, Molyneux, 2001) and effectiveness (Borrill et al., 2000), others downplay any strong association between team size and team functioning (Deo et al., 1997, Poulton and West, 1999). Shortell et al. (2004) noted that team size has to be managed carefully. Data from their study suggest that larger size makes it more difficult to develop effective teams particularly in regard to establishing participation and arriving at agreement on goals (Shortell et al., 2004).

Comparatively, a study by Deo et al. (1997) showed that the use of a small trauma team does not appear to give results that are any worse than those of large trauma teams. However, for interpreting the results from Deo et al.'s (1997) study, one of the considerations mentioned was that the trauma team evaluated was very experienced at dealing with trauma cases on a daily basis. The implications of a team's history on performance is also evident from results of a study involving long term care professionals (Temkin-Greener et al., 2004). The study showed a positive association between professional work experience as a group with perceived team effectiveness. In an interview study with members of cardiothoracic surgery teams, it was found that while new team members are valued for their different skills and experience, respondents perceive a shared team history to be crucial for desired team performance (Friedman and Bernell, 2006).

It was suggested, based on a study of teams in the UK's National Health Service (NHS), that team size would depend on the scope of the task (Bamford and Griffin, 2008).

Based on the findings by Bamford and Griffin (2008), we could deduce that research on healthcare teams that standardizes the scope of task would likely reduce variation in team size. In another study on 68 primary healthcare teams, there were no significant relationships between team structure variables (team size, team tenure and fund holding status) and the four measures of team effectiveness (teamwork, organizational efficiency, health care practice and patient-centered care) (Poulton and West, 1999). Nevertheless, it was suggested that team processes are often determined partially by team structures (Poulton and West, 1999).

Overlap between structural team characteristics and individual team member characteristics occurs given that healthcare organizations have a say in the selection, recruitment and retention of team members. For example, the structural team characteristics considered by Temkin-Greener et al. (2004) are summarized from individual team member characteristics such as age, gender and ethnicity. Nevertheless, in this literature review, structural team characteristics and individual team characteristics are clearly defined as different groups of team characteristics. The next section looks at individual characteristics of team members.

### **2.7.2 Individual characteristics of team members**

Individual team member characteristics or demographic characteristics of team members commonly considered in healthcare team research are gender, age and profession (Goni, 1999, Borrill et al., 2000, Temkin-Greener et al., 2004). The potential association between gender and teamwork is observable in a survey study involving 224 healthcare team leaders (Leggat, 2007). The study identified differences in perceptions among males and females team leaders which could influence team behaviours and team effectiveness. Male healthcare team leaders were found to value the ability to influence as an important teamwork skill, which contrasted with female preference for negotiation, self-awareness and a positive attitude. The impact of gender for healthcare teamworking is also reflected by the suggestion for nurses to develop a combination of

gender-specific male and female behaviours in creating successful healthcare team environments (Rudan, 2003).

Similar to gender, the age of members in healthcare teams has been found to have differing impacts on aspects of team functioning and performance. Results of an interdisciplinary mental health teams study showed established team members rated the level of team integration significantly more positive than newer members (Lichtenstein et al., 1997). Two possible reasons were put forward in explaining the findings associating age with team integration. The first reason was that only employees that tolerate a job remain until an older age and the second, that older workers have adapted to situations that might prove unacceptable to younger workers. In highlighting the issue of different generations of nurses working together, Greene (2005) suggested that to deal with staffing shortages, hospital recruitment and retention plans need to consider the dissimilar demands and expectations of younger and older staff. While nurses in their 20s would prefer 12 hour shifts, shorter shifts will be needed for aging baby boomers (Greene, 2005).

Professional differences among team members is a significant healthcare theme due the multidisciplinary joint working between healthcare practitioners (Baxter and Brumfitt, 2008). It is suggested that communication and collaboration barriers between medical and nursing professions could jeopardize healthcare quality and safety efforts (Zwarenstein and Reeves, 2002). A cross-sectional survey study by Thomas et al. (2003) revealed critical care physicians and nurses having discrepant attitudes of teamwork with each other. The findings on discrepant teamwork attitudes between physicians and nurses were attributed to professional differences in aspects of status, responsibility, training and culture. Nevertheless, a study by Verma et al. (2006) demonstrated that medicine, nursing, occupational therapy and physiotherapy share common core competencies. The different healthcare professionals share common competencies in their work scope as professionals, experts, scholars, managers, communicators and collaborators (Verma et al., 2006).

While demographic team characteristics items of gender, age and profession are commonly considered in evaluations of healthcare teams, the extended list of individual characteristics of team members used varies from study to study. Individual team member characteristics unique to specific studies include: experience and qualification

(Borrill et al., 2000); type of personnel (temporary or permanent staff) and whether the staff devoted part of the time to research (Goni, 1999); and ethnicity, education, occupation, occupation category, employment status (full-time, part-time, per diem), professional experience (years in profession) and PACE experience (Temkin-Greener et al., 2004).

Unique individual team member characteristics have been connected with various different healthcare elements and outcomes. In a survey involving six acute care facilities, nursing graduates with six months of experience or less expressed being insecure and lacking confidence in dealing and communicating with physicians (Casey et al., 2004). Racial diversity was connected with conflict and miscommunication in a focus group study involving nurses from two US metropolitan hospitals but the study identified leadership as a mitigating factor which could strengthen the positive aspects of racial diversity (Dreachslin et al., 2000). A study observing team members in a primary care context revealed that the nature of individual expertise was associated with a reduction in unnecessary and redundant interactions when dealing with patient problems (Patel et al., 2000). The many options in evaluating individual characteristics of team members highlight the potential diversity which might exist in the membership of healthcare teams. It is, in part, because of individual characteristics of team members that no two healthcare teams are identical.

Various combinations from the list of individual characteristics of team members provide a means of defining team composition. Sensing an overview of team composition is crucial. It was concluded in a study of healthcare team diversity, that team building training should be conducted in heterogeneous groups to allow for inter-role conflict to be explored and resolved before such conflict affects patient care (Dreachslin et al., 1999). A study on team diversity and team functioning involving mental health personnel indicated that in the managerial design of a treatment team, the selection of team members with strong professional backgrounds and appropriate skills was necessary to optimize team functioning (Alexander et al., 1996). Team composition factors predicted innovation in both community mental health and primary healthcare teams (Borrill et al., 2000). Another study on the role of perceived team effectiveness in improving chronic illness care highlighted that the presence of a greater percentage of physicians on a team was marginally associated with overall perceived team



effectiveness and the level of assessed team skill in making changes (Shortell et al., 2004). The next section discusses team functioning characteristics.

### **2.7.3 Team functioning characteristics**

Team functioning can be interpreted as a reflection of the way a team acts, integrates, behaves and copes with the delivery of healthcare. Thus, research in healthcare on team processes (Poulton and West, 1999), team member interpersonal behaviour (Farrell et al., 2001), team development stages (Farrell et al., 2001), team cohesiveness (Undre et al., 2006), team working (Borrill et al., 2000), team organization (Thylefors et al., 2005), operational team working (Bamford and Griffin, 2008) and team climate (Hann et al., 2007) is central to functioning.

Team functioning in healthcare has been researched together with various aspects of organizational, service and individual factors; as well as with different outcome measures. A survey evaluation of team processes in primary care teams found that participative and collaborative teams are more likely to be patient centered and efficient (Poulton and West, 1999). Farrell et al.'s (2001) study of US geriatric teams found that as teams developed from early to later stages, there was reduced variation in how each member is seen by other team members. The study also highlighted that regardless of team developments, the prominence and task orientation of team members was linked to their level of education (Farrell et al., 2001). An interview study assessing team cohesiveness in multidisciplinary operating theatre teams indicated that a low level of shared understanding among team members could place a limit on potential team efficiency (Undre et al., 2006). Borrill et al.'s (2000) major UK survey of team working in primary, secondary and community service settings revealed that the quality of team working was strongly connected with team effectiveness. A survey of Swedish healthcare teams assessing team organization on an integration continuum indicated high integration among team members was positively associated team climate and perceived efficiency (Thylefors et al., 2005). Bamford and Griffin's (2008) study of operational team working with teams from a UK NHS hospital argued that in improving patient care, effective teamwork was insufficient without good management practices.

The measurement of team climate pertaining to shared perception towards innovation (Anderson and West, 1998) is one of the most common approaches to assessing team functioning in healthcare (Kivimaki et al., 2007, Rose and Schelewa-Davies, 1997, Strating and Nieboer, 2009). Team climate has been positively linked to a range of different healthcare elements and variables. High levels of team climate were found to have an association with superior clinical care, positive patient evaluations, and self-reported innovation and effectiveness in a questionnaire study of 42 primary healthcare practices (Bower et al., 2003). A cross-sectional survey of general practices in England found that flexible and spontaneous organizational culture was associated with good climate for participation and teamwork (Hann et al., 2007). Team climate was shown to have a positive influence on the association between multidisciplinary and the quality of innovation in a study of healthcare workers from 66 breast cancer teams and 95 primary healthcare teams (Fay et al., 2006). A Swedish questionnaire study involving elderly care nurses concluded that better team climate may improve well-being and reduce negative stress reactions for staff (Dackert, 2010). In a study of 78 healthcare teams from Spanish public hospitals, research findings indicated team climate has a mediating role in the relationship between change-oriented leadership and group outcomes (Gil et al., 2005).

Limitations of the healthcare team functioning studies vary according to study design. Cross-sectional studies (e.g., Rose and Schelewa-Davies, 1997, Bower et al., 2003, Hann et al., 2007) are constrained in their ability to determine causality compared to longitudinal or intervention studies. Nevertheless, existing research on the different manifestations of team functioning collectively emphasizes that key variables are context, team functioning, team characteristics and performance.

The various tools and instruments utilized in assessing healthcare team functioning often reflect a combination of interrelated variables. The Team Climate Inventory (TCI), which has been confirmed as a valid and reliable self report measure of team climate for hospital teams (Anderson and West, 1998), uses scales covering vision, participative safety, task orientation, support for innovation and a fifth scale designed to detect socially desirable answers (Ouwens et al., 2008). A cognitive and motivational team survey validated by Millward and Jeffries (2001) in a healthcare setting measured team dimensions of potency, identifications, shared mental models and meta cognitions

related to shared goals. The Healthcare Team Vitality Instrument (HTVI) developed to assess healthcare team functioning evaluates elements of support structures, engagement and empowerment, patient care transition and communication (Upenieks et al., 2010). The Collaboration and Satisfaction About Care Decisions (CSACD) instrument was designed for use in intensive care units, and the tool assessed aspects of planning, communication, decision making, cooperation, assertion and coordination (Baggs, 1994). Another survey for intensive care, a seven item teamwork climate scale, examined difficulty speaking up, input in decision making, the encouragement of teamwork, physician-nurse collaboration, conflict resolution, support from team members and nurse input (Thomas et al., 2003).

Variables from team functioning tools are assumed to represent values and elements that are desirable, necessary or important for a high performing or effective team. While there are some variables that are unique to certain terms and tools of team functioning, there seems to be considerable overlap and similarities in the variables. For example, support for innovation is a hallmark of Anderson and West's (1996) TCI and prominence is a unique variable of the System for the Multiple Level Observation of Groups (SYMLOG) (Farrell et al., 2001). Common, overlapping and underlying variables of team functioning across tools and evaluation frameworks include communication (Upenieks et al., 2010, Thylefors et al., 2005, Thomas et al., 2003), relationship among team members (Farrell et al., 2001, Baggs, 1994), task focus (Ouwens et al., 2008, Kivimaki et al., 2007), quality orientation (Shortell et al., 2004, Strasser et al., 2008, Undre et al., 2006), goals and objectives (Millward and Jeffries, 2001, Anderson and West, 1996), as well as leadership (Thylefors et al., 2005, Bamford and Griffin, 2008).

Besides being utilized in frameworks and integrated assessment tools, the common variables of team functioning have been investigated independently in relation to healthcare teamwork and performance outcomes. Though effective communication and teamwork in almost every study are said to promote high quality patient care, it is acknowledged that communication failures in teams are an extremely common cause of patient harm (Leonard et al., 2004). Relationship-centered care has been endorsed for promoting sincere teamwork through respect and appreciation for colleagues regardless of discipline (Beach et al., 2006). While commonly viewed in a structural and positional

outlook, clinical leadership has been conceptualized as a function for managing team member relationships when facilitating the frontline delivery of care (Millward and Bryan, 2005).

Process oriented goals focus on interpersonal relationships among team members. In contrast, task oriented goals cover the assessment of patients, the identification of patients' medical and health needs, the development and implementation of patient care plans, the monitoring of patient outcomes, and the adjustment of care plans to optimize patient outcomes (Heinemann et al., 1999). Giving due consideration to the organizational, cultural and social context, and the specific behaviour of all participants, might contribute to improving the quality of care and reducing human failure in a task-oriented clinical team environment (Ummenhofer et al., 2001).

As different variables of team functioning are associated with healthcare outcomes in varying degrees of influence, studying these variables in combination using focused instruments could provide a more holistic understanding of teamwork. The integration of team functioning variables in focused instruments could also be useful when conducting pragmatic evaluations of team characteristics' associations with potential influencing determinants and related performance outcomes. Assessing healthcare team performance is covered next.

## **2.8 Assessing healthcare team performance**

Healthcare team performance measures are not standardized across healthcare organizational studies with the literature revealing a variety of measures to assess team outcomes. Besides using clinical indicators (e.g., Strasser et al., 2005, McGlynn et al., 2003), healthcare researchers have measured team or service performance based on efficiency, economy and efficacy (Goni, 1999), users' perceived quality of service or patient satisfaction (Goni, 1999, Korsch et al., 1968) and overall job satisfaction of team members (Proudfoot et al., 2007, Ulmer and Harris, 2002, Lu et al., 2007). While some performance measures such as clinical indicators, patient satisfaction and job satisfaction of healthcare workers are commonly used in healthcare studies, other team performance outputs can be unique to specific studies. For example, a study evaluating 213 primary healthcare teams in Spain measured service quality based on three indexes:

access to services and professional-patient relationships; coordination within the healthcare team; and evidence-based practice (Gene-Badia et al., 2008). In another study, team working outputs included effectiveness, clinical outcomes, team member mental health, innovation, team member turnover and cost-effectiveness (Borrill et al., 2000). Secondary data options for performance measurement are increasingly available for cross sectional benchmarking and comparisons as clinical indicators are now standardized across many medical fields (Collopy, 2000, Simmonds and Stevermuer, 2007, Mainz et al., 2009).

Among the benefits of measuring team performance are identifying possible critical behavioural or clinical areas for improvement, and contributing to team evaluation and development for ensuring safe and effective patient care (Jeffcott and Mackenzie, 2008). For example, investigating team performance outcomes could aid in triangulating team process research findings of a qualitative study where healthcare professionals perceived effective teams to have flexible communication patterns and high levels of mutual respect between team members (Mickan and Rodger, 2005). It could be determined whether communication levels are efficient and effective for desired performance outcomes, whether mutual respect between members enhances integration, cohesiveness and job satisfaction, or whether other elements of team process need to be addressed to influence or improve clinical performance in the particular healthcare context. A team performance study with nurses and physiotherapist from 23 teams indicated that emotional intelligence could enhance cohesion and patient outcomes (Quoidbach and Hansenne, 2009). An observational measure of performance tool for surgical teams developed by Healey et al. (2004) provides a framework that could be useful in evaluating and validating methods of team training in surgery.

It is recognized that performance outcomes for teamwork in healthcare are multidimensional and conceptually diverse, hence a difficulty in comparing research findings (Lemieux-Charles and McGuire, 2006). The complexities of measuring healthcare team performance could explain why some teamwork studies in healthcare are limited to examining team processes (Heinemann et al., 1999, McCallin, 2001) but not the associated or causal links between the team processes and outcomes (Schmitt et al., 1988, Schofield and Amodeo, 1999). Nevertheless, teamwork or team processes and performance outcome studies in healthcare are emerging (Gil et al., 2005, Manser,

2009, Morey et al., 2002). Much progress has been made for the measurement of healthcare team performance (Rosen et al., 2008, Jeffcott and Mackenzie, 2008), which includes the standardization of outcomes by medical specialty at national if not universal levels (Zwarenstein et al., 2009, Wheelan et al., 2003, Mazzocco et al., 2009), and the introduction of frameworks and tools for measuring team performance outcomes (Reader et al., 2009, Malec et al., 2007, Weaver et al., 2010).

Measuring teamwork performance and outcomes should continue to be pursued as such efforts contribute towards understanding the elements of successful teamwork (Murray and Enarson, 2007). While relationships have been found between the various team characteristics and many dimensions of team performance, we shall see that the effects of team characteristics on the different dimensions of healthcare performance varies from study to study. A study of over 400 healthcare teams in the UK's NHS, indicated that teams with clear objectives, higher levels of participation, emphasis on quality and support for innovation positively affected healthcare in terms of patient care, effective organization and interdependent working (Borrill et al., 2000). Findings from a study on Spanish primary healthcare teams revealed that access and physician-patient relationship dimension have been shown to not be affected by structural factors but team coordination improved in rural teams and in those providing care for older populations (Gene-Badia et al., 2008). In Goni's (1999) study of Spanish primary healthcare teams, there was no positive or negative relationship between team design variables and certain expectations of the administration such as economy or efficiency. Data from Proudfoot et al.'s (2007) study of Australian general practices showed that team climate predicted staffs' overall job satisfaction and patients' overall satisfaction. In an American study of rehabilitation teams and stroke patient outcomes, only three of the 10 measures of team functioning (task orientation, order and organization and utility of quality information) were significantly associated with patient functional improvement (Strasser et al., 2005).

From the results of the studies presented, it can be deduced that correlations between team characteristics and performance can vary by context, country, patient population, sector, setting and type of team. This reflects potential for future studies in correlating team characteristics with performance in healthcare. We move to a consideration of HRM in healthcare.

## **2.9 HRM in healthcare**

While evaluating the association between team characteristics and performance is important in this study, the second premise, and overarching aim, of the research concerns HRM in the context of healthcare. As mentioned in Chapter 1, the second premise consists of two components - to investigate HRM's impact on rehabilitation service performance through influence on team characteristics and also to assess HRM's influence on rehabilitation service performance without team characteristics as an intermediary.

The HRM research dimension provides a managerial perspective to understand team characteristics and performance of rehabilitation services. As we have seen, HRM is a broad field that includes both policy and practice concerning people in workplaces. While numerous studies have shown HRM to have a positive impact on organizational performance, limited research has been conducted to explore the relationship between HRM and performance in healthcare (Harris et al., 2007). Studies that have evaluated HRM in healthcare have shown a positive relationship between HRM and performance with HRM being associated with lower patient mortality rates, and customer as well as staff satisfaction (West et al., 2006, West et al., 2002, Meyer and Collier, 2001, Brown et al., 2003, Purcell et al., 2003). In addition to healthcare research pertaining to the broad domain of HRM, there are important insights from healthcare studies which focused on specific components and aspects of HRM or related organizational areas, either for independent evaluation or in relation to other determinants and outcomes. This section presents existing healthcare HRM research, research pertaining to independent healthcare HRM components, and related aspects of HRM in healthcare.

### **2.9.1 Existing healthcare HRM research**

The studies on HRM in healthcare generally focus on HRM's impact towards the organization as a whole. Some exceptions focus on HRM's impact at the unit level (Purcell et al., 2003) and team level (Bamford and Griffin, 2008). Work has evaluated HRM's impact in healthcare using either feedback from senior managers and directors (West et al., 2002, West et al., 2006) or obtaining feedback from staff, especially team members (Purcell et al., 2003, Guest and Conway, 2004). Areas of HRM in healthcare

that have been investigated include compensation policy (Brown et al., 2003), and recruitment and selection, training, harmonization, job security and reward (West et al., 2006). HR development and management areas evaluated in the Meyer and Collier (2001) study using the Malcolm Baldrige National Quality Award (MBNQA) Health Care Pilot Criteria included HR planning and evaluation, health care staff work systems, health care staff education, training and development, and health care staff well-being and satisfaction. UK NHS respondents in a study by Guest and Conway (2004) associated higher levels of worker satisfaction, commitment, excitement, motivation and lower intention to leave with the presence of progressive HR practices, flexible family friendly practices, effective supervisory leadership and delivery of promises leading to perceptions of fairness of treatment and high trust.

The HRM-performance link in healthcare merits further research. While indicating a possible link between HRM and organizational outcomes, Bartram et al.'s (2007) study of 132 Australian hospitals indicated a lack of understanding and development in exploiting the link. A review of healthcare literature acknowledges that effective HRM strategies contribute towards the achievement of better outcomes but highlights the need for more research to develop new HR policy supporting high quality care (Kabene et al., 2006). Further research could also build upon recent studies focusing on how HRM is expressed, operationalized and perceived in hospitals (Stanton et al., 2010, Townsend and Wilkinson, 2010). Exploring HRM practices in a longitudinal study of three Australian public hospitals revealed that CEOs play a crucial role in providing legitimacy, leadership and resources for creating a distinctive HR system (Stanton et al., 2010). Townsend and Wilkinson (2010) reported that despite health reforms focusing on structural change and cost containment, HRM is still overlooked in hospitals, and healthcare HR departments continue to be perceived as administrative functions.

### **2.9.2 Healthcare workforce planning and staffing**

Workforce planning and staffing are perceived to be significant areas of focus in the healthcare HRM research literature (O'Rourke and White, 2011, Lankshear et al., 2005, Dimick et al., 2001, Joyce et al., 2004). A study investigating the relationship between corporate strategy and diversity-focused HRM practices showed that hospitals with an



external, market-driven focus had higher workforce diversity management scores than hospitals with an internal focus and no clear strategic direction (Dansky et al., 2003). Hiring resilient healthcare workers can provide safe patient care and prevent accidents in complex systems with multiple flaws such as conflicting goals, staff shortages and insufficient professional support (Ebright et al., 2003). Eaton's (2000) study of patient care quality in nursing homes found that when frontline workers were viewed as replaceable and unskilled, there was high staff turnover and minimal quality of care for residents. Patient care quality was higher in nursing homes where there was no work system understaffing, and nurses worked in teams or 'care pairs' where they could assist one another with difficult tasks (Eaton, 2000). An investigation of physician and nurse staffing levels on cancer surgical outcomes indicated that well staffed hospitals had a lower proportion of inhospital deaths for patients with postoperative complications (Yasunaga et al., 2012).

In a review of literature on skill-mix changes in the healthcare workforce, limited research was found on the impact of role changes involving workers other than doctors or nurses (Sibbald et al., 2004). Nevertheless, the identification of studies on professional substitution involving medical, nursing and allied health staff by Sibbald et al. (2004) highlights the blurring of traditional professional boundaries in healthcare work systems. The success or failure of role changes and professional substitution could have implications for determining the composition and team working of multidisciplinary healthcare services. Adequate staffing was reported to be one of the key requirements for effective multidisciplinary team working in cancer care (Fleissig et al., 2006). Nurse staffing levels were found to have implications for quality of care, job satisfaction and burnout in a study involving hospitals from the US, Canada, England and Scotland (Aiken et al., 2002). In a review of research on hospitals with a good reputation for recruitment and retention of registered nurses, it was found that some hospitals do not retain their good reputation after hospital reorganization, while others retain their reputation despite organizational change (Buchan, 1999). The review by Buchan (1999) recommended validation of hospital recruitment and retention reputation through the investigation of service organization and care outcomes.

### **2.9.3 Healthcare staff evaluation and appraisal**

The appraisal, evaluation and performance measurement of healthcare professionals can have implications for the achievement of clinical outcomes and organizational reputation (Pringle et al., 2002). Performance appraisal in the healthcare context serves purposes such as for managerial control, identifying scope and areas for performance improvement, determining individual potential for promotion, improving boss-subordinate communication, identification of training and development needs, and as a basis for remuneration and reward (Edmonstone, 1996). A study by Mugweni et al. (2011) indicated that appraisals encourage positive change in clinical practice and also provide benefits of mentorship and motivational support for staff. For senior medical staff, appraisals are typically held annually with the medical or clinical director (Khalil et al., 2001). Nurses have been reported to reflect on their competence through self assessments and nurse managers carry out annual staff reviews to maintain high standards of care (Meretoja and Leino-Kilpi, 2003). The use of peer evaluation in nursing enables staff to give and receive support for professional development through further collaborative on the job learning (Vuorinen et al., 2000). Allied health physiotherapist have clinical supervisors who perform annual appraisals and rotational reviews (Hall and Cox, 2009). A performance appraisal study by Redman et al. (2000) in an NHS hospital indicated that healthcare staff evaluation may also involve informal mini review discussions. Such mini reviews were reported to be valuable in providing a measure of staff progress and attainment, and for general updating of performance objectives in line with the rapidly changing organizational environment (Redman et al., 2000).

While staff appraisals ideally serve to improve healthcare service outcomes (Conlon, 2003), research findings have indicated some problematic issues with the implementation and outcomes of such evaluations (Berridge et al., 2007, Wilson and Western, 2001, Chandra, 2006). The study by Berridge et al. (2007) involving nurses and allied health staff from acute and community settings revealed that besides the perception of appraisals being undervalued by managers, appraisals were frequently rushed and their purpose often misunderstood. Research by Wilson and Western (2001) involving staff from a medium-sized hospital revealed that some staff perceived their appraisals to lack credibility and therefore avoided preparing for appraisal sessions.

Recognizing the important role of appraisals in determining training and development needs, it was recommended that managers and staff make adequate preparations before evaluation meetings, and strive for agreement in formulating flexible development plans (Wilson and Western, 2001). To improve the accuracy of appraisals, it has been suggested that healthcare managers strive to avoid biases stemming from differences in experience, gender, age, ethnicity, education and training (Chandra, 2006). Given the alignment of performance appraisal in healthcare with other individual HR functions and organizational strategy (Khatri et al., 2006), further managerial insights might be derived from assessing staff evaluation with related healthcare facets and variables.

#### **2.9.4 Health delivery system**

The health delivery system has been suggested to affect work and clinical processes associated with patients, employees and organizational outcomes of care (Carayon et al., 2006). The delivery of patient care in the health system is largely a human process with the causes of variability being subtle and difficult to quantify (Sehwail and DeYong, 2003). A review of guidelines for healthcare practice pointed out that inflexible and rigid rules may be popular with managers but such guidelines may not be appropriate for non-uniform clinical problems (Woolf et al., 1999). Greenhalgh (2008) theorized that effective and efficient collaboration between professionals in healthcare requires development, refinement and renegotiation of existing routines. A patient-centered care restructuring of four medical units involving redesigned staff roles and clinical case facilitation by a multidisciplinary team resulted in greater nurse-physician collaboration and positive patient feedback for the care team concept (Bryan et al., 1998). Research by Ham et al. (2003) indicated that redesigning work processes can improve health service performance but the outcome of such efforts will be influenced by local context and the specific mechanisms implemented. A study by Tucker et al. (2008) involving senior managers and frontline staff from 20 US hospitals showed that fixing operational failures in the work system can provide both patient safety and efficiency benefits rather than a trade off in outcomes. High involvement work systems were found to be associated with high employee satisfaction and low patient services costs in a US study of 146 Veterans Health Administration centers (Harmon et al., 2003).

However, there is also evidence that delivery systems can constrain healthcare professionals to adopt tradeoffs in performance outcomes (Villagra, 2004, Ryan, 2004, Knapp and Kavanagh, 1997). A study by Zyzanski et al. (1998) showed that while physicians in high volume practices were efficient, their efficiency resulted in lower patient satisfaction and less positive doctor-patient relationships. The time constrained, complex and taxing emergency department environment requiring clinician multitasking and handoffs can encounter information loss that compromises patient safety (Laxmisan et al., 2007). While all healthcare stakeholders might value good clinical outcomes at a low cost, it may be prudent to recognize that clinicians are likely to value cost and quality tradeoffs differently compared to their employers (Thier and Gelijns, 1998), and that no one performance outcome can encompass all important healthcare factors (Davies and Crombie, 1997).

### **2.9.5 Healthcare organization policy**

Organizational policy has been proposed as an input affecting healthcare professional performance (Karsh et al., 2006). Shortell et al. (1998) recommended that continuous quality improvement policies for clinical practice are likely to be effective with adequate preparation, leadership and trusting relationships with physicians. It has been suggested that in developing health services policy, greater reliance should be placed on scientific evidence and consensus from clinical practitioners on the delivery of patient care (Lohr et al., 1998). It is also necessary to assess the unintended or adverse consequences of the organizational and system-level policies designed to promote efficiency and maximize quality in healthcare (Flood and Fennell, 1995). Tucker and Edmondson (2003) indicated that the lack of organizational learning from failures in hospitals can be attributed to the policy focused on individual vigilance, efficiency concerns and empowerment. Such policy insights might point towards the need for a more collective, holistic and integrated approach in the management of staff from healthcare organizations.

### **2.9.6 Healthcare organization and service structure**

Studying the variations in structure and process has been utilized (Plsek and Wilson, 2001, Hearld et al., 2008) to address the question of how the organization and management of hospitals influences the quality of patient care (West, 2001). The dual hierarchy in structuring hospitals, with independent structures for patient care and administrative matters has been criticized for not recognizing the complex nature of hospitals, and ignoring the benefits of joint decision making (Ashmos et al., 1998). The administrative detachment from clinical issues could make it hard for non-clinician executives to appreciate clinical operations and accurately diagnose safety or improvement needs (Singer et al., 2003). A study of organizational structure by Carney (2004) involving directors of nursing from Irish acute care hospitals found a flat-structure model to have advantages over a complex-structure model. The flat-structure-model was widely perceived to enhance downward communication flow and permit involvement in strategy development, whereas the complex-structure model was associated with exclusion in policy making, poor communication flow and limited access to senior management (Carney, 2004). The transition for some independent hospitals to becoming part of integrated delivery systems, involving changing power dynamics and linkages with other healthcare organizations, has resulted in new structures with their own implications (Zinn and Mor, 1998). Lee and Alexander (1999) suggested that in the continuously changing healthcare industry, it may be necessary for hospitals to reconstruct their organizational structures in line with new frames of strategy. There is decreased importance for hierarchical authority structures and increasing importance for structures that enhance communication and consensus building in the healthcare context (Boon et al., 2004).

The structuring of services within healthcare organizations comes with its own implications (Jain et al., 2006, Boon et al., 2009, Jansen, 2008). A common structure adopted by healthcare systems for providing patient care is the clinical service line (Duffy and Lemieux, 1995, Bowers and Taylor, 1990, Greenberg et al., 2003). The clinical service line is “an organizational arrangement for planning, marketing, and/or coordinating multiple disciplines in the delivery of services defined by a disease, population group or clinical intervention” (Byrne, 2006, p28). The utilization of multiple disciplines and professions, structured around clinical outputs has enabled

service lines to achieve the goals of efficient and effective care in health systems (Jain et al., 2006). Boon et al. (2009) differentiates between interdisciplinary collaboration and integration models. Professional autonomy, identity and boundaries are maintained with a collaboration model, while the integration model for service delivery utilizes a common governance structure and the blurring of roles and responsibilities (Boon et al., 2009). Shared understanding of patient needs, common professional language and criteria, and agreed upon standards among professionals from multiple disciplines characterizes the functioning of an integrated healthcare service (Kodner and Spreeuwenberg, 2002). As complex diagnoses and treatment methods make it increasingly difficult to serve patients in disciplinary silos (Bronstein, 2003), health service structuring may have elements of both clinical service line and integrated care models.

Services structured to provide interdisciplinary care have the potential benefits of improved patient outcomes (Tieman et al., 2007), conserving inpatient resources (Racine et al., 1998) and good quality of care (McPherson et al., 2001). The adoption of common goals and common values in serving patients through teamwork (Ray, 1998) might offer insights on the benefits derived from interdisciplinary service structures. However, there remains challenges rooted in traditional role politics and economic factors facing the implementation of interdisciplinary care structures (Jansen, 2008). Despite workforce flexibility legitimizing the blurring of interprofessional role boundaries (Nancarrow and Borthwick, 2005), jurisdictional competition can result in healthcare professionals reverting to their traditional model of healthcare delivery (Sicotte et al., 2002). The staffing constraints of healthcare organizations can limit the human resources necessary for comprehensive interdisciplinary services (Casarett et al., 2002). In line with HR dimensions of interdisciplinary care, it has been recommended that health services managers engage clinicians directly in balancing clinical autonomy with transparent accountability (Degeling et al., 2003).

### **2.9.7 Healthcare leadership**

Leadership is often connected with organizational and service structure in healthcare (Hoff, 2004). In healthcare organizations, organic structures are likely to be associated

with a transformational leadership style while bureaucratic structures are often connected to transactional leadership (Brazier, 2005). Organic structures are characterized by flexibility and teamwork (Rahimnia and Moghadasian, 2010), therefore complementing the involvement (Nielsen et al., 2008) and empowerment (Dixon, 1999) approaches of transformational healthcare leadership. The transactional leadership style reflects a leader-follower relationship of exchanges where followers receive certain rewards for behaving according to their leader's directions (Den Hartog et al., 1997). The directive style of transactional leadership (Cleary et al., 2005) is likely to be promoted in bureaucratic healthcare organizations with an emphasis on staff control mechanisms (Koeck, 1998). Structural distance between leader and follower in a public healthcare context was found to moderate the relationship between transformational leadership and organizational commitment (Avolio et al., 2004). It has been proposed that hospitals do not fit the bureaucratic model as frontline healthcare professionals expect autonomy to exercise judgement in clinical matters, based on their expertise, skill and knowledge (Oni, 1994). Nevertheless, in complex healthcare environments, managers are likely to require both transformational and transactional competencies in leading healthcare professionals (Kleinman, 2004).

Modern healthcare environments require leaders to cultivate sophisticated talent for achieving measurable outcomes, effectiveness and evidence based management (Steffl and Bontempo, 2008). A study involving senior US hospital managers indicated that hospital leaders have to demonstrate visible commitment for project implementation, and communicate a common vision to hospital staff (Poon et al., 2004). A study of dementia care units in Sweden had staff expressing the desire for explicit, clear, knowledgeable and accessible leadership on a daily basis (Albinsson and Strang, 2002). Strong and committed physician leadership has been found to be a dominant success factor for improving patient care in the hospital setting (Bradley et al., 2001). On the other hand, a lack of leadership has been shown to have adverse implications in the healthcare context (Feng and Manuel, 2008, Kanji and Moura e Sá, 2003, Olofsson et al., 2003). A lack of leadership was linked to hindering the success of total quality management programs in NHS hospitals (Nwabueze, 2001). Unsupportive leadership has been reported as a factor associated with ill health and absenteeism among healthcare personnel (Jinks et al., 2003). A systematic review by Cummings et al. (2010) of literature pertaining to nursing leadership styles indicated that leadership

focused on task completion alone was insufficient for achieving desired workforce outcomes. It was suggested that leaders with relational skills and concern for their employees are necessary to enhance staff satisfaction, recruitment, retention and work environments in healthcare organizations (Cummings et al., 2010).

### **2.9.8 Healthcare staff recognition and reward**

Bodinson (2005) highlighted the need for leaders to use recognition in reinforcing behavioural standards aligned with a commitment to healthcare excellence. The pay-for-performance model which links quality of care with the level of payment for healthcare services is advocated as an approach that promotes cooperation from doctors in increasing efficiency and public reporting (Corrigan and Ryan, 2004). Performance related payment is compatible with the use of team performance as a healthcare outcome measure, where inefficiency is curtailed through internal monitoring (Bloor and Maynard, 1998). Reward structures are reported to be integral in driving cooperative behavior related to clinical education and staff development learning systems (Ladyshewsky, 2006). Failure to recognize and reward healthcare professionals or provide adequate incentives and acknowledgement for their services and efforts has been linked to various detrimental outcomes such as low motivation (Leshabari et al., 2008), work stress (Van Vegchel et al., 2001), low job dissatisfaction (Votmer et al., 2012), poor service quality (Theodorakioglou and Tsiotras, 2000), and staff turnover (Khowaja et al., 2005).

Ideally, creation of value and good outcomes for patients should determine the rewards for professionals in health systems (Porter, 2010). Research exploring high performance healthcare facilities indicates that in driving and sustaining high performance for healthcare organizations, the reward and recognition of clinicians deserves due attention through formal and informal means (Wolf, 2008). High performing healthcare organizations have been found to have dynamic, flexible reward structures with an element of choice compared to the mechanistic, inflexible, rule bound reward structures of low performing healthcare organizations (Martin, 1994). Some of the reward and recognition approaches that have been utilized for healthcare staff include loyalty vouchers and staff awards (Keating, 2007), promotion opportunities and career



development (Mok and Au-Yeung, 2002), paid registration for continuing education and paid academic tuition (Alspach, 2003), monetary incentives (Scott et al., 2011) and bonuses (Rosenthal and Frank, 2006). Informal appreciation for clinicians might come from managers (McConnell, 2005) and their colleagues or team members (Paliadelis et al., 2007). It is acknowledged that many healthcare professionals find their roles intrinsically rewarding (Parry-Jones et al., 1998, Parker et al., 2007, Edwards et al., 2000, Marshall and Harrison, 2005) and often receive appreciation from their patients (Bartos et al., 2008, Fosbinder, 1994, Gunderman and Huynh, 2007).

The managerial goodwill to recognize and reward clinicians' efforts is often hindered by limited funding and financial constraints in public healthcare organizations (Hoque et al., 2004, Pollitt et al., 1988). Failure to reward staff in healthcare has also been attributed to a 'crystallized' bureaucracy where a successful team may not be rewarded due to a lack of recognition for team achievements (Graber and Kilpatrick, 2008). Determining meaningful and significant options or alternatives for rewarding healthcare staff depending on context could be a step in appreciating clinicians and consequently ensuring quality of patient care. A study by Younies et al. (2008) in the United Arab Emirates found that healthcare workers' reward and recognition preferences in both private and public sectors were generally similar, with material rewards being prioritized. However, the reward and recognition of clinicians should not focus excessively on financial incentives given the complexity of worker motivation which encompasses elements of economics, psychology, organizational development, HRM and sociology (Franco et al., 2002).

### **2.9.9 Healthcare staff development**

Staff development is generally accepted as being beneficial for healthcare workers and to contribute towards positive performance outcomes (Lammintakanen et al., 2008, Wilcock et al., 2009). Besides resulting in enhanced clinician knowledge and skills, professional development in healthcare is positively linked to staff satisfaction, staff retention and quality patient care (Levett-Jones, 2005). It is suggested that staff development specialists can improve the quality of care by ensuring clinicians are taught the skills to search and evaluate evidence, and by promoting the support and

reward of evidence-based practice in healthcare environments (Krugman, 2003). Healthcare staff training and development cover areas that include mandatory education (Franck and Langenkamp, 2000), communication skills (Brown et al., 1999), teamworking (Nielsen et al., 2007), quality improvement (Boonyasai et al., 2007), leadership (McAlearney, 2006) and clinical skills (Hilsenroth et al., 2002).

A variety of approaches have been utilized and encouraged to promote healthcare staff development (Waddell and Dunn, 2005, Plastow and Boyes, 2006, Beaubien and Baker, 2004, Bartlett, 2001). For nursing staff development, peer coaching which builds upon prior knowledge and skills is advocated as a viable method for ensuring the transfer of skills and behaviours learnt in training to clinical practice (Waddell and Dunn, 2005). Multidisciplinary continuing professional development group activities such as journal clubs have the advantage of improving team working across traditional professional roles and enabling better service delivery (Plastow and Boyes, 2006). Beaubien and Baker (2004) reported that while the association between simulation training and patient safety outcomes has not been clearly demonstrated, the use of simulation for training teamwork skills in healthcare has been found to improve teamwork attitudes and behaviours. A study by Bartlett (2001) involving 337 registered nurses from five hospitals found significant relationships between organizational commitment and aspects of training such as duration, access, learning motivation, support and perceived benefits.

Despite the wide range and reported benefits of healthcare development options, healthcare staff and managers have indicated that training and education practices are under-developed (Lammintakanen et al., 2008). Without processes to measure the impact of education activities for clinicians, resources for education are often reduced or eliminated when healthcare organizations are seeking to cut costs (Lindy and Reiter, 2006). There is a need for accessible, flexible and portable development solutions as staff shortages and work pressures are a major obstacle in enabling clinicians to attend training (Ward and Wood, 2000). Efforts to promote healthcare staff development could consider evaluating and revising the required scope, objectives, benefits and work system considerations when implementing the range of existing education and training options.

### **2.9.10 Healthcare staff well-being**

To promote the provision of quality patient care, managerial efforts in healthcare organizations have strived to maintain the well-being and satisfaction of staff responsible for service delivery (Medland et al., 2004, Goetzel et al., 2002). Besides the provision of rewards and development for healthcare staff discussed earlier, organizational efforts to enhance the well-being of clinicians have included flexible work conditions (Stagnitti et al., 2006), professional support (Steenbergen and Mackenzie, 2004) and adequate staffing (Eisenberg et al., 2001). Allied health staff who participated in a study by Stagnitti et al. (2006) indicated that the intention to stay in their current job was attributed to flexible work conditions, having autonomy and support, and perceived variety of clinical and management experience. In semistructured interviews conducted by Steenbergen and Mackenzie (2004), new graduate occupational therapists highlighted the importance of professional support in developing independence and other skills. Eisenberg et al. (2001) argued for the importance of having an adequate number of staff with the appropriate blend of skills, and determining effective patient-staff ratios for healthcare professionals in improving the organizational workplace.

Some factors that have been identified as detrimental to the well-being of staff in healthcare organizations include leadership issues (Coomber and Barriball, 2007), lack of managerial support (Bennett et al., 2001) and work overload (Firth-Cozens, 2001). A systematic review by Coomber and Barriball (2007) pertaining to turnover for hospital-based nurses found that leadership issues are linked to dissatisfaction and turnover for nurses. A questionnaire study by Bennett et al. (2001) involving ward-based nurses revealed that a lack of management support was associated with work stress, negative mood states and low levels of work satisfaction. In a longitudinal study tracking doctors over a period of 11 years by Firth-Cozens (2001) organizational causes of poor patient care include clinician-stress factors such as work overload and sleep loss, and latent managerial factors of poor supervision and monitoring. Taking into account staff expectations, sources of dissatisfaction and work demands, the future direction of providing environments conducive for the well-being of clinicians might require more staff input and collaboration in determining HRM policy and practice.

### **2.9.11 High performance work systems**

Research concerning components of HRM highlights that different components can be critical in their own right for influencing various healthcare outcomes. Different HRM components may have varying results then when evaluated in an integrated manner, revealing both independent and combined influences on healthcare outcomes or performance measures. The concept of high performance work systems (HPWS) often encompasses a holistic range of best practice strategies that are useful for evaluating healthcare HRM components in an integrated manner (Leggat et al., 2011, Young et al., 2010, Bonias et al., 2010). The scope of HPWS in healthcare varies by study but attention generally focuses on elements connected to or related with the HRM work system. The HRM elements included in Lee et al.'s (2011) HPWS study were training and education, communication and compensation. Besides highlighting the importance of salary and promotion for employee job satisfaction, the study found that HPWS in healthcare organizations can have an influence on employees fulfilling their obligations and on service quality (Lee et al., 2011). In a study of 113 Veterans Health Administration ambulatory care centers, HPWS characteristics that included the existence of rewards, communication, empowerment and teamwork were linked to employee perceptions of their ability to deliver high-quality customer service (Scotti et al., 2007). A case study in the Dutch healthcare sector by Boselie (2010) evaluated the impact of HPWS aspects of training and development, remuneration and employee involvement in decision making. Remuneration was not significantly associated with commitment but the study found that staff training and development enhances commitment, and that enhanced employee involvement in decision making could lead to a high performance work climate among employees (Boselie, 2010).

The results from key HPWS studies reflect the contextual nature of healthcare HRM (Dieleman et al., 2009) which may be influenced by workforce characteristics (Spinks and Moore, 2007), desired service outcomes (Harmon et al., 2003) and specific organizational structures (Buchan, 1999), constraints (Withanachchi et al., 2007) or goals (Lowe, 2002). An analysis of challenges facing healthcare organizations confirms that the contextually complex task environment of hospitals can have implications for aspects of professional development, socialization, leadership, integrations and control (Ramanujam and Rousseau, 2006).

### **2.9.12 Healthcare HRM and teamwork**

It can be seen that the scope of HRM's related elements that has been researched in healthcare is comprehensive. However, the interface and link between HRM and teamwork has been given less attention. For example, in studies that did relate to teamwork, the HRM and teamwork link to performance in healthcare was limited to HR directors providing information about the percentage of staff in the hospital working in teams (West et al., 2002, West et al., 2006). Considering the multidisciplinary effort needed for the delivery of healthcare today, this needs attention. Healthcare studies should ideally devote more attention to the possible role HRM might play in enhancing team functioning.

Though the limited studies on HRM in healthcare may be perceived to reflect an absence of significant HRM linkages with team functioning, such associations should not be ruled out. An evaluation by Purcell et al. (2003) at the unit level in a UK hospital found that marked positive changes in employee attitudes took place in response to improved people management. The improvement efforts involved careful selection, emphasizing leadership skills beyond just medical competence, providing support and training to frontline managers, and by introducing a new 360-degree appraisal system for which the manager would have responsibility (Purcell et al., 2003). As selection, training and support in a healthcare setting can produce positive results, it is thus probable that the recruitment of team players and provision team training might induce team functioning that could translate into improved performance. At the same time, it has been shown that healthcare teams sometimes receive little organizational support. It was reported that there was limited evidence of multi-disciplinary teamwork and organizational support for team working in eight teams within the UK NHS (Bamford and Griffin, 2008). The question then becomes: what support is needed? Based on the literature review, studies on HRM in healthcare have not specifically explored the association between HRM's influence and team functioning. Research is needed to determine in what contexts HRM does influence team functioning and the ways in which teamwork in healthcare services is affected by HRM. This research is positioned to make a contribution to fill this research gap. The next section shifts to rehabilitation services in order to document aspects of the study's research setting.

## **2.10 Rehabilitation services**

The effective team functioning of a rehabilitation service would be important in allowing it to fulfill its role, which as described by Warren and Manderson (2008), is to provide patients with the skills and tools designed to enable them to return to their former life. A more comprehensive description of rehabilitation services states that:

“(Such teams) address clients’ functional impairments, activity and participation restrictions, and any environmental barriers impacting on their ability to carry out personal, domestic and social activities of daily living”

(Graham and Cameron, 2008, p392).

It follows that rehabilitation aims to play a crucial role in helping patients in coming to terms with often devastating bodily disruption, and learning strategies to minimize these effects (Warren and Manderson, 2008).

Teamwork in rehabilitation services is not only deemed necessary but is seen as a critical component in the delivery of effective rehabilitation medical services. Gibbon et al. (2002) regards teamwork as the cornerstone of rehabilitation and it is recognized that the skills of a multiprofessional team are required to provide the care and interventions necessary to maximize the patient’s potential to recover from his or her stroke. For example, a study by Stresser et al. (2005), evaluating the relationship between rehabilitation team functioning and stroke patient outcomes, concluded that characteristics of team functioning predicted selected rehabilitation outcomes. It is no surprise that decades ago Wright (1959) advocated that professionals from several health disciplines must work together with the client, in planning, developing and evaluating rehabilitation effects.

The teamwork dependant role of rehabilitation puts forward a great challenge to the rehabilitation team which, arguably, has one of the more diverse memberships in healthcare. Rehabilitation patients are typically treated by multiple personnel. The range of disciplines involved in rehabilitation services can stretch from medical specialties (psychiatry, internal medicine and orthopaedics) to physiotherapy, occupational therapy, speech pathology, social work, clinical psychology, neuropsychology, orthotics/prosthetics, nutrition and recreational therapy (Mullins et al., 1994). From the broad range of professionals involved in rehabilitation, we can see that the field has

grown since originating from the need for comprehensive long-term healthcare to treat vast numbers of injured servicemen after World War I and II (Mullins et al., 1999). Given the historical existence of rehabilitation in the medical field and the potential diversity of a rehabilitation team, important research has been done in this field.

Based on literature associating team work with rehabilitation service delivery, there is evidence that elements of team functioning play a role in the delivery of rehabilitation services. Mullins et al. (1999) reasons that because patients are often ‘co-treated’ between disciplines, ongoing communication and coordination of care is essential to the rehabilitation process. Besides communication and coordination, other elements of team functioning may impact on rehabilitation outcomes depending on internal and external influences as well as the context in which the team operates. For example, it was concluded that stroke patients treated by rehabilitation staff who participated in a team training program were more likely to make functional gains than those treated by rehabilitation staff receiving information only (Strasser et al., 2008). However, not all interventions towards team functioning appear favorable. The Gibbon et al. (2002) study concluded that the introduction of coordinated team approaches (team notes and care pathways) do not improve attitudes to teamworking and teams in rehabilitation appear to take a long time to establish cohesion and develop shared values.

Rehabilitation service effectiveness is assessed by the restoration of function for patients using procedures and goals which focus on patients’ performance, rather than the cure of disease as in other medical specialties (Keith, 1998). Rehabilitation patients are typically assessed and monitored in functional areas of self-care, sphincter control, mobility, locomotion, communication and social cognition using the 18 item functional independence measure scale (Tesio et al., 1996, Mackintosh, 2009, Hammond et al., 2001). The scale scores provide an indication of patient ability with high scores reflecting greater functional ability and low scores corresponding with poorer functional ability status (Rolland et al., 2004, Aprile et al., 2006). More independent patients are likely to receive home discharges compared to less independent patients who might require continued professional care in a healthcare facility (Black et al., 1999). Inpatient rehabilitation facilities often bridge the gap between acute hospital stay and patients’ return home (Durkin et al., 2010). However functional improvements and discharge destination for patients can and is often influenced by patient demographics or

characteristics (Mallinson et al., 2011, Harvey et al., 1998). In a study by Mallinson et al. (2011) examining differences in rehabilitation outcomes of patients after lower-extremity joint replacement, healthy patients with social support could be directly discharged for home care, while sicker patients may require 24-hour medical and nursing care. Patients with neurologic impairment and physical disability can influence inpatient rehabilitation length of stay with such patients requiring longer hospitalization for adequate recovery and safe discharge (Harvey et al., 1998). Discharge planning issues have been reported to cause moral distress among rehabilitation professionals in cases when their recommendations for safe discharge plans are rejected by patients and families, and when resources are not available to provide the care needed (Kirschner et al., 2001).

While patient satisfaction is especially high in rehabilitation, it is recommended that due consideration be given to determining patient satisfaction in areas of progress and degree of return to independent living (Keith, 1998). Careful consideration of inpatient risk factors for death and emergency transfer to acute care is advocated for proper assignment of patients to rehabilitation levels of care (Wright et al., 1996). The efficiency of rehabilitation practice is often assessed based on patient functional gains achieved with duration of stay (Woo et al., 2008) and treatment resources (Patrick et al., 2001). Effective rehabilitation treatments plans and methodologies might not be encouraged if the costs are too high (Sonoda et al., 2004). In the US context, rising service costs have affected the professional composition of rehabilitation services with teams experiencing a lack of social workers and rehabilitation nurses (Flax, 2000). There is anecdotal evidence that increasingly tight funding for inpatient rehabilitation is connected with poorer care (Johnston et al., 2003). The cost issues in rehabilitation (Sonoda et al., 2004) coupled with increasing patient loads and demand for rehabilitation care (Simmonds and Stevermuer, 2007) makes a strong case for rehabilitation services to be managed efficiently and effectively in delivering and improving patient care.

From the above, and putting this all together, this research contributes to the body of knowledge by evaluating the impact of organizational or management coordinated approaches towards team working and performance in the rehabilitation field of



healthcare. The research attempts to investigate whether HRM influences rehabilitation team functioning in a way that leads to positive or negative performance.

## **2.11 Conclusion**

This chapter has reviewed the literature relevant to the research variables of the study. The next chapter, the third of the thesis, discusses the methods chosen to conduct the study, including the instruments selected to gather data about the constructs gleaned from the literature review and summarized in the research model to be tested (Figure 1.1 and 2.1).

## **Chapter 3: Research Methodology**

### **3.1 Introduction**

This chapter explains the rationale for, and details of, the research methods. The cross sectional study design for this project and its suitability in accomplishing study aims are advanced. The selection of services for participation and the process of gaining research access are outlined. Data collection and analysis techniques together with limitations of the study design are also presented. Sections covered in this chapter are: 3.2 General research approach and theoretical underpinnings; 3.3 Identification of variables, and justification of study instruments and research setting; 3.4 Study population and sampling strategy; 3.5 Human research ethics committee applications; 3.6 Participating hospitals; 3.7 Study participants; 3.8 Types of data; 3.9 Primary data collection; 3.10 Secondary data; 3.11 Data analysis; and 3.12 Limitations of the research methods.

### **3.2 General research approach and theoretical underpinnings**

A cross sectional approach (Mann, 2003) was selected to research the relationship between team characteristics, performance and HRM in rehabilitation services. A cross sectional study provides a ‘snapshot’ of the outcomes and the characteristics associated with it (Levin, 2006). The use of a cross sectional study at a single point in time which can study multiple outcomes (Mann, 2003) supported the research aims of the study. It is unknown how elements of HRM influence team characteristics and performance in rehabilitation teams. The study has both descriptive and analytic dimensions. It provides an overview of team characteristics, performance and HRM, and enables an assessment of associations between the three study domains in rehabilitation services from public hospitals. Given the research gap identified, the multi-faceted nature of the research and the time frame for completing this research, a longitudinal study would not have been suitable or practical. However, the study sets the stage for a longitudinal investigation to be conducted from the point at which this research ends.

The study utilizes a mix of quantitative and qualitative methods that are elaborated in this chapter. The methods used are: a questionnaire survey for examining team characteristics and overall job satisfaction; individual and focus group interviews in

evaluating HRM policy and practice; document analysis for determining contextual organization, service and team information; and secondary database analysis for assessing clinical performance. Mixing quantitative and qualitative approaches for achieving a study's aims is an increasingly popular research approach (Creswell et al., 2004, Greene and Caracelli, 1997, Johnson et al., 2007, Caracelli and Greene, 1993) primarily rooted in the philosophy of pragmatism (Datta, 1997, Feilzer, 2010, Morgan, 2007). Pragmatism advocates a pluralist approach to research, therefore supporting practical methodological needs in answering research questions (Johnson and Onwuegbuzie, 2004). The different approaches to evaluating and measuring the mix of study elements, and the aim of providing an explanatory perspective for the association between HRM, performance and team characteristics presented a strong case for adopting the pragmatism of a mixed methods approach for this study (Teddlie and Tashakkori, 2012).

Among the variations of mixed method research is the design which employs both quantitative and qualitative methods. This design is used to evaluate the same specific construct or phenomenon in a study (Jick, 1979, Moffatt et al., 2006, Leech and Onwuegbuzie, 2009). The complementary mixed format utilizes in the same study, quantitative methods for some constructs and qualitative methods for other constructs (Tashakkori and Creswell, 2007, Sale et al., 2002, Denscombe, 2008). This study adopts the latter approach with quantitative and qualitative data sets representing different research domains and variables, applied in parallel. Quantitative approaches were used for the evaluation of team characteristics and the study's performance measures, i.e., job satisfaction and clinical indicators. The evaluation of HRM policy and practices was carried out through qualitative analysis. The parallel combination of methods from different research paradigms fulfills a complementary purpose in illuminating different aspects of a broad research question (Kelle, 2006).

In this study, combining results from the mixed method approach was deemed appropriate for the study aim of contributing team characteristics explanations for the HRM-performance link. Though the case study method with quantitative and qualitative elements was considered as an alternative approach for achieving study aims, this method was rejected due to its design being more appropriate for studying complex associations within complex systems (Yin, 1999).

The theoretical underpinnings of the study are largely positivist, relying upon logical analysis and the testing of propositions (Poole and Jones, 1996). The positivist line of inquiry often emphasizes objectivity in solving research questions (Playle, 1995), numerical data (Johnson and Onwuegbuzie, 2004) and inferential statistics (Lee, 1991), and structured research frameworks (Giddings, 2006). This study's positivist inclinations stem from the formulation of a conceptual framework (Figure 1.1 and Figure 2.1) to guide inquiry. The framework supported the quantitative evaluation and comparison of team characteristics and performance, and the pre structured qualitative assessment of HRM based on themes derived from existing literature.

The study also adopts an interpretivist world view, which considers and allows for many possible truths for a particular construct or phenomenon (Jacobson and Jacques, 1997). The interpretivist paradigm is associated with subjectivity in determining associations and explanatory perspectives (Roth and Mehta, 2002), the recognition of contextual nuances in interpreting findings (Black, 2006), and the bottom-up identification of themes and emerging ideas from research findings (Leitch et al., 2010, Bevir, 2004). The study's interpretivist underpinnings are evident in the linking of disparate variables within the study's theoretical framework, the recognition of contextual themes arising from qualitative data analysis, and the interpretive discussion of combined quantitative and qualitative findings.

Informed through positivist and interpretivist underpinnings, this study reflects the paradigm pluralism that commonly underlies mixed method research (Teddlie and Tashakkori, 2012). The justification of variables, study instruments and research setting is presented next.

### **3.3 Identification of variables, and justification of study instruments and research setting**

This section details criteria, options and decisions made in finalizing variables, study instruments and the research setting of the study. Areas covered include team characteristics, performance, HRM, rehabilitation services and overview of variables within the study's theoretical framework.

### **3.3.1 Team characteristics**

Three categories of team characteristics are taken into account in this research. Exploring literature on each team characteristics category contributed in selecting the most relevant list of items for this research. I begin with structural team characteristics.

#### *3.3.1.1 Structural team characteristics*

Given the possibility of structural team characteristics affecting team processes, this research gave due attention to this category in designing the study. Structural team factors are standardized as much as possible in this research. Rehabilitation services can generally be divided into four different types: full service, specialist service, supervised allied health service and unsupervised allied health service (Graham and Cameron, 2008). This research focuses on public full service rehabilitation services located in the Sydney basin that serve a general patient population. Some full service rehabilitation services are devoted to geriatric patients. It was originally intended for this research to use a sample that would include any full service rehabilitation service in Sydney. However, as the patient populations may influence performance in healthcare (Gene-Badia et al., 2008), the research was focused on full rehabilitation services that cater to the general population. However, one of the participating services while also a full service rehabilitation provider, catered for stroke rehabilitation patients and this difference is taken into account in the discussion of findings. The choice of rehabilitation services in the public sector for this research is elaborated in a subsequent section of this chapter. Team composition in this study is considered a derivative of individual team member characteristics' items rather than a structural team factor. This differentiation avoids overlap and aids in defining both categories of team characteristics distinctly.

Structural team characteristics of team size and team tenure were chosen for evaluation in this study as they are likely to vary across teams from different public healthcare organizations. As seen in the literature pertaining to team size in healthcare, there is a possibility of team size influencing team outcomes (Borrill et al., 2000, Molyneux, 2001, Williams and Laungani, 1999). Team tenure was selected as a team structural characteristic as it would provide an indication of the teams' experience and age. Team

tenure could reflect informal learning and experience which may have been documented or passed on verbally to team members. Thus, the accumulation of learning and experience can be partially judged based on team tenure. Due to possible turnover and changes in team membership before the research commenced, team tenure might not give an accurate estimate on the duration in which all current team members have been working together. However, the item, current rehabilitation team experience, selected under the individual team member characteristics category, should overcome this issue. Selection of individual team member characteristics is covered next.

### *3.3.1.2 Individual characteristics of team members*

This research takes into account seven individual characteristics of team members. Individual team characteristics items utilized cover the common demographic items gender, age and profession, as well as country of professional training, professional healthcare experience (months/years of experience in current profession), rehabilitation team experience (months/years of experience as a rehabilitation team member), and current rehabilitation team experience (months/years of experience in current rehabilitation team). These seven items were selected based on their potential in influencing research outcomes.

The common standard items gender, age and profession were adopted as they have been utilized in studies on teams for correlation with other healthcare variables (Goni, 1999, Borrill et al., 2000, Temkin-Greener et al., 2004). It was highlighted in an exploratory study on the issue of creating effective teams that racial, ethnic, and gender differences matter, and profession is an important item in the conceptualization of culture (Messerman, 1999). Education was not selected as an item as it overlaps with profession.

To account for cultural values that might affect communication and relationships with other team members, country of professional training was chosen over racial ethnicity. Country of professional training would reflect nurtured cultural values specific to a healthcare context. It has been noted that not recognizing differences in experience devalues the skills and many years of experience of senior team members (Øvretveit, 1996).

The importance of experience among team members influenced my decision to use three items to cover the different dimensions of experience among team members. Just as team members can have varying lengths of experience as healthcare professionals, the length of experience in rehabilitation services can also vary by individual team member. Therefore I utilize two separate items to distinguish professional healthcare experience from rehabilitation team experience.

The last item, experience in current rehabilitation, was included as some team members could be new to the current rehabilitation team while others could be senior members. It has been mentioned that practitioners often remark on the differences between their current team and others in which they have worked (Øvretveit, 1996). By selecting three items relating to experience it would be possible to explore in relation to team functioning and performance, whether a longer length of experience in one item can compensate for a shorter length of experience in another item.

### *3.3.1.3 Team functioning*

A range of alternatives were considered in selecting the indexes for evaluating team functioning in this research. One of the first tools considered but rejected was the SYMLOG which is used to measure interpersonal behavior in groups (Cashman et al., 2004, Farrell et al., 2001). The 26-item SYMLOG rating scale measures each member's perception of each other team member on three orthogonal dimensions, namely, prominence, sociability and task orientation (Farrell et al., 2001). While the prominence dimension which measures assertiveness and dominance of team members is unique to the SYMLOG, the sociability dimension clearly relates to communication, while the dimension task orientation of established authority can also be interpreted as the meeting of organizational quality standards. Cashman et al. (2004) used the SYMLOG in a longitudinal study of an intervention to enhance interdisciplinary team functioning in a primary care setting. In Farrell et al.'s (2001) study of geriatric teams using the SYMLOG, evidence was found that as teams develop from early to later stages, the interpersonal behavior of members becomes less differentiated on all three SYMLOG dimensions.

While the SYMLOG is a reliable team evaluation tool, it was not chosen for two reasons. First, it does not evaluate team member perception of the team as a whole but measures each member's perception of each other team member. Second, the tool uses 26-items to measure only three orthogonal dimensions: prominence, sociability and task orientation (Farrell et al., 2001). It is intended that the selected team functioning tool in this study cover a broader range of team dimensions.

After ruling out use of the SYMLOG, literature then pointed to the TCI (Anderson and West, 1996) as the preferred tool to evaluate team functioning. The TCI has been sufficiently validated and used quite extensively in healthcare studies in many countries (Anderson and West, 1996, Anderson and West, 1998, Williams and Laungani, 1999, Ylipaavalniemi et al., 2005, Loo and Loewen, 2002, Poulton and West, 1999, Bower et al., 2003, Gosling et al., 2003, Kivimäki and Elovainio, 1999). The TCI evaluates team climate for innovation based on four factors namely vision, participative safety, task orientation and support for innovation. It contains a social desirability scale to determine impression management (Anderson and West, 1996).

Unlike the SYMLOG, the TCI evaluates team member perception of the team as a whole. However, the TCI comes with some caveats that resulted in a search for an alternative tool. Being a commercial tool, using the TCI would incur an expensive fee for the researcher. Usage of the commercial TCI would not allow any refining or tailoring of the questionnaire to suit local language nuances. The tool uses 44 items to measure the four dimensions along with the social desirability scale. The TCI thus was judged to be a specialized tool, not fulfilling the criteria for the selected tool to be as comprehensive as possible in evaluating a broad range of team functioning dimensions.

While the TCI has an additional dimension compared to the SYMLOG, its range of team functioning dimensions is still limited. An alternative would be to use the TCI in conjunction with another tool. However, due to the number of items in the TCI, combining or using the TCI with another tool would result in an excessive amount of items that could be burdensome for respondents.

Analysis of the TCI was not in vain as factors in the TCI provided a valuable benchmark for team functioning characteristics. The TCI's variable vision mirrors the characteristics goals and objectives. Participative safety from the TCI corresponds to



some degree to communication, relationships and social climate, while task orientation has parallels with a quality focus. While largely unique, the support for innovation factor in the TCI resembles the variable innovation that has been considered in a study by Strasser et al. (2005).

The search for a tool with a more comprehensive range of characteristics led to an evaluation of Strasser et al.'s (2005) 10 scales assessing team member perceptions of team functioning. The tool was developed specifically for evaluating rehabilitation teams and coverage of team functioning dimensions was more comprehensive than other team evaluation tools. Dimensions included communication, perceived effectiveness, physician involvement, physician support, teamness, utility of quality information, innovation, interprofessional relationships, order and organization and task orientation. The scales showed some close parallels with the TCI in terms of task orientation, innovation and communication.

Unfortunately after much scrutiny, it was decided that Strasser et al.'s (2005) scales would not be used for this research due to several shortcomings. Correspondence with the main author revealed that statements for the dimension utility of quality information in the tool did not prove helpful in the previous research he conducted. Strasser et al.'s (2005) scales were found to be lengthy, using more than 10 pages. As the respondents' questionnaire for this research would have to incorporate a job satisfaction tool and also collect data on individual team member characteristics, the tool for evaluating team functioning could not be excessive in length. Two out of the 10 scales in Strasser et al.'s (2005) tool focus on the physician. This could be perceived as biased, and might be resented by non-physician respondents. Nevertheless, while not adopted for this research, Strasser et al.'s (2005) 10 scales provided a valuable range of dimensions that guided the search for a suitable team evaluation tool.

It was finally decided that team functioning in this research be assessed using Thylefors et al.'s (2005) team type index, perceived efficiency index and team climate index. While Thylefors et al.'s (2005) study was published in English, the original indexes obtained from the main author were in Swedish. Upon translation, it could be observed that the indexes were very concise and easy to administer. The three indexes complement each other by providing a comprehensive evaluation of team characteristics that is relevant to effective team functioning. All three indexes have acceptable levels of

reliability and allow quantification of the team functioning characteristics. Using three team functioning indexes from the same authors would ensure no overlap in team characteristics that might result if tools from different authors were combined.

Thylefors et al.'s (2005) team type index determines team organization based on the level of integration using six dimensions: role specialization; task interdependence; coordination; task specialization; leadership; and role interdependence. Respondents would select one out of three descriptions for each of the six dimensions. Scores from the team type index are then used to categorize the team as either multiprofessional (low score), interprofessional (medium score) or transprofessional (high score). The grouping of teams based on the level of integration is a feature unique to the team type index and this was a factor in its adoption for this research.

The second team functioning index by Thylefors et al.'s (2005) to be adopted for this research is the perceived efficiency index. This index uses six items that include elements of goal consensus, work efficiency, team success, quality, meeting of patients' needs and satisfaction with team work. As mentioned by the authors, all items in the perceived efficiency index focus in one way or another on goal achievement. The perceived efficiency index reflects aspects of task orientation and quality focus which are critical aspects of team functioning found in the previous tools reviewed.

The team climate index, the third index to be adopted, was constructed based on McGregor's (1960) description of prerequisites for successful teamwork (Thylefors et al., 2005). Correspondence with the main author confirmed that the team climate index is a general measure of team working climate. It includes social as well as task oriented aspects. While the TCI specifically measures team climate for innovation, Thylefors et al.'s (2005) team climate index could be perceived as a general measure for successful team climate. The general team climate index used together with the team type index and perceived efficiency index fulfills the needs of this research to provide a broad evaluation of team functioning characteristics. The team climate index consists of 15 items which relate to feedback, interest and attention, empathy, listening, expressing one's position, ability to give and take, presence of an informal and supporting atmosphere, participation in team discussions, how disagreements and different points of views are dealt with, decision making consensus, expression of criticism, expression of feelings and opinions on factual questions, leadership style, task orientation and

encouragement of individual performance. While Thylefors et al.'s (2005) indexes may not include the support for innovation dimension of the TCI, support for innovation is evaluated qualitatively in this research as a factor in HRM's possible connection with team characteristics.

With the selection of Thylefors et al.'s (2005) indexes, factors for evaluating team characteristics in this research were finalized. Attention then shifted to identifying performance measures which might be assessed against, and correlated with, team characteristics in this research. One of the aims of this research is to analyze the relationship between team characteristics and performance in healthcare. While there have been many studies evaluating team characteristics, it should be remembered that teams with the supposedly desirable team functioning characteristics may not necessarily be associated with healthcare performance. This could be attributed to the scope and diversity of, and constant changes in, the medical field. What may work in one team setting may not work in another. Thus, the next sub section discusses how performance measures were determined for this research.

### **3.3.2 Performance measures**

In deciding suitable performance measures for this research, healthcare journals were explored to get an overview of available choices. It was clear that studying the association between performance and other healthcare variables is made complicated by the different definitions of healthcare performance that vary from one stakeholder or organization to another. Regulatory and accreditation bodies might define performance in healthcare based, in part, on clinical indicators, management may judge performance based on efficiency and effectiveness of healthcare workers, patients might evaluate performance based on the quality of care, while healthcare team members may desire job satisfaction. The issue of assessing performance in healthcare is further complicated by a lack of standardized performance measures other than clinical indicators. It was the challenge of this research to find a suitable niche to fill in the quest of correlating team characteristics with performance in healthcare.

In order to narrow down possible options in measuring performance in this research, several criteria were established. It was noted in reviewing the literature that high scores

in one measure of performance may not necessarily mean a high score in another performance measure. Thus to provide some checks and balances, it would be prudent to evaluate performance in healthcare on multiple dimensions, using both a primary and secondary data approach. Another criterion in choosing the performance measures was that at least one of the chosen measures should specifically reflect the performance of the team as a whole instead of providing a performance appraisal for an individual team member, such as a doctor or nurse, or even giving a measure of the entire healthcare organization's performance.

Using the criteria laid down for determining suitable performance measures, feedback was obtained from an expert in hospital performance and accreditation. This information directed this research towards the field of rehabilitation medicine where clinical indicators are actively collected. Rehabilitation medicine clinical indicators in Australia are standardized by the Australian Council on Healthcare Standards (ACHS) and clinical indicator data are routinely submitted by Australian rehabilitation services to the Australasian Rehabilitation Outcomes Centre (AROC). AROC rehabilitation clinical indicator data can be accessed by researchers upon obtaining permission from the respective healthcare organizations. This makes a cross sectional comparison across teams in different services possible. However, it was clear that private healthcare organizations would most probably delay or deny access to rehabilitation medicine clinical indicator data for commercial reasons. This research therefore focused on rehabilitation services in the public sector. Clinical indicators of rehabilitation services are unique compared to clinical indicators of other medical fields or general clinical indicators. They reflect the performance of the entire rehabilitation service rather than the performance of an individual team member or the entire hospital organization. The uniqueness of rehabilitation medicine clinical indicators can be explained by the fact that rehabilitation services outcomes are heavily dependent on the collective effort of all clinical team members.

Rehabilitation medicine clinical indicators which cover aspects of assessment, rehabilitation plan and program, provide a means for assessing the collective team effort required in rehabilitation services. Assessments, plans and programs in rehabilitation services require input from multidisciplinary team members from admission to discharge of patients. Clinical indicators give a different measure of patient outcome

quality compared to a patient satisfaction survey. Patients' satisfaction with a healthcare service may not necessarily mean that patients are receiving satisfactory medical treatment and care. There is the possibility that patients receiving poor quality of care might still voice satisfaction if team members are pleasant and courteous or if the health service has impressive and luxurious facilities. On the other hand, poor clinical indicator scores could indicate problems in the rehabilitation service delivery that could adversely affect patient well-being.

Rehabilitation medicine clinical indicators included both process and outcome indicators. The decision to adopt rehabilitation medicine clinical indicators for this research determined not only the source of secondary data for the study but also the service setting, and as highlighted later in the elaboration on the selection of rehabilitation services, the sector of focus. The adoption of indicators as a measure of performance influenced the search for a second measure of performance that was based on primary data. Despite the limitations of patient' satisfaction mentioned in the previous paragraph, it was considered as a performance measure which would add a marketing dimension to the proposed research. However, this measure was dropped as it could potentially delay the research. Collecting patient data could require a lengthy ethics approval application and it seemed that there was a possibility that approval may not be granted to a non-clinician researcher.

The rejection of patient satisfaction as a performance measure led to the option of measuring performance from the perspective of rehabilitation team members' satisfaction. It was decided that job satisfaction of team members will be used for this research and evaluated using a customized version of the overall job satisfaction scale (Warr et al., 1979). The 15 item scale has good psychometric properties and has been used in healthcare and industrial contexts worldwide (Proudfoot et al., 2007). Being a non-commercial tool, the overall job satisfaction scale can be modified and tailored to suit the proposed research. As the original tool which needs to be administered to team members uses a total of only 15 items, combining it with the individual team member characteristics items and team functioning indexes would not result in an excessively long and cumbersome questionnaire.

It could be argued that overall job satisfaction may be attributed to many factors other than team characteristics. Items in the scale such as rate of pay, way the hospital is

managed and job security may not have any connection with team characteristics. Nevertheless there is the possibility of effective team functioning resulting in a level of satisfaction which might lead team members to overlook negative aspects of their job. Team members who are satisfied with team functioning may register a high overall job satisfaction score despite poor physical work conditions, prolonged hours of work and lack of job security.

As research has shown job satisfaction to be associated with team functioning (Proudfoot et al., 2007), the overall job satisfaction scale would be a suitable tool to assess performance in this study. Job satisfaction might even be perceived an indication as to whether teams' effective functioning and performance on clinical indicators will be sustained. This is based on the assumption that a satisfied team is likely to have continuity in the level of service being delivered. It is clearly useful for the purpose of this research that items in the overall job satisfaction scale are connected with HRM. Items in the scale such as rate of pay, job security, hours of work and the way the hospital is managed are associated with HRM policy and practice.

With the selection of overall job satisfaction to complement rehabilitation medicine clinical indicators, this research settled on utilizing two measures of performance. The use of two measures of performance rather than one measure is commensurate with the multiple constituencies approach adopted in previous studies (e.g., Goni, 1999, Tsui, 1990). The approach is in line with the perspective that an organization can be said to be effective insofar as it meets the expectations of the different groups (Zammuto, 1984, Tsui, 1990).

Performance in this study relates to requirements and expectations of ACHS, AROC and rehabilitation clinical staff. Nevertheless, the use of clinical indicators as a measure of team performance would also be a measure of rehabilitation patient care quality. Assessing and optimizing the standard of rehabilitation services is one method of promoting the quality of service delivered to individuals with restrictions due to both acute and chronic conditions (Graham et al., 2008). The rehabilitation medicine clinical indicators are thus significant to patients and might be a deciding factor in patients' choice of rehabilitation service in the near future if such data were made public. That established, we move on to considerations in evaluating HRM's influence and association with team characteristics and performance.

### **3.3.3 HRM influence and association with team characteristics and performance**

The MBNQA Human Resource Development and Management (HRDM) category (cited in the previous chapter) was selected to guide the researching of HRM's link with team characteristics and the selected performance measures. The Baldrige model of quality management for healthcare has been tested in a study by Meyer and Collier (2001). Results show that many of the hypothesized relationships in the Baldrige model are correlated. The HRDM category as a reference in developing interview and focus group tools ensured that the HRM dimension received a manageable but comprehensive coverage in this research. While the Baldrige model with the HRDM category was designed as a framework for the American context, the model's quality focus gives it universal applicability. The Baldrige model criteria has been adopted or adapted for benchmarking quality in organizations by many countries (Flynn and Saladin, 2006). The adopted Baldrige model HRDM as used by Meyer and Collier (2001) was already tailored for assessing healthcare organizations. Language nuances were addressed through piloting in developing qualitative tools from the original model's HRDM category to ensure compatibility in the Australian context. The tailoring of the American model for assessing Australian healthcare organizations was in line with knowledge that Baldrige constructs can be strongly affected by dimensions of national culture (Flynn and Saladin, 2006).

The approach of using the original quantitative instrument to develop qualitative tools overcomes criticism of previous quantitative HRM performance research done in the field of healthcare, where feedback was only obtained from HR directors or managers using questionnaires. As will be elaborated further in this chapter, qualitative input on HRM policy and practice will be obtained from HR directors or managers and rehabilitation service members. The four areas of the HRDM category probed qualitatively were: HR planning and evaluation; healthcare staff work systems; healthcare staff education, training and development; and healthcare staff well-being and satisfaction. Clarified in Chapter 1, healthcare staff well-being and satisfaction refers to managerial efforts promoting staff satisfaction such as the rewarding of performance and having development opportunities, and thus differs from overall job satisfaction adopted as an outcome performance measure in this study. As indicated previously, a qualitative approach in assessing HRM gives greater methodological depth

to the research as team characteristics and team performance are assessed quantitatively. With this settled, discussion on the suitability of rehabilitation services for this study is presented next.

### **3.3.4 Suitability of rehabilitation services**

While an increasing number of medical fields are being evaluated using clinical indicators (Collopy, 2000, Simmonds and Stevermuer, 2007, Mainz et al., 2009), the focus on rehabilitation services in this research was influenced by the strongly collective effort needed for rehabilitation team functioning. Though the importance of team functioning in the delivery of healthcare seems to be growing (Mullins et al., 1999, Manser, 2009, Weaver et al., 2010), the delivery of some medical services may not be crucially dependant on team effort. In some medical fields such as psychiatry or pediatrics, performance may be largely dependent on one particular team member such as the specialist. On the other end on the continuum, rehabilitation service delivery and teams' outcomes are strongly linked to team effort (Eldar et al., 2008). As mentioned by Mullins et al. (1999), integrated team approaches have been considered the standard form of treatment in the rehabilitation context for over five decades.

A variety of collaborative treatment models have been proposed over the history of rehabilitation medicine. That is, the early multidisciplinary approach, followed by a focus on interdisciplinary efforts and the emerging transdisciplinary model (Mullins et al., 1994). This research builds upon this research trajectory by utilizing Thylefors et al.'s (2005) team type index which determines type of team organization - multiprofessional, interprofessional or transprofessional - based on the level of integration. Despite the years of research to understand and improve rehabilitation team functioning, Shaw et al. (2008) reports that little information is available that can assist rehabilitation professionals in enacting authentic transdisciplinary approaches in work practice contexts. It should be remembered that while a transdisciplinary team might theoretically be the most integrated form of team organization, it might not necessarily produce the desired outcomes in a rehabilitation team. It is also important to note that the numerous team characteristics and contexts vary from one rehabilitation team to another. A small rehabilitation team serving a geriatric patient population in a rural setting would



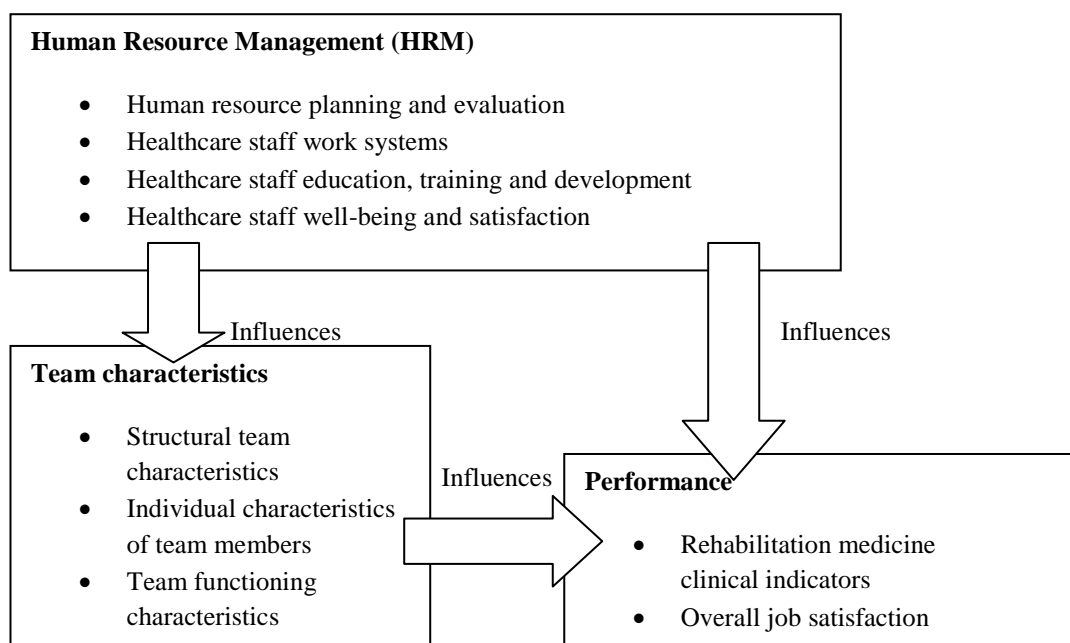
probably have different team functioning requirements and characteristics when compared to a large rehabilitation team serving a general patient population in an urban setting.

The focus on full service rehabilitation teams provides the greatest professional diversity and size among the four categories of rehabilitation service defined by Graham and Cameron (2008). The focus on services in public hospitals enabled access to data for evaluating team characteristics and job satisfaction through survey, conducting interviews and focus groups for HRM input, and facilitating access to clinical indicator data for measuring rehabilitation service performance. Having described the rationale and provided justification for the measures, an overview of research variables within the study's theoretical framework is presented next.

### 3.3.5 Overview of variables within theoretical framework

Figure 1.1 from Chapter 1 is re-presented to provide a diagrammatic overview of the variables selected for investigating the study's theoretical framework, and aid concluding points about them. In fulfilling the first study aim, three categories of team characteristics are assessed in rehabilitation services from public hospitals to determine the association between elements of teamwork with performance. HRM's impact through and without team characteristics on performance is evaluated in achieving the second aim of the research.

**Figure 1.1:** Variables adopted for study's theoretical framework



Structural team characteristics of team size and team tenure were adopted based on possible variation among participating services and potential influence on the services from the characteristics. The seven individual characteristics of team members selected are gender, age, profession, country of professional training, professional experience, rehabilitation team experience and current rehabilitation team experience. The seven individual characteristics of team members were selected based on their potential to influence team functioning and performance.

Team functioning was assessed using three indexes developed by Thylefors et al. (2005). The indexes which are the team type index, perceived efficiency index and team climate index were selected based on their comprehensive coverage of team functioning characteristics. No overlap in dimensions of team characteristics occurs when the three indexes are combined.

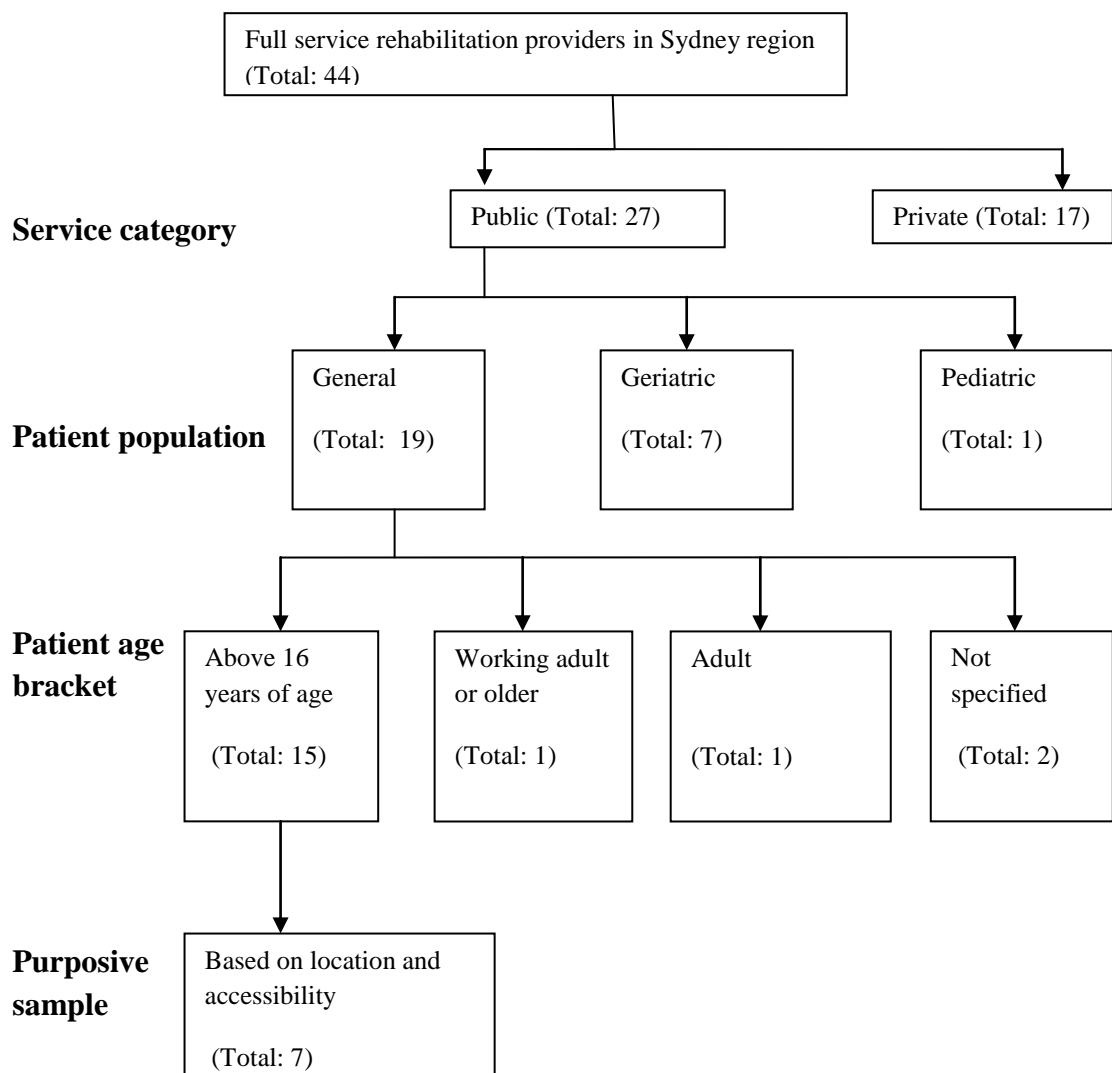
Performance was measured using rehabilitation medicine clinical indicators and the overall job satisfaction scale by Warr et al. (1979). Rehabilitation medicine clinical indicators were selected as they reflect the collective performance of a team unlike indicators from other fields of medicine or general indicators which might reflect the performance of a particular team member or the healthcare organization as a whole. The choice of rehabilitation medicine clinical indicators played a role in focusing this research on rehabilitation services. The overall job satisfaction scale was chosen due to its reliability in healthcare studies and since job satisfaction is related to both team characteristics and HRM.

Finally, areas of HRM evaluated were guided by the HRDM category from the MBNQA. The four areas from the HRDM category are: human resource planning and evaluation; healthcare staff work systems; healthcare staff education, training and development; and healthcare staff well-being and satisfaction. The four areas comprehensively cover the field of HRM and enabled a manageable evaluation of HRM's interface with team characteristics and performance in rehabilitation services. We move on to the study design considerations, starting with sampling issues.

### 3.4 Study population and sampling strategy

As mentioned in the introduction chapter, aggregated individual participant results from rehabilitation services provided the unit of analysis in achieving study aim. Searching in the Australasian Faculty of Rehabilitation Medicine (AFRM) website determined rehabilitation services fulfilling the research criteria of this study. In standardizing the sample to reduce confounding variations, services selected are similar in terms of service category (public full service), geographic location (Sydney) and inpatient population served (general). Figure 3.1 shows the breakdown of the rehabilitation services in Sydney from which the study sample was selected.

**Figure 3.1:** Breakdown of full service rehabilitation providers in Sydney for sample selection



It was ascertained through the AFRM website's search function that from the 44 full service rehabilitation services in Sydney, 27 were public services and 17 were private services. From the 27 public full service rehabilitation services identified, 19 catered to a general patient population, seven served geriatric patients and one was devoted to pediatric services.

The 19 services that catered to a general patient population could be further divided into four groups based on their specified inpatient age brackets, that is: (adult) patients above 16 years of age (15 services); working adult or older (one service); adult (one service); and not specified (two services). To obtain a significant sample of comparable services, this study focused on services offered to adult patients.

The targeted group with 15 services provided a structurally similar population of rehabilitation services from which a cross section was obtained. The list of 15 services was further narrowed according to the study's requirements and practicalities. One service was removed from the list due to it not being affiliated with AROC and therefore not collecting rehabilitation medicine clinical indicator data needed for this study. Two other services were excluded from the list due to their distant location from the researcher's base.

The narrowed list consisted of 12 services and a purposive sample of seven services was selected from these based on adequate geographic grouping in health service region, and with regard to researcher accessibility. The sample allows for the generalization of this study towards public full service rehabilitation providers serving a general patient population (above 16 years of age) in Sydney.

### **3.5 Human research ethics committee applications**

Applications to the relevant Human Research Ethics Committees (HREC) ensured that the study design had taken into account and addressed ethical concerns. This study went through two tiers of HREC applications. As a prerequisite for the study to proceed, an application was submitted to the HREC of University of New South Wales (UNSW). Upon approval from the university HREC (Ethics No 09215), an application was made to a state appointed lead HREC to fulfill New South Wales Health requirements for health services research (Ethics No HE09/339).

Efforts to secure access to the healthcare organization sites began upon the project receiving approval from the state appointed lead HREC. Formal letters explaining the study's objectives and requirements were sent to the selected healthcare organizations. In exchange for their willingness to be part of this research study, the participating public healthcare organizations were offered a presentation or summary of the research findings. An additional HREC approval was requested to fulfill a research governance office issue with the use of clinical indicator data. HREC approval was ratified by all research governance offices at the healthcare organization sites purposively selected for participation. Ratification by all the research governance offices enabled the study to proceed at all sites selected for the research. Brief descriptions of the participating sites and their inpatient rehabilitation services are now offered.

### 3.6 Participating hospitals

Rehabilitation clinicians and HR personnel were recruited from the seven enrolled healthcare organizations. Participating organizations were de-identified and named Hospitals A, B, C, D, E, F and G. General details of the participating hospitals and their respective rehabilitation services are included in Table 3.1.

**Table 3.1:** General details of the participating hospitals and their respective rehabilitation services

| Details                     | Hospital A      | Hospital B      | Hospital C      | Hospital D      | Hospital E      | Hospital F      | Hospital G      |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Hospital age                | >100 years      | >100 years      | >100 years      | <50 years       | >100 years      | <50 years       | <20 years       |
| Hospital beds               | >300            | >300            | <100            | <100            | >500            | <100            | >300            |
| Ownership                   | Public          | Private         | Public          | Private         | Public          | Private         | Public          |
| Classification              | Public hospital | Public hospital | Public hospital | Public hospital | Public hospital | Public hospital | Public hospital |
| Rehabilitation category     | General         | General         | General         | General         | General         | General         | Stroke          |
| Rehabilitation service beds | <25             | <30             | <30             | >50             | <25             | <30             | <25             |

Hospitals A, B, C and E were each more than 100 years old while Hospitals D, F and G were much younger. Hospital E had the most number of beds (>500) while Hospitals A, B and G each had more than 300. Hospitals C, D and F each had less than 100 beds. While all participating hospitals were publicly funded healthcare providers, Hospitals B,

D and F were privately owned facilities providing public services. As stated in Chapter 1, all participating organizations are classified as public hospitals. For Hospital G, participation was from the stroke rehabilitation service due to the hospital's general rehabilitation service declining to participate. Services from the other hospitals in the study were general rehabilitation services. The rehabilitation service at Hospital D had the most number of beds (>50). Hospitals B, C and F each had fewer than 30 rehabilitation service beds while Hospitals A, E and G each had fewer than 25 beds in their rehabilitation services. Rehabilitation service age defined as the structural team characteristic team size, and team tenure also defined as a structural team characteristic in the study, will be presented under team characteristics findings in the next chapter. We move on to the recruitment of individual study participants.

### **3.7 Study participants**

Study participants comprised both clinical and managerial staff. Clinical rehabilitation staff made up survey participants in evaluating team characteristics and job satisfaction. Both clinical rehabilitation staff and managerial HR staff participated in interview and focus groups assessing aspects of HRM.

For clinicians, research sessions for administration of survey, interviews and focus groups were generally arranged through the NUM. For medical, senior nursing staff and allied health staff, research sessions generally took place after their multidisciplinary patient case conference meetings. For some senior clinicians such as service directors, NUMs and nurse educators, as well as for managerial staff, interview sessions were arranged with them personally to suit their schedule. For most nursing staff, research sessions were conducted during their allocated educational in-service time slots and upon completion of shifts. All research sessions with clinicians and HR staff were scheduled during morning and afternoon time slots between working hours of 9 am and 5 pm. Two of the four focus groups at Hospital C were scheduled on a weekend (Saturday) while all other research sessions across hospitals were scheduled on weekdays. With the exception of one nurse from Hospital B who declined to participate, all other staff invited and available during the scheduled research sessions responded by completing the survey and by participating in interviews and focus groups as required. Proportions of clinician participants in relation to service staff numbers are provided in

the next chapter. The survey received 155 clinician responses while 152 clinicians who completed the survey were also available for participation in interviews and focus groups during separate research sessions. There were 11 HR staff who participated in interview sessions.

### **3.7.1 Survey participants**

A total of 155 responses were obtained to the study's survey questionnaire. Participants were a representation of doctors, nurses and allied health staff. The figure of 155 is obtained after exclusion of 3 student participants (one from Hospital C and two from Hospital D) and one participant from Hospital D who did not fulfill the criteria of being in the current rehabilitation team for at least a week. The sample of 155 includes two repeat participants who filled in the questionnaire more than once due to different roles played in their respective rehabilitation services. One repeat participant was from Hospital A with the participant filling in the questionnaire in sessions with interprofessional rehabilitation team staff and also with staff from his own professional group. Another repeat participant was from Hospital D and the participant filled in the survey questionnaire on three occasions due to her being on three sub-teams within the rehabilitation service recruited for the study. Thus the survey represented roles rather than individuals. Detailed information pertaining to survey participants is presented under team characteristics findings in the next chapter.

### **3.7.2 Interview and focus group participants**

Study participants for interview and focus group sessions totaled 163 and comprised HR, medical, nursing and allied health staff. While the total of 163 participants is a large pool in eliciting qualitative data, this figure was necessary to ensure sufficient representation from each of the participating rehabilitation services and HR departments from the seven hospitals. Between 14 and 38 participants were recruited at each hospital. A total of 42 research sessions involving 18 interviews and 24 focus groups were conducted. Table 3.2 provides a breakdown of interview and focus group research sessions and participants across hospitals.

**Table 3.2:** Number of interview and focus group sessions, and participants across hospitals

| Research session details            | All hospitals | General    |            |            |            |            |            | Stroke     |
|-------------------------------------|---------------|------------|------------|------------|------------|------------|------------|------------|
|                                     |               | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Interviews                          | 18            | 3          | 3          | 1          | 4          | 2          | 3          | 2          |
| Focus groups                        | 24            | 3          | 3          | 4          | 4          | 3          | 3          | 4          |
| Total qualitative research sessions | 42            | 6          | 6          | 5          | 8          | 5          | 6          | 6          |
| HR staff participants               | 11            | 1          | 2          | 1          | 2          | 1          | 3          | 1          |
| Clinical staff participants         | 152           | 22         | 31         | 16         | 36         | 13         | 16         | 18         |
| Total participants                  | 163           | 23         | 33         | 17         | 38         | 14         | 19         | 19         |



### **3.8 Types of data**

Data in this study included both primary and secondary data. Primary data concerning team characteristics and job satisfaction were collected through surveys answered by rehabilitation service members in the selected healthcare organizations. Primary data concerning HRM were obtained through individual and focus group interviews with rehabilitation service members and HR directors or managers. The issue of participant reporting bias (Stone and Shiffman, 2002) is acknowledged in the use of self-reported data for examining team characteristics and HRM domains. To mitigate and reduce reporting bias, the tools for eliciting self-reported data were based on existing instruments with proven reliability in measuring study constructs, adequate participant representation was sought from the respective services, and data obtained were subject to rigorous statistical and thematic analytical approaches.

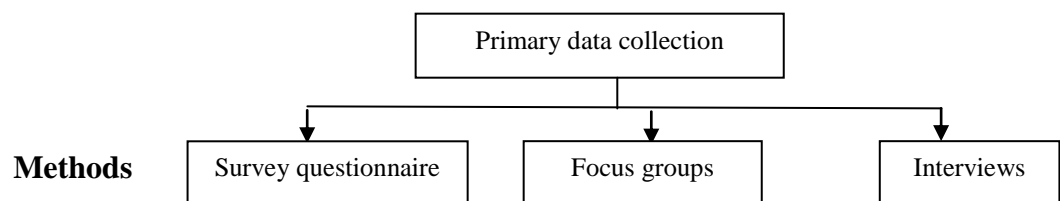
Secondary data in this study were obtained through document analysis and secondary database analysis. Document analysis involved examination of administrative records pertaining to general facts and figures of the participating hospitals and their rehabilitation services. Secondary database analysis was the statistical analysis of rehabilitation medicine clinical indicator data. Administrative records were obtained through communication with senior rehabilitation clinicians. Rehabilitation medicine clinical indicator data were obtained from the data custodian, AROC. In using secondary data, it is acknowledged that reliability of the data depends on external documentation and collection (Brown and Semradek, 1992). Nevertheless, obtaining administrative hospital and service figures from official senior clinician records, and utilizing clinical data which complied with ACHS and AROC data collection guidelines were deemed sufficiently reliable options for this study's research aims. Sections 3.9 and 3.10 provide elaboration on the study's primary data collection and secondary data utilized.

### **3.9 Primary data collection**

Both quantitative and qualitative methods were pursued in order to promote rigour and depth in the data collection outcomes (Kiessling and Harvey, 2005), with the aim of triangulating findings (Bryman, 2006). Quantitative data on team characteristics and job

satisfaction were collected through a survey questionnaire administered to members of the rehabilitation services. Qualitative data were obtained using focus groups with members of the rehabilitation services and interviews with HR directors or managers to determine HRM policy and practice in the respective health services. The application of the selected methods for data collection required on average, approximately seven separate sessions at each healthcare organization. Conducting a focus group required an hour and conducting an interview also required an hour. The use of thirty to sixty minute durations for each session provided sufficient time for the researcher to gather information and did not overly burden research participants. Figure 3.2 shows the primary data collection methods utilized. Data collection tools are discussed under the sub sections which follow.

**Figure 3.2:** Primary data collection methods utilized



### 3.9.1 Survey questionnaire

The survey method has the advantage of being able to produce a large amount of data in a short time, readily and cheaply (Kelley et al., 2003). The survey questionnaire (Appendix 2) served to enable a comprehensive evaluation of team characteristics in a rehabilitation setting and evaluate aspects of job satisfaction for team members. Participants were requested to regard all clinicians in their respective services as being part of their team. The survey questionnaire was developed to collect information on: individual characteristics of team members; perceived team size; team type, perceived efficiency and team climate indexes (Thylefors et al., 2005); and the overall job satisfaction scale (Warr et al., 1979). It is acknowledged as a study limitation that Cronbach's alpha reliability values of the adopted survey questionnaire measures were derived from the original indexes and scale, in lieu of retesting for psychometric properties. While relying on psychometric testing carried out by the original authors,

great care was taken to ensure items in the adopted indexes and scale did not deviate from their intended measurement purpose when tailored according to Australian language nuances.

The survey questionnaire constructed comprised 11 pages that included the cover page and questions in six main parts (A, B, C, D, E and F) on the subsequent pages. Overall, the six parts in the questionnaire were designed to elicit information on 51 different items. Administering the survey questionnaire to clinicians required a thirty minute session. Table 3.3 highlights the simplified headings given for each part in the questionnaire together with corresponding tools or coverage and number of items for each part.

**Table 3.3:** Simplified headings, corresponding tool/thematic coverage and number of items in survey questionnaire

| Part        | Heading                    | Tool/Thematic coverage  | Number of items |
|-------------|----------------------------|---|-----------------|
| A           | Your details               | Individual characteristics of team members and structural team characteristic, team size. | 8               |
| B           | Your team's characteristic | Team type index   | 6               |
| C           | Your views on your team    | Perceived efficiency index  | 6               |
| D           | Your team members          | Team climate index  | 15              |
| E           | Job satisfaction           | Overall job satisfaction scale  | 15              |
| F           | Final comments             | Final comments on teamwork  | 1               |
| Total items |                            |   | 51              |

Part A consisted of eight items which covered seven individual characteristics of team members defined in the literature review. These are: gender; age; profession; country of professional training; professional healthcare experience; rehabilitation team experience; current rehabilitation team experience; and the structural team characteristic, team size. Piloting the questionnaire with rehabilitation professionals resulted in the rewording of Part A's seventh and eighth questions on current rehabilitation team experience and number of members (team size). The questions were reworded to specifically refer to the current team (acute rehabilitation team). In this phase it was realized that some rehabilitation professionals belonged to more than one rehabilitation team. The decision to focus on full service category rehabilitation services

as highlighted in Chapter 1 matched acute inpatient rehabilitation criteria of being more intensive and comprehensive than sub-acute inpatient rehabilitation (Keith et al., 1995). Though official team size figures for the rehabilitation services were confirmed through administrative records of the participating healthcare services, question eight in Part A focused on this structural team characteristic to explore the team size perceived by the rehabilitation professionals. Table 3.4 lists the items and corresponding team characteristics categories under Part A of the survey questionnaire.

**Table 3.4:** Survey questionnaire Part A's characteristics of team individuals and perceived team size

| Number | Item   | Team characteristics category              |
|--------|--|--|
| 1      | Gender                                       | Individual characteristics of team members |
| 2      | Age  |  |
| 3      | Profession                                   |  |
| 4      | Country of professional training             |  |
| 5      | Professional experience                      |  |
| 6      | Rehabilitation team experience               |  |
| 7      | Current acute rehabilitation team experience | Structural team characteristic             |
| 8      | Team size (perceived)                        |  |

Part B which was based on the team type index (Thylefors et al., 2005) consisted of six themes with three alternative statements for each theme. Cronbach's  $\alpha$  value for the team type index is 0.65. It is important for the items forming the scale to have internal consistency and therefore all the items should measure the same thing (Bland and Altman, 1997). The Cronbach's  $\alpha$  is noted as a gauge of reliability or accuracy for the psychological measurements (Cronbach and Shavelson, 2004). The Cronbach's  $\alpha$  functions as a useful coefficient for assessing the internal consistency of a scale,  $\alpha = 1$  if the items are all perfectly correlated and  $\alpha = 0$  if none is related to another (Bland and Altman, 1997). While 0.7 is usually the level of alpha considered adequate, measures with lower levels of a  $\alpha$  may still be quite useful (Schmitt, 1996). The  $\alpha$  value is a function of the number of items in a scale as well as a function of item intercorrelation (Cortina, 1993). The team type index's Cronbach's  $\alpha$  value is acceptable considering that Cronbach's  $\alpha$  is quite sensitive to the number of items (Thylefors et al., 2005).

The instructions in Part B requested that respondents tick the statement that best described their team for each of the six themes. The statements to describe each theme related to the three models of team functioning (multiprofessional, interprofessional and transprofessional). However, the grouping of statements was not printed in the questionnaire to prevent skewed selections of statements to describe the themes. While the statements were used in their original wordings, the six thematic terms from the original index were reworded to be less theoretical and more user friendly and more specific. The potential index score obtained by summing up the responses for the six themes ranged from 6 to 18. The scores obtained would determine the ‘team type’. A low index score (6-9) reflected a multiprofessional team, a medium score (10-14) indicated an interprofessional team and a high score (15-18) signified a transprofessional team. Table 3.5 presents the reworded versions of the six themes used in the questionnaire.

**Table 3.5:** Survey questionnaire Part B’s original team type index themes and user friendly/specific rewording

| Number | Original theme       | User friendly/specific rewording |
|--------|----------------------|----------------------------------|
| 1      | Role specialization  | Team member roles                |
| 2      | Task interdependence | Tasks/duties                     |
| 3      | Co-ordination        | Work management/co-ordination    |
| 4      | Task specialization  | Work focus                       |
| 5      | Leadership           | Leadership behavior              |
| 6      | Role interdependence | Job flexibility                  |

The perceived efficiency index (Cronbach’s  $\alpha = 0.89$ ) used for Part C comprised six items in the form of questions and five Likert scale style response options. The items in Part C evaluated goal achievement and the five response options ranged from ‘to a very low degree’ to ‘to a very high degree’. Respondents were instructed to tick the box with the most appropriate response for each of the questions to best describe their team. The perceived efficiency index scores could range between 1 and 5 with a higher score indicating better team efficiency. The items evaluated in the perceived efficiency index are provided in Table 3.6.

**Table 3.6:** Survey questionnaire Part C's perceived efficiency index items

| Number | Item                        |
|--------|-----------------------------|
| 1      | Working towards common goal |
| 2      | Efficiency of teamwork      |
| 3      | Team success                |
| 4      | Quality of team output      |
| 5      | Meeting patients' needs     |
| 6      | Satisfaction with team work |

The team climate index (Cronbach's  $\alpha = 0.93$ ) used for Part D was made up of 15 statements that provided a comprehensive evaluation of general team working climate that includes social as well as task oriented aspects. The team climate index used five Likert scale style response options which ranged from 'totally disagree' to 'totally agree'. Respondents were required to tick the most appropriate response. The team climate index scores could range between 1 and 5 with a higher score indicating better team climate. Table 3.7 provides the items evaluated in the team climate index.

**Table 3.7:** Survey questionnaire Part D's team climate index items

| Number | Item  |
|--------|---|
| 1      | Ability to provide feedback among team members  |
| 2      | Interest and attention among team members   |
| 3      | Ability to identify and feel empathy among team members   |
| 4      | Ability to listen to others   |
| 5      | Ability to express one's position   |
| 6      | Ability to give and take  |
| 7      | Performance of work in an informal and supportive atmosphere  |
| 8      | Participation in team discussions   |
| 9      | Respecting and taking advantage of disagreement and different points of views   |
| 10     | Striving for consensus decision making  |
| 11     | Expression of criticism in a positive and constructive manner   |
| 12     | Expression of feelings and opinions on factual questions  |
| 13     | Domination of team work by formal leader and dependence of leadership style on circumstances and nature of the given task |
| 14     | Team task orientation   |
| 15     | Team encouragement of individual performance  |

Fifteen statements from the overall job satisfaction scale shaped Part E of the questionnaire. The overall job satisfaction scale as used by Lu et al. (2007) has a Cronbach's  $\alpha$  value of 0.89. The Likert scale style responses ranged from 'very

dissatisfied’ to ‘very satisfied’. Overall job satisfaction scale scores could range between 1 and 5, with a higher score indicating better job satisfaction. Table 3.8 presents the items in the overall job satisfaction scale.

**Table 3.8:** Survey questionnaire Part E’s overall job satisfaction scale items

| Number | Item                                       |
|--------|--|
| 1      | Physical work conditions                   |
| 2      | Freedom to choose working methods          |
| 3      | Fellow workers                             |
| 4      | Recognition of good work                   |
| 5      | Immediate manager                          |
| 6      | Amount of responsibility given             |
| 7      | Rate of pay                                |
| 8      | Opportunity to use own abilities           |
| 9      | Relations between management and staff     |
| 10     | Future chance of promotion                 |
| 11     | Way the hospital is managed                |
| 12     | Attention paid to own personal suggestions |
| 13     | Hours of work                              |
| 14     | Amount of variety in own job               |
| 15     | Job security                               |

The team type index sub-scale items each have three possible statement options corresponding to values of one to three. The perceived efficiency index, team climate index and overall job satisfaction scale all used five-point Likert scales. Likert-type scale items require the participant to select a response from the ordered alternatives (Clason and Dormody, 1994). While the optimum number of scale points for any one study would depend on the investigator’s interests and objectives (Lissitz and Green, 1975), Likert categories are preferred over a simple agree or disagree dichotomy based on the assumption that expanding the number of response categories enhances the precision of the single item in estimating the individual’s location on a single latent continuum (Duncan and Stenbeck, 1987). More scale points in response formats would generate more variability in response which is a desirable scale characteristic if the response is reliable (Dawis, 1987). However, it has also been observed that there is generally little utility in terms of reliability in having more than five scale points (Lissitz and Green, 1975).

The items in the team type index and the perceived efficiency index were readily available from Thylefors et al.'s (2005) work. Since the items for the team climate index were not specified in the article, the tool was obtained through communication with the primary author. The original team climate index was in Swedish. It was translated into English for this study. Items in Warr et al.'s (1979) overall job satisfaction scale were based on their usage by Lu et al. (2007).

Though the questionnaire generally sought responses which could then be quantified, Part F requested final comments on teamwork using an open ended question. This question served to provide valuable insight which might not have been revealed through the other questions in the survey.

Thematic terms and language used in the original tools were simplified and adjusted according to local Australian language nuances to ensure user friendliness in using the questionnaire. Careful attention was given in ensuring translated versions of the research tools fulfilled their originally intended purposes. After pre-testing, piloting and feedback from researchers and rehabilitation service members from another Australian city, the survey questionnaire was finalized.

As HRM was also a study variable to be investigated with the rehabilitation services members, an alternative to the survey questionnaire was needed for practical reasons. The survey questionnaire administered to the rehabilitation clinicians comprehensively evaluated team characteristics and job satisfaction using a quantitative approach. Integrating the evaluation of HRM into the survey questionnaire would have made the questionnaire lengthy and cumbersome for the participants. Hence, this component of the research was achieved by a qualitative approach in the form of focus groups.

### **3.9.2 Focus groups**

The focus group method is a form of group interview. It generates data from the communication between research participants responding to open ended questions from the interviewer (Kitzinger, 1995). Focus groups offered the added benefit of stimulating interaction between research participants, a feature which distinguishes focus groups from one-to-one interviews or questionnaires (Kitzinger, 1994). The interactions among



focus group participants include commenting on each other's point of view and challenging each other's motives and responses, sometimes in a pointed fashion (Kidd and Parshall, 2000). It is the observation of interactions during focus groups which allows the researcher to tap into the dynamics of attitudes and experiences of participants (Morgan and Spanish, 1984). Focus groups are most informative through skillful facilitation of group dynamics and focused interview techniques (Winslow et al., 2002). While minority or sensitive views may not be voiced in a focus group (Buston et al., 1998), this problem was not deemed significant for this study. The focus groups in this study were designed mainly to evaluate HRM and therefore did not directly require participants to disclose sensitive issues with regards to their team or performance.

The sampling strategy of seven rehabilitation services in different healthcare organizations made it impractical to conduct interviews with all team members given the time and cost constraints faced in completing this study. Focus groups which enabled multiple participants to be grouped together for eliciting information provided a manageable and practical method.

The focus group questions were developed primarily based on the HRDM category from the MBNQA Health Care Pilot Criteria as used by Meyer and Collier (2001). Table 3.9 presents the HRM areas and coverage from the MBNQA's Health Care Pilot Criteria HRDM category.

**Table 3.9:** HRM areas and coverage from the MBNQA's Health Care Pilot Criteria HRDM category

| HRM areas  | Coverage   |
|--|--|
| HR planning and evaluation                           | <ol style="list-style-type: none"> <li>1. HR planning such as ensuring the selection and recruitment of a proper mix of professionals</li> <li>2. Employee development objectives derived from strategic objectives</li> <li>3. Cooperative staff/management relationships</li> <li>4. Motivation of employees by improved job design such as cross training or job rotation</li> </ol>                                      |
| Healthcare staff work systems                        | <ol style="list-style-type: none"> <li>1. Range of tasks given to employees</li> <li>2. Level of decision making responsibility given to employees</li> <li>3. Employees compensation and recognition linked to strategic goals</li> <li>4. Provision of rewards for employees learning new skills</li> </ol>  |
| Healthcare staff education, training and development | <ol style="list-style-type: none"> <li>1. Training to build staff capabilities</li> <li>2. Training of frontline employees to handle service failures such as 'recoveries' from long patient waiting times and other delays or errors</li> <li>3. Provision of problem solving skills training for employees</li> <li>4. Evaluation of the benefits of staff training by measuring changes in skills or behaviour</li> </ol> |
| Healthcare staff well-being and satisfaction         | <ol style="list-style-type: none"> <li>1. Creation of a work environment that supports the well-being and development of employees</li> <li>2. Measuring employee satisfaction using a variety of methods</li> <li>3. Improving employee health and safety</li> <li>4. Provision of career development services for employees</li> <li>5. Evaluation of employee turnover in each Department</li> </ol>                      |

The HRDM category provided a generalized and comprehensive coverage of HRM for synthesizing focus group questions. It was decided that the number of focus group questions would have to fit within a 60 minutes time frame. The time frame took into account the busy schedule of rehabilitation service professionals and balanced against the need for sufficient time to satisfy the study's HRM research objective. The number of questions from the HRDM category also had to be kept to a minimum to ensure collective feedback from all participants while capitalizing on the interactive nature of the focus group method.

The finalized focus group questions (Appendix 3) consisted of eight parts (A, B, C, D, E, F, G and H) with a total of 14 questions. Part A consisted of three opening questions which generally explored attitudes and perceptions towards the team, factors influencing teamwork and factors influencing performance.

Parts B, C, D and E were tailored based on the four areas and corresponding coverage of HRM from the HRDM category. Part B which focused on the HR planning and evaluation area had two questions which dealt with selection and recruitment as well as staff evaluation. Part C's focus on healthcare staff work systems included two questions enquiring about individual work and team work in the team and the recognition and reward system. The area of healthcare staff education, training and development was covered in Part D with a single question about staff development. Part E sought information about healthcare staff's well-being and satisfaction with a question: what it's like working in the healthcare organization. Part F explored the broader healthcare context with a question on the influence of other hospital staff on the team.

The inclusion of the Part F question was in order to elicit information with regards to collaboration and informal or teamwork relationships with staff beyond the boundaries of the formal rehabilitation team. Part G under the heading of general people management consisted of three questions pertaining to people management in the healthcare organization, the HR department's influence on the team and the team's reaction towards increased people management effort from the HR department. The usage of the term 'people management' in wording questions in Part G was based on feedback from rehabilitation professionals and researchers in designing and piloting the focus group questions. Feedback obtained suggested that the term 'HR management' would limit participant response to focus only on efforts from the HR department rather than effort reflecting the full scope of HRM. This feedback is in line with HRM literature where the term 'people management' is synonymous with 'HR management' (Purcell et al., 2003, Guest and Conway, 2004). Part H provided a closing question requesting final remarks on people management. Probing and clarifying questions were improvised as necessary when running the focus groups.

The focus group questions were also used for interviewing rehabilitation clinicians whose work schedule did not allow them to join focus group sessions conducted. Research sessions with members of the rehabilitation services resulted in data from

hand written notes and transcripts of digital recordings of the sessions. Table 3.10 presents the structure of focus group questions by part, with corresponding question group and number of questions.

**Table 3.10:** Division of focus group questions by part with corresponding question group and number of questions

| Part            | Question group                                       | Number of questions |
|-----------------|--|---------------------|
| A               | Opening questions                                    | 3                   |
| B               | Human resource planning and evaluation               | 2                   |
| C               | Healthcare staff work systems                        | 2                   |
| D               | Healthcare staff education, training and development | 1                   |
| E               | Healthcare staff well-being and satisfaction         | 1                   |
| F               | Healthcare context                                   | 1                   |
| G               | General people management                            | 3                   |
| H               | Closing question                                     | 1                   |
| Total questions |  | 14                  |

From the above table, it can be seen that a broad-based approach was taken in assessing HRM using focus groups. For a more specific, in-depth qualitative approach in evaluating HRM in the selected healthcare organizations, this study opted to use interviews with HR directors or managers. The use of interviews in this study is elaborated on in the next section.

### 3.9.3 Interviews

The interview method is used in many qualitative research studies (Fossey et al., 2002). The method is used to provide detailed data on individuals' experiences, views and feelings (Buston et al., 1998). If questions are open-ended, they can provide the benefit of uncovering issues or concerns that had not been anticipated or considered by the researcher (Pope et al., 2002). Interviews carried out for this study played a role in triangulating HRM information obtained from the focus groups. The interview questions (Appendix 4) were based on the same HRDM category used for designing the focus group questions. In evaluating the HRM variable of the study, triangulation addresses the issue of internal validity by using more than one method of data collection

(Barbour, 2001). The use of interviews contributed in deriving information on HRM policy and practice from a managerial perspective in contrast to the rehabilitation team perspective of HRM obtained from the focus groups. The interviews with the HR directors and managers were tailored to cover the areas of HRM from the HRDM category more specifically than the focus group sessions.

Mirroring the structure of the focus group questions, the finalized interview questions consisted of eight parts (Parts A, B, C, D, E, F, G and H). The interview structure consisted of 30 questions, while the focus group format had a total of 14 questions. Four opening questions in Part A requested a description of the healthcare organization, a description of the rehabilitation service and perceptions on influences towards teamwork and performance.

Parts B, C, D and E reflected the HRM areas from the HRDM category. Part B consisted of nine questions on human resource planning and evaluation. The nine questions covered factors shaping human resource planning, staff selection and recruitment, qualities important for staff, influence of existing staff on selection and recruitment, staff evaluation, staff orientation, healthcare and management staff relationships, staff motivation and leadership. Part C explored healthcare staff work systems with six questions on individual and teamwork requirements, decision making responsibility, the recognition and reward system, support for innovation, and the HR department's reaction to more support for innovation. The element 'support for innovation', though not derived from the HRDM category, was assessed under Part C as this element of team functioning is given strong emphasis in the healthcare team literature (Anderson and West, 1996, Borrill et al., 2000, Anderson and West, 1998). Part D which focused on healthcare staff education, training and development used a single question.

Part E evaluated healthcare staff well-being and satisfaction with five questions probing the positives and negatives of working in the healthcare organization, improving staff well-being and satisfaction, reasons for staff turnover and the HR department's effort at retaining staff. Part F explored the healthcare context in terms of how the different departments and units affected one another in the healthcare organization.

Part G covered general people management with three questions pertaining to a general description of people management, the HR department's influence on staff and the usefulness of increasing the HR department's involvement in staff management. The closing question in Part H requested final remarks on HRM. The term 'HRM' rather than 'people management' was used for the interview's closing question as the interviewees in this study comprised of HR directors and managers who are likely to be familiar with management terminology.

Taking into account potential issues of managerial confidentiality and the status of HR staff in their organizations, interview sessions with HR directors or managers were not digitally recorded. Research sessions with HR staff resulted in data from hand written notes. Table 3.11 shows the division of interview questions by part with corresponding question group and number of questions.

**Table 3.11:** Division of interview questions by part with corresponding question group and number of questions

| Part            | Question group                                       | Number of questions |
|-----------------|--|---------------------|
| A               | Opening questions                                    | 4                   |
| B               | Human resource planning and evaluation               | 9                   |
| C               | Healthcare staff work systems                        | 6                   |
| D               | Healthcare staff education, training and development | 1                   |
| E               | Healthcare staff well-being and satisfaction         | 5                   |
| F               | Healthcare context                                   | 1                   |
| G               | General people management                            | 3                   |
| H               | Closing question                                     | 1                   |
| Total questions |  | 30                  |

While team characteristics, overall job satisfaction and HRM information was obtained through primary data collection, fulfilling the research objectives of examining the team characteristics and HRM link to performance also required access to quantitative secondary data in the form of rehabilitation medicine clinical indicator data. Assessment of clinical performance is elaborated in the following section.

### 3.10 Secondary data

Information on how the study's secondary data were obtained, their purpose and specific details are provided in this section. As previously mentioned the study's secondary data were administrative records and rehabilitation medicine clinical indicator data.

#### 3.10.1 Administrative records on participating hospitals and their rehabilitation services

Administrative records pertaining to hospital and rehabilitation service facts and figures were obtained through communication with senior clinicians such as rehabilitation service directors, nurse unit managers and allied health seniors. The facts and figures provided contextual hospital and service information detailed earlier in this chapter. Information regarding rehabilitation service size and tenure which will be presented in the next chapter were necessary due to their study categorization as structural team characteristics. The administratively obtained team size figures were also crucial for comparing against clinician reported team size. The following table (Table 3.12) details the specific facts and figures that were obtained with regards to the participating hospitals and their respective services.

**Table 3.12:** Hospital and rehabilitation service figures requested through communication with senior clinicians

| Hospital facts and figures        | Rehabilitation service facts and figures         |   |
|-----------------------------------|--|---|
| Hospital age (years in operation) | Rehabilitation category (general or specialized) |   |
| Hospital beds (numbers)           | Rehabilitation service beds (numbers)            |   |
| Ownership (public)                | Structural team characteristics                  | Service/team size (number of staff)     |
|                                   |  | Service/team tenure (year in operation) |

#### 3.10.2 Rehabilitation medicine clinical indicator data

Health service researchers often rely on data derived from secondary sources due to the costs of assessing practice patterns and health outcomes (Huston and Naylor, 1996).

Secondary data in the form of rehabilitation medicine clinical indicator data as a measure of team performance were sought and evaluated upon the completion of primary data collection. The first four indicators were process indicators covering: the timely assessment of function on admission, the assessment of function prior to patient episode end, the timely establishment of a multidisciplinary team rehabilitation plan, and the discharge plan prior to patient separation. The two outcome indicators assessed functional gain achieved by rehabilitation program, and destination after discharge from a rehabilitation program. Rehabilitation medicine clinical indicator data provided an independent measurement of performance and complemented the overall job satisfaction performance data collected using the survey questionnaire. The rehabilitation medicine clinical indicators' specifications for data used in this study were set by the ACHS. Table 3.13 presents the specifications of the ACHS rehabilitation medicine clinical indicators.



**Table 3.13:** ACHS rehabilitation medicine clinical indicators specifications

| No | Indicator   | Numerator   | Denominator  |
|----|---|---|--|
| 1  | Timely assessment of function on admission                            | Total number of patients admitted to a rehabilitation unit/facility for whom there is documented evidence of a functional assessment within 72 hours of patient admission   | Total number of patients admitted to the rehabilitation unit/facility with a minimum length of stay of 72 hours  |
| 2  | Assessment of function prior to episode end                           | Total number of inpatients for whom there is documented evidence of a functional assessment within 72 hours of cessation of an inpatient rehabilitation program (excluding deaths and those cases where a suspension of rehabilitation treatment leads to a care type change to acute care) | Total number of inpatients who cease an inpatient rehabilitation program (excluding deaths and those cases where a suspension of rehabilitation treatment leads to a care type change to acute care) |
| 3  | Timely establishment of a multi-disciplinary team rehabilitation plan | Total number of patients admitted to a rehabilitation unit/facility for whom there is a documented established multidisciplinary rehabilitation plan within 7 days of patient admission   | Total number of patients admitted to a rehabilitation unit/facility with a minimum length of stay of 7 days  |
| 4  | Discharge plan prior to patient separation                            | Total number of separations for which there is an appropriate discharge plan for a patient (excluding deaths and those cases with a suspension of rehabilitation treatment leads to a care type change to acute care)   | Total number of separations (excluding deaths and those cases with a suspension of rehabilitation treatment leads to a care type change to acute care)   |
| 5  | Functional gain achieved by rehabilitation program                    | Total number of patients who have completed a rehabilitation program and for whom there is documented evidence of functional gain   | Total number of patients who have completed a rehabilitation program   |
| 6  | Destination after discharge from a rehabilitation program             | Total number of patients who have completed a rehabilitation program and been discharged to their pre-episode form of accommodation, or a form of accommodation that allows for greater independence  | Total number of patients who have completed a rehabilitation program and been discharged   |

**Source:** Australasian Rehabilitation Outcomes Centre website, Data Matters information bulletin, March 2008

### **3.11 Data analysis**

Data analysis included both quantitative and qualitative approaches. Once the data were compiled, triangulated interpretations and inferences were made.

#### **3.11.1 Quantitative data analysis**

Survey data were entered into and analyzed in Statistical Package for Social Sciences (SPSS) software (version 18). Following entry, data were checked for accuracy against paper copy for each record. Data were examined using descriptive statistics to provide frequency distributions. While Thylefors et al.'s (2005) indexes were used in developing the survey, regression analyses used in the previous study was not possible for this research. Due to the small sample size being compounded by poor distribution across several categories, services in this research were compared using Fisher's Exact Monte Carlo test. Fisher's Exact test is usually recommended for comparisons in small sample sizes (Suissa and Shuster, 1985). The Monte Carlo procedure is suitable for testing significance with limited reference sets (Hope, 1968). In cases where comparing the seven services in a single step (using 7 x n tables) did not identify significant differences, but visual examination suggested differences, additional cross tabulations were undertaken. Additional cross tabulations involved dichotomizing data to examine each service against all other services grouped together. Dichotomizing could be justified when distribution of a count variable is observed to be skewed (MacCallum et al., 2002). The additional dichotomizing of data ensured significant results were not missed out in determining differences among the services. A significance level of 0.05 was used to compare services. The purpose of this analysis was to ensure the research question was considered for individual services and as a group.

For the team type index results which categorized participants into either multiprofessional, interprofessional or transprofessional groupings, Fisher's Exact tests were used to determine significant differences in grouping between teams from hospitals. For the index values resulting from the perceived efficiency index, team climate index and the overall job satisfaction scale, due to results not being normally distributed, non parametric methods were used. Specifically, the Mann Whitney test was used to ascertain possible differences between the rehabilitation services from the

participating hospitals. The Mann Whitney test is suitable for statistical comparison where the assumption of normality is not met (Rosner and Grove, 1999).

Clinical indicator data for each service reported compliance rates for each service, as well as providing national and benchmark group compliance rates. Compliance rates for each indicator were compared across all services and examined in relation to national and benchmark group compliance results. Cumulative ranking of indicator data was also carried out, with the four process indicators and with all six indicators collectively. Cumulative ranking of indicators were obtained by aggregating individual clinical indicator results rankings. Due to the differing approaches in analyzing survey and clinical data, and the limited sample of participating rehabilitation services, associations between team characteristics and performance findings were determined from hospitals with significant and substantially different results compared to the others. This approach was deemed to be more practical in evaluating the association between variables compared to performing statistical correlations between survey and clinical data.

### **3.11.2 Qualitative data analysis**

The content analysis for the study's qualitative data utilized a combination of: theory and research literature directed initial coding; conventional coding identifying arising issues; and summative comparative analysis to guide interpretation of findings (Hsieh and Shannon, 2005). This allowed research analysis matrixes to be formulated and the identification of appropriate quotes to illuminate the HRM findings chapter (Chapter 5).

Content analysis process employed in healthcare was used in this study (Elo and Kyngäs, 2008). That is, research notes from interview sessions with HR staff and digital recordings from interview and focus group sessions with clinical staff were transcribed for analysis. Transcripts from sessions with HR staff were combined into documents by hospital and the same was done with transcripts from clinical staff sessions. The combining of transcripts by hospital aided the identification of issues or unique features at a specific hospital and common elements across participants. The HR and clinical staff input were first analyzed separately before comparing for contrasts and validation of findings reported. The separate analysis of HR and clinical staff reported findings is

reflected in the presentation of Chapter 5. In elaborating on clinician input, similarities and differences with HR staff input are highlighted to triangulate data.

The framework embedded in the focus group (Appendix 3) and interview (Appendix 4) guides structured the thematic coding and grouping of data. The researcher undertook line-by-line analysis of each hospital transcript set (Bradley et al., 2007, Ryan and Bernard, 2003, Webb, 1999). Apart from checking data against predetermined themes of the study's framework, general reviews and summarizing of transcripts contributed towards the coding and labeling of data based on emerging themes and pertinent issues. The analysis focused on striving to assess participant reports of how elements of HRM policy and practice were associated with team characteristics and performance. In doing so, an integrated approach to qualitative data analysis that is both deductive and inductive was used (Bradley et al., 2007, Freshwater and Avis, 2004, Burnard et al., 2008). Nvivo (version 9) software was utilized in managing qualitative data. The software was useful in aiding the identification of common threads, interrelating implications and differentiating elements between the participating hospitals.

Determining HRM input of importance involved comparing data from research sessions at individual hospitals and contrasting data across hospitals. To promote rigour and reliability of qualitative data analysis, screening and selection of information from research data were based on commonality (Polkinghorne, 1995, Creswell and Miller, 2000), noteworthy variation (Thorne, 2000), depth of discussion by participants (Kidd and Parshall, 2000), and relevance to the study's aims (Creswell et al., 2007).

The analysis resulted in the charting of detailed matrixes providing overviews of HR staff and clinical staff responses across hospitals and study themes' questions (Pope et al., 2000). Categorized findings in the matrixes reflect common and differentiating evidence for individual organizations for each theme question (columns) and, for each theme question across the organizations (rows). The qualitative analysis recorded in the appendicized matrixes was the basis for presenting HR and clinical staff findings by hospital in Chapter 5. Matrixes are presented in Appendix 5.

The comprehensive approach towards qualitative analysis is reflected in the presentation of HRM findings. In the HRM findings chapter, aspects and issues relating to commonality and variation among services are highlighted, supported with participants'

quotes. The use of quotes serves to texture findings with verbatim participants' input (Sandelowski, 1994, Ponterotto and Grieger, 2007). Holistic perspectives of each service together with contrasting comparisons with other services are presented in the elaboration and discussion of HRM findings.

### **3.11.3 Combining quantitative and qualitative findings**

Combining and triangulating the team characteristics, performance and HRM results was carried out by matching significant and unique quantitative and qualitative findings from the respective healthcare services. Summary tables from the two findings chapters (Tables 4.16 and 5.17) were assessed against the study's theoretical framework which incorporated the specific variables evaluated (Figure 1.1). Associations indicating pathways of influence between variables were derived through the manual grouping of quantitative and qualitative findings by hospital.

In this study, integration of data happened after quantitative and qualitative data had been separately analyzed as described in the previous sub-sections. Mixed method data sets were therefore integrated at the interpretive level of research, instead of at the paradigm, method or analysis points (Sandelowski, 2000). Regardless of the point of integration, combining mixed methods results produces an intermeshed relationship between quantitative and qualitative data, while preserving the modality of different paradigmatic approaches (Moran-Ellis et al., 2006). This study's quantitative and qualitative analysis uncovered common patterns among the participating services, and the results revealed elements and aspects that were significant and unique to particular services. It was necessary to combine the significant and unique quantitative and qualitative findings from the services in achieving the study's aim of determining the association between team characteristics, performance and HRM. Statistical approaches and quantitative comparisons identified significant and substantially different findings among services. Unique qualitative findings were selected based on how they differentiated a service, and their association or potential to explain quantitative findings obtained. The matching of significant and unique quantitative and qualitative findings from the respective services contributed towards deriving conclusions and explanations for the associations between study domains and variables.

### **3.12 Limitations of the research methods**

This study was limited by the resource and time constraints of one person doing a doctoral study. This resulted in the selection of a cross-sectional study to evaluate the association between team characteristics, performance and HRM. While great effort was taken to promote rigorous study methods, it is acknowledged that with the cross-sectional approach, associations rather than causality are being demonstrated (Mann, 2003). The ability to demonstrate causality among the study variables requires a longitudinal approach (Marquis et al., 1983). Nevertheless, the cross-sectional approach adopted was suitable in supporting the aims of this study. To reduce confounding elements, the sampling frame was standardized, ensuring that participating health services were structurally similar, and thus comparable.

The study size is a limitation of this research. It is a result of time and cost constraints. However, it represents a significant proportion of 15 public healthcare organizations in Sydney offering full service rehabilitation services to a similar patient category group. The seven participating healthcare organizations provided a pool of 163 individual participants comprising clinicians and HR personnel. This therefore provided an acceptable and legitimate pool of participants matched to the study's aims, and in accordance with the approved ethical design. The study was limited to obtaining clinician responses during day and afternoon shifts, therefore not covering night shift staff. As mentioned in a previous section, the use of self reported data presents the possibility of participant bias.

The mixed methods approach adopted is affected by the issue of quantitative and qualitative approaches representing different paradigms (Sale et al., 2002). The issue of differing paradigms is compounded by advocacy for either quantitative or qualitative methods as the definitive research approach for some scholars (Morgan, 1998). In this study, quantitative and qualitative methods complemented each other in fulfilling the study's aim. While the rationale and reasoning in linking this study's quantitative and qualitative findings could be open to differing interpretations and alternative subjectivity (Freshwater, 2007), the adopted approach offers benefits such as providing a more complete analysis (Creswell et al., 2004), obtaining a broader picture of a phenomenon (O'Cathain et al., 2007) and offering a justifiable third paradigm (Johnson

et al., 2007). The mixed methods benefits in this study were derived by integrating significant and unique findings from the quantitative and qualitative approaches.

### **3.13 Conclusion**

This methodology chapter has detailed the approach taken in conducting the study to meet desired, ethically approved research aims. The next chapter will present the first part of the research findings pertaining to team characteristics and performance.

## **Chapter 4: Team Characteristics and Performance**

### **4.1 Introduction**

This chapter presents a comparative analysis of team characteristics and performance data from the participating hospitals' rehabilitation services. The presentation of team characteristics starts with structural team characteristics which were determined from administrative records of the rehabilitation services. Structural team characteristics reported are team size and team tenure (team age). Team characteristics data obtained via the survey questionnaire cover: individual characteristics of team members; the reported number of team members in the rehabilitation service (perceived team size); a team type index; a perceived efficiency index; a team climate index; and teamwork comments. The findings about individual characteristics offer a demographic description of the participants. The reports of the numbers of team members gives an overview of rehabilitation service staff perceptions with regards to their definition of team size and the number of team members with whom they work in their respective services. Team type index findings presents a distribution of team categorization based on participant responses towards themes pertaining to the level of integration in their services. The perceived efficiency index findings provide a summary of perceived team efficiency within the services. The team climate index findings cover responses to items relating to elements for successful team work. Insights from survey participants pertaining to teamwork are presented in the teamwork comments section to complement to team characteristics data obtained. Performance data presented come from: the overall job satisfaction scale included in the survey questionnaire and rehabilitation medicine clinical indicators secondary data. The overall job satisfaction scale findings are a summary of staff satisfaction with regards to different items contributing to staff well-being within the services. Rehabilitation medicine clinical indicators data reveals clinical performance outcomes from the respective services.

Significant cumulative results are presented for the indexes and scale results by hospital. This is followed by analysis of themes, items, or variables of importance that contributed to significantly different cumulative indexes and scale results among the participating hospitals. Tables in this chapter distinguish between the participating hospitals with general rehabilitation services and the sole hospital that provided a stroke



rehabilitation service. Noteworthy comparisons are shaded in the tables complementing this chapter. This chapter's organization is provided under the following headings: 4.2 Structural team characteristics; 4.3 Survey participant distribution by hospital; 4.4 Individual characteristics of team members (participant demographics); 4.5 Reported number of team members in the rehabilitation service; 4.6 Team type index; 4.7 Perceived efficiency index; 4.8 Team climate index; 4.9 Teamwork comments; 4.10 Overall job satisfaction scale; 4.11 Rehabilitation medicine clinical indicator data; 4.12 Association between team characteristics and performance; and 4.13 Discussion.

## **4.2 Structural team characteristics**

Structural team characteristics evaluated in the study were team size and team tenure (Table 4.1). Team size provides an indication of the number of members in a particular service. Team tenure would reflect the age of the rehabilitation service. The team size data obtained from administrative records of the rehabilitation services reveal two hospitals (Hospitals B and D) to have large services (59 and 68 respectively). Based on data presented in the previous chapter, it is worth noting in conjunction with team size, that the number of beds for Hospital D's rehabilitation service is more than 50, while there are less than 30 rehabilitation beds at Hospital B. Therefore, the large team size of Hospital D's service would be catering to potentially larger inpatient numbers compared to the team at Hospital B. The number of rehabilitation beds at the other participating hospitals range between less than 25 and less than 30. Hospital G has the service with the third highest number of staff with 46 clinicians. The staff numbers from Hospitals A, E, F are close with 37, 36 and 37 respectively. Hospital C had the smallest team size with a service of 27 staff. Team tenure findings indicate Hospital F to have the oldest service (> 20 years). The services from Hospitals A, C, D and E were all more than 15 years of age. The services from Hospitals B and G were both less than 15 years old.

**Table 4.1:** Structural team characteristics, by hospital

| Structural team characteristic | General    |            |            |            |            |            | Stroke     |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|
|                                | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Team size                      | 37†        | 59†        | 27         | 68         | 36†        | 37†        | 46†        |
| Team tenure                    | >15 years  | < 15 years | >15 years  | >15 years  | >15 years  | >20 years  | < 15 years |

† Full time equivalent figures

### 4.3 Survey participant distribution by hospital

As highlighted in Chapter 3, a nurse from Hospital B was the only clinician who declined participation. All other clinicians from across the hospitals who turned up at scheduled research sessions responded by providing participation consent and completing the survey as requested. The survey questionnaire was completed by 155 participants from the seven hospitals (Table 4.2). Between 16 to 34 participants from each hospital's rehabilitation service were recruited. The lowest number of participants came from Hospitals C and F, with 16 each. The highest number of participants came from Hospitals D and B with 34 and 31 respectively. The response rates obtained contributed towards good representation of the respective services and promotes the transferability of findings for the selected sample. While the recruitment of clinicians from the services ranged between 41% and 59%, the percentages recruited would sufficiently fulfill the numbers making up a full shift. It will also be observable in the next section that clinicians recruited also reflect the medical, nursing and allied health compositions of the services.

**Table 4.2:** Number of survey participants, by hospital

| Number of participants                | All hospitals | General    |            |            |            |            |            | Stroke     |
|---------------------------------------|---------------|------------|------------|------------|------------|------------|------------|------------|
|                                       |               | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
|                                       | 155           | 22         | 31         | 16         | 34         | 17         | 16         | 19         |
| Team size (as presented in Table 4.1) |               | 37†        | 59†        | 27         | 68         | 36†        | 37†        | 46†        |
| Participant percentages               |               | 59%        | 53%        | 59%        | 50%        | 47%        | 43%        | 41%        |

† Full time equivalent figures

#### **4.4 Individual characteristics of team members (participant demographics)**

Full statistical results for the individual characteristics of team members across the seven hospitals are presented in Table 4.3. Participants were predominantly female (76.1%). The gender distribution did not differ significantly between hospitals.

Differences between hospitals for age distribution were not significant. The age groups with the largest number of study participants were 20-30 (35.5%) and 31-40 (23.2%). Substantial proportions of participants were also in the 41-50 and 51-60 age groups with 20.0% and 16.8% respectively. A small proportion of participants (3.8%) were in the 61-70 and 71 and above age groups.

No significant difference between hospitals was found for the distribution of professions. All hospitals had representations from doctors, nurses, physiotherapists and occupational therapists. Nurses were the most frequently represented profession with 43.2 % of rehabilitation service participants. Some sites lacked certain a representative from a specific profession. The only orthoptist participant came from Hospital G. Hospital C lacked any social workers while Hospitals D and E did not have a speech pathologist. Only Hospitals F and G had dieticians while only Hospitals A and B engaged psychologists.

Excluding two participants from the sample with missing answers, 116 participants (74.8%) were Australian trained and 37 participants (23.9%) were initially trained outside Australia. No significant differences were found in the distribution of country of initial training between hospitals.

No significant distribution differences were found between hospitals for participants' experience in their profession. Participants were in the main experienced, that is, the 'more than 10 years' category had the highest proportion (40.9%), while the 'less than one year' category had the lowest proportion (9.1%).

**Table 4.3:** Comparison of team members' characteristics, by hospital

| Characteristic                           | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | p<br>Value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| Gender                                   |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Male</i>                              | 37 (23.9%)             | 6 (27.3%)  | 7 (22.6%)           | 7 (43.8%)           | 8 (23.5%)           | 4 (23.5%)           | 2 (12.5%)           | 3 (15.8%)           | 0.54       |
| <i>Female</i>                            | 118 (76.1%)            | 16 (72.7%)   | 24 (77.4%)          | 9 (56.3%)           | 26 (76.5%)          | 13 (76.5%)          | 14 (87.5%)          | 16 (84.2%)          |            |
| Age (years)                              |                        |  |                     |                     |                     |                     |                     |                     |            |
| 20-30                                    | 55 (35.5%)             | 2 (9.1%)   | 12 (38.7%)          | 8 (50.0%)           | 12 (35.3%)          | 7 (41.2%)           | 6 (37.5%)           | 8 (42.1%)           | 0.09       |
| 31-40                                    | 36 (23.2%)             | 6 (27.3%)  | 8 (25.8%)           | 6 (37.5%)           | 7 (20.6%)           | 4 (23.5%)           | 4 (25.0%)           | 1 (5.3%)            |            |
| 41-50                                    | 31 (20.0%)             | 5 (22.7%)  | 9 (29.0%)           | 1 (6.3%)            | 8 (23.5%)           | 3 (17.6%)           | 2 (12.5%)           | 3 (15.8%)           |            |
| 51-60                                    | 26 (16.8%)             | 7 (31.8%)  | 2 (6.5%)            | 0 (0.0%)            | 5 (14.7%)           | 2 (11.8%)           | 4 (25.0%)           | 6 (31.6%)           |            |
| 61-70                                    | 5 (3.2%)               | 2 (9.1%)   | 0 (0.0%)            | 1 (6.3%)            | 1 (2.9%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| 71 and above                             | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| Profession                               |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Doctor</i>                            | 24 (15.5%)             | 3 (13.6%)  | 6 (19.4%)           | 2 (12.5%)           | 6 (17.6%)           | 2 (11.8%)           | 2 (12.5%)           | 3 (15.8%)           | 0.99       |
| <i>Nurse</i>                             | 67 (43.2%)             | 8 (36.4%)  | 11 (35.5%)          | 8 (50.0%)           | 17 (50.0%)          | 8 (47.1%)           | 5 (31.3%)           | 10 (52.6%)          |            |
| <i>Physiotherapist</i>                   | 20 (12.9%)             | 3 (13.6%)  | 5 (16.1%)           | 2 (12.5%)           | 4 (11.8%)           | 3 (17.6%)           | 2 (12.5%)           | 1 (5.3%)            |            |
| <i>O.T.†</i>                             | 21 (13.5%)             | 3 (13.6%)  | 5 (16.1%)           | 3 (18.8%)           | 4 (11.8%)           | 2 (11.8%)           | 3 (18.8%)           | 1 (5.3%)            |            |
| <i>Social Worker</i>                     | 12 (7.7%)              | 2 (9.1%)   | 2 (6.5%)            | 0 (0.0%)            | 3 (8.8%)            | 2 (11.8%)           | 2 (12.5%)           | 1 (5.3%)            |            |
| <i>S. T.‡</i>                            | 5 (3.2%)               | 1 (4.5%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (6.3%)            | 1 (5.3%)            |            |
| <i>Dietician</i>                         | 2 (1.3%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (6.3%)            | 1 (5.3%)            |            |
| <i>Psychologist</i>                      | 3 (1.9%)               | 2 (9.1%)   | 1 (3.2%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Orthoptist</i>                        | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| Country of initial professional training |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Australia</i>                         | 116 (74.8%)            | 14 (66.7%)   | 24 (77.4%)          | 9 (56.3%)           | 26 (76.5%)          | 15 (88.2%)          | 14 (93.3%)          | 14 (73.7%)          | 0.23       |
| <i>Overseas</i>                          | 37 (23.9%)             | 7 (33.3%)  | 7 (22.6%)           | 7 (43.8%)           | 8 (23.5%)           | 2 (11.8%)           | 1 (6.7%)            | 5 (26.3%)           |            |

\*Totals of each variable may vary due to missing values. †Occupational therapist ‡Speech therapist

*Continued*

| Characteristic   | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>Value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| Experience in<br>professional field<br>(years)             |                        |  |                     |                     |                     |                     |                     |                     |            |
| < 1  | 14 (9.1%)              | 0 (0.0%)   | 5 (16.1%)           | 3 (18.8%)           | 1 (2.9%)            | 1 (6.3%)            | 0 (0.0%)            | 4 (21.1%)           | 0.07       |
| 1-<5   | 34 (22.1%)             | 1 (4.5%)   | 7 (22.6%)           | 4 (25.0%)           | 8 (23.5%)           | 4 (25.0%)           | 5 (31.3%)           | 5 (26.3%)           |            |
| 5- 10  | 43 (27.9%)             | 4 (18.2%)  | 9 (29.0%)           | 5 (31.3%)           | 13 (38.2%)          | 3 (18.8%)           | 5 (31.3%)           | 4 (21.1%)           |            |
| > 10   | 63 (40.9%)             | 17 (77.3%)   | 10 (32.3%)          | 4 (25.0%)           | 12 (35.3%)          | 8 (50.0%)           | 6 (37.5%)           | 6 (31.6%)           |            |
| Experience in<br>rehabilitation team<br>(years)            |                        |  |                     |                     |                     |                     |                     |                     |            |
| < 1  | 37 (24.0%)             | 0 (0.0%)   | 10 (32.3%)          | 3 (18.8%)           | 14 (41.2%)          | 3 (18.8%)           | 0 (0.0%)            | 7 (36.8%)           | 0.001      |
| 1-<5   | 42 (27.3%)             | 3 (13.6%)  | 10 (32.3%)          | 8 (50.0%)           | 5 (14.7%)           | 4 (25.0%)           | 7 (43.8%)           | 5 (26.3%)           |            |
| 5- 10  | 42 (27.3%)             | 9 (40.9%)  | 6 (19.4%)           | 2 (12.5%)           | 10 (29.4%)          | 3 (18.8%)           | 8 (50.0%)           | 4 (21.1%)           |            |
| > 10   | 33 (21.4%)             | 10 (45.5%)   | 5 (16.1%)           | 3 (18.8%)           | 5 (14.7%)           | 6 (37.5%)           | 1 (6.3%)            | 3 (15.8%)           |            |
| Experience in<br>current<br>rehabilitation team<br>(years) |                        |  |                     |                     |                     |                     |                     |                     |            |
| < 1  | 49 (32.0%)             | 2 (9.1%)   | 15 (48.4%)          | 3 (20.0%)           | 16 (47.1%)          | 4 (25.0%)           | 2 (12.5%)           | 7 (36.8%)           | 0.003      |
| 1-<5   | 48 (31.4%)             | 7 (31.8%)  | 8 (25.8%)           | 9 (60.0%)           | 6 (17.6%)           | 4 (25.0%)           | 8 (50.0%)           | 6 (31.6%)           |            |
| 5- 10  | 38 (24.8%)             | 6 (27.3%)  | 8 (25.8%)           | 2 (13.3%)           | 10 (29.4%)          | 3 (18.8%)           | 5 (31.3%)           | 4 (21.1%)           |            |
| > 10   | 18 (11.8%)             | 7 (31.8%)  | 0 (0.0%)            | 1 (6.7%)            | 2 (5.9%)            | 5 (31.3%)           | 1 (6.3%)            | 2 (10.5%)           |            |

\*Totals of each variable may vary due to missing values

Statistical testing revealed significant difference between hospitals in the number of years of experience participants had in a rehabilitation team. While Hospitals A and E had significantly higher proportions with 'more than 10 years of experience' (45.5% and 37.5% respectively), the proportion was very much lower for Hospital F with 6.3%. For the 'less than a year' category of experience in a rehabilitation team, Hospitals D, G and B had high proportions of 41.2%, 36.8% and 32.3% respectively while Hospitals A and F did not have any participant in the 'less than a year' category. A high proportion of staff from Hospital C (50.0%) and F (43.8%) had between one and five years of experience in a rehabilitation team. From Hospital F, there was a high proportion of staff (50.0%) having between 5 and 10 years of experience in a rehabilitation team.

Significant differences were found between hospitals for participants' experience in their current rehabilitation team. The percentages of participants with less than one year of experience in their current team was high for Hospitals B, D and G with 48.4%, 47.1% and 36.8% respectively. At the other end of the spectrum, only 9.1% of participants from Hospital A had less than one year of experience in their current team. Hospitals A and E had 31.8% and 31.3% respectively of participants with more than 10 years of experience in their current team while none of the participants from Hospital B had a similar level of current rehabilitation team experience. A high proportion of participants from Hospital C (60.0%) and Hospital F (50.0%) had between 1 and 5 years of experience in their current team.

Overall, there were no statistically significant differences for the individual characteristics in distributions of gender, age, profession, country of professional training and experience in professional field among the participating hospitals. The common findings among services for the five individual characteristics indicate that team composition and participant demographics for the services are fairly similar.

Significant differences were noted among hospitals for the individual characteristics of experience in a rehabilitation team and experience in the current rehabilitation team. Hospitals B, D and G had high proportions of staff with less than one year of experience in both a rehabilitation team and the current rehabilitation team. Hospitals A and E had high proportions of staff with more than 10 years of experience in both a rehabilitation team and the current rehabilitation team. Hospitals C and F had high proportions of staff with between one and five years of experience in a rehabilitation team and the current

rehabilitation team. Hospital F also had a noticeably high proportion of staff with between five and 10 years of experience in a rehabilitation team. The differences in rehabilitation and current team experience among individuals from the services suggest a level of experience diversity both within and between the services.

#### **4.5 Reported number of team members in the rehabilitation service**

For all hospitals, the number of team members as reported by the participants was quite varied (Table 4.4). The distribution of data is attributable to several factors. From the survey input, some participants indicated their reported number covered only members of their professional group within the rehabilitation service. Other participants perceived team membership to include either some or all the different professional groups within the service. It was noted during the administering of the survey questionnaire that many participants were uncertain with regards to the number of team members they had and there was often discussion among participants in calculating team size. Ambiguity with regards to perceived team size and membership was also explicitly mentioned by some participants. The varied answers from participants reflect a lack of consensus in defining team relationships across professional groups within the rehabilitation services. It is likely that variation in findings was due to full time equivalent figures being conflated or confused by participants with casual and flexible staffing arrangements.

The numbers reported by participants were compared against administrative figures. With the exception of Hospital G, administratively determined figures of staff numbers in rehabilitation services are within or close to ranges of participants' reported data. The specialized nature of the stroke rehabilitation service at Hospital G might require fewer interactions among the different professional groups within the service or a sequential or parallel approach to task completion among the professionals. Less interprofessional contact among different clinical staff could account for the perceived number of team members in Hospital G being lower than the full time equivalent figure administratively obtained.

**Table 4.4:** Perceived number of rehabilitation team members compared to administratively determined number, by hospital

| Team size   |                           | Rehabilitation services results by hospital |              |              |               |               |               |              |
|---|---------------------------|---|--------------|--------------|---------------|---------------|---------------|--------------|
|   |                           | General                                     |              |              |               |               |               | Stroke       |
|   |                           | Hospital A                                  | Hospital B   | Hospital C   | Hospital D    | Hospital E    | Hospital F    | Hospital G   |
| Perceived number of team members by clinical rehabilitation service staff | Mean (Standard deviation) | 18.41 (6.97)                                | 28.1 (22.45) | 21.88 (7.49) | 29.88 (25.99) | 33.18 (14.06) | 38.63 (16.27) | 13.89 (5.03) |
|   | Median                    | 16.0  | 27.5         | 20.0         | 16.0          | 40.0          | 50.0          | 16.0         |
|   | Range                     | 9-34  | 5-100        | 9-40         | 6-104         | 18-68         | 14-50         | 7-20         |
| Administratively determined number (approximate)                          |                           | 37†   | 59†          | 27           | 68            | 36†           | 37†           | 46†          |

† Full time equivalent figures

Differences in figures reported by participants from all hospitals compared to administrative figures could be due to a few reasons. Some full time equivalent roles might be divided among a few different staff. There is the possibility of some administratively accounted roles being unfilled or left vacant due to staff turnover. Differences in figures may also be affected by how rehabilitation clinicians define team membership as opposed to an assumption that all rehabilitation service staff are regarded as team members.

#### 4.6 Team type index

From the team type index, the majority (60.6%) of study participants view the team within which they were working as being ‘interprofessional’, 35.5% as ‘transprofessional’, and 3.9% as ‘multiprofessional’ (Table 4.5). The dominant interprofessional results indicate the level of perceived team organization within the rehabilitation services to be largely in the middle of the integration continuum mentioned in the literature review. A large proportion of participants with transprofessional results suggest some aspects of team organization to be very integrated. The small proportion of staff reporting their team to be multiprofessional suggests very limited integration for some staff with other team members in the rehabilitation services. Initial testing for differences in team type between hospitals did



not detect a significant difference, however visual examination, isolation and retesting of findings from Hospital C against other hospitals indicated that Hospital C differed from the rest ( $p=0.009$ ), with 43.8% of participants in Hospital C scoring their team as transprofessional, 37.5% as interprofessional and 18.8% as multiprofessional. Results from Hospital C show that participant results from its rehabilitation services are not predominantly in a particular team type category. The results imply a lack of consensus about team organization within Hospital C.

Examining the themes (Table 4.6) that are summed to form the team type index, participants report a combination of multiprofessional, interprofessional and transprofessional elements. The majority of participants perceive the teams that they work in as being interprofessional in terms of role specialization and task interdependence. The interprofessional findings indicate the expectation for interactions within the rehabilitation services despite roles being specialized and that tasks are partly interdependent and require coordination. Coordination, leadership and role interdependence are mainly perceived to be transprofessional, while task specialization is largely reported as multiprofessional. The transprofessional themes results suggests coordination through: close interaction, flexibility and improvisation; team leadership that varies by situation and self regulation; and role interdependence characterized by interaction and continuous adjustments. The multiprofessional result for task specialization indicates tasks to be specialized and only those with special professional education being allowed to perform the particular task.

**Table 4.5:** Distribution of rehabilitation service team type index, by hospital

| Team type categorization | All hospitals<br>n (%) | Rehabilitation services results by hospital |                     |                       |                     |                     |                     |                     | P Value |
|--------------------------|------------------------|---|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------|
|                          |                        | General                                     |                     |                       |                     |                     |                     | Stroke              |         |
|                          |                        | Hospital A<br>n (%)                         | Hospital B<br>n (%) | Hospital C<br>n (%)   | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| Multiprofessional        | 6 (3.9%)               | 1 (4.5%)                                    | 0 (0.0%)            | 3 (18.8%)<br>p=0.009† | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            | 0.56    |
| Interprofessional        | 94 (60.6%)             | 14 (63.6%)                                  | 20 (64.5%)          | 6 (37.5%)             | 21 (61.8%)          | 10 (58.8%)          | 11 (68.8%)          | 12 (63.2%)          |         |
| Transprofessional        | 55 (35.5%)             | 7 (31.8%)                                   | 11 (35.5%)          | 7 (43.8%)             | 12 (35.3%)          | 7 (41.2%)           | 5 (31.3%)           | 6 (31.6%)           |         |

\*Totals may differ across types due to missing values

†Value obtained after isolation and examination against results from other hospit

**Table 4.6:** Participant responses to team type index themes

| Theme                   | Response statements by team type   |   |   |
|-------------------------|--|---|---|
|                         | Multiprofessional<br>n (%)   | Interprofessional<br>n (%)  | Transprofessional<br>n (%)  |
| 1. Role specialization  | Team roles are specialized and everyone concentrates on her or his own tasks<br><br>16 (10.3%)                               | Roles are specialized but everyone is expected to interact<br><br>110 (71.0%) | Although roles are specialized, everyone must also be prepared not only to complement, but to replace each other when necessary<br><br>29 (18.7%) |
| 2. Task interdependence | Tasks are usually performed in a determined sequence<br><br>19 (12.3%)   | Tasks are partly interdependent and must be co-ordinated<br><br>96 (62.3%)    | Team members as well as their tasks are interdependent<br><br>39 (25.3%)  |
| 3. Co-ordination        | Co-ordination is based on supervision or standardization<br><br>14 (9.2%)  | Every one has to co-ordinate their activities<br><br>44 (28.8%)               | Co-ordination is achieved by direct close interaction, flexibility and improvisation<br><br>95 (62.1%)  |
| 4. Task specialization  | Tasks are specialized and only those with a special professional education are allowed to perform the task<br><br>65 (41.9%) | Everyone must be prepared to adjust to the task.<br><br>40 (25.8%)            | Everyone must be prepared to adjust to the strengths and weaknesses of the others<br><br>50 (32.3%)   |
| 5. Leadership           | Team leader functions as a traditional manager<br><br>37 (23.9%)   | Team leader functions as a 'coach'<br><br>31(20.0%)                           | Team leadership varies with the situation; the team is self-regulated<br><br>87 (56.1%)   |
| 6. Role interdependence | 'Do your job the best way you know'<br><br>10 (6.5%)   | 'Do your job and co-operate'<br><br>26 (16.8%)                                | 'Do your job in an interactive way and be ready for continuous adjustments'<br><br>119 (76.8%)  |

\*Totals may differ across themes due to missing values

Differences were detected between hospitals pertaining to the team type index themes although these were not statistically significant (Table 4.7). For example, the majority of participants from all hospitals except Hospital C perceived their teams to be interprofessional in terms of the second theme, task interdependence. Hospital C differed from the others in perceptions of task independence. Task independence responses for Hospital C were equally distributed between the response categories of multiprofessional, interprofessional and transprofessional. The task independence theme finding for Hospital C is likely to be the contributor to the hospital's significantly different team type index results. Another variation noted was that almost half the participants from Hospital B had an interprofessional response for the third theme of coordination while the majority of participants from other hospitals perceived the coordination of their team to be transprofessional. While there were other differences in proportionality between hospitals for team type index themes responses, as mentioned, they were not statistically significant.

In summary, large proportions of rehabilitation services staff from Hospitals A, B, D, E, F and G categorized their team as 'interprofessional'. These results indicate team organization in the rehabilitation services to reportedly have mid level integration between 'multiprofessional' and 'transprofessional' team types. The results indicate the hospitals to have elements of all three team types. Hospital C had team type index results with almost equal proportion of staff producing 'interprofessional' and 'transprofessional' results. The different team type index results for Hospital C could be attributed to its differing task interdependence characteristics the hospital had compared to other hospitals.

**Table 4.7:** Team type index themes, by hospital

| Theme and response statement category | All hospitals n (%) | Rehabilitation services participant response results by hospital |                  |                  |                  |                  |                  |                  | p value |
|---------------------------------------|---------------------|--|------------------|------------------|------------------|------------------|------------------|------------------|---------|
|                                       |                     | General  |                  |                  |                  |                  |                  | Stroke           |         |
|                                       |                     | Hospital A n (%)   | Hospital B n (%) | Hospital C n (%) | Hospital D n (%) | Hospital E n (%) | Hospital F n (%) | Hospital G n (%) |         |
| 1. Role specialization                |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 16 (10.3%)          | 2 (9.1%)   | 1 (3.2%)         | 3 (18.8%)        | 4 (11.8%)        | 1 (5.9%)         | 2 (12.5%)        | 3 (15.8%)        | 0.64    |
| <i>Interprofessional</i>              | 110 (71.0%)         | 17(77.3%)  | 22 (71.0%)       | 11 (68.8%)       | 26 (76.5%)       | 10 (58.8%)       | 12 (75.0%)       | 12 (63.2%)       |         |
| <i>Transprofessional</i>              | 29 (18.7%)          | 3 (13.6%)  | 8 (25.8%)        | 2 (12.5%)        | 4 (11.8%)        | 6 (35.3%)        | 2 (12.5%)        | 4 (21.1%)        |         |
| 2. Task interdependence               |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 19 (12.3%)          | 3 (13.6%)  | 1 (3.3%)         | 5 (31.3%)        | 3 (8.8%)         | 1 (5.9%)         | 2 (12.5%)        | 4 (21.1%)        | 0.34    |
| <i>Interprofessional</i>              | 96 (62.3%)          | 14 (63.6%)   | 21 (70.0%)       | 6 (37.5%)        | 23 (67.6%)       | 9 (52.9%)        | 11 (68.8%)       | 12 (63.2%)       |         |
| <i>Transprofessional</i>              | 39 (25.3%)          | 5 (22.7%)  | 8 (26.7%)        | 5 (31.3%)        | 8 (23.5%)        | 7 (41.2%)        | 3 (18.8%)        | 3 (15.8%)        |         |
| 3. Co-ordination                      |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 14 (9.2%)           | 2 (9.1%)   | 5 (16.1%)        | 1 (6.7%)         | 2 (5.9%)         | 2 (11.8%)        | 0 (0.0%)         | 2 (10.5%)        | 0.07    |
| <i>Interprofessional</i>              | 44 (28.8%)          | 3 (13.6%)  | 14 (45.2%)       | 6 (40.0%)        | 7 (20.6%)        | 2 (11.8%)        | 4 (26.7%)        | 8 (42.1%)        |         |
| <i>Transprofessional</i>              | 95 (62.1%)          | 17 (77.3%)   | 12 (38.7%)       | 8 (53.3%)        | 25 (73.5%)       | 13 (76.5%)       | 11 (73.3%)       | 9 (47.4%)        |         |
| 4. Task specialization                |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 65 (41.9%)          | 8 (36.4%)  | 10 (32.3%)       | 7 (43.8%)        | 15 (44.1%)       | 7 (41.2%)        | 7 (43.8%)        | 11 (57.9%)       | 0.85    |
| <i>Interprofessional</i>              | 40 (25.8%)          | 7 (31.8%)  | 10 (32.3%)       | 3 (18.8%)        | 7 (20.6%)        | 3 (17.6%)        | 6 (37.5%)        | 4 (21.1%)        |         |
| <i>Transprofessional</i>              | 50 (32.3%)          | 7 (31.8%)  | 11 (35.5%)       | 6 (37.5%)        | 12 (35.3%)       | 7 (41.2%)        | 3 (18.8%)        | 4 (21.1%)        |         |
| 5. Leadership                         |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 37 (23.9%)          | 10 (45.5%)   | 6 (19.4%)        | 2 (12.5%)        | 7 (20.6%)        | 6 (35.3%)        | 2 (12.5%)        | 4 (21.1%)        | 0.28    |
| <i>Interprofessional</i>              | 31 (20.0%)          | 1 (4.5%)   | 9 (29.0%)        | 5 (31.3%)        | 5 (14.7%)        | 4 (23.5%)        | 3 (18.8%)        | 4 (21.1%)        |         |
| <i>Transprofessional</i>              | 87 (56.1%)          | 11 (50.0%)   | 16 (51.6%)       | 9 (56.3%)        | 22 (64.7%)       | 7 (41.2%)        | 11 (68.8%)       | 11 (57.9%)       |         |
| 6. Role interdependence               |                     |  |                  |                  |                  |                  |                  |                  |         |
| <i>Multiprofessional</i>              | 10 (6.5%)           | 3 (13.6%)  | 1 (3.2%)         | 3 (18.8%)        | 1 (2.9%)         | 0 (0.0%)         | 0 (0.0%)         | 2 (10.5%)        | 0.22    |
| <i>Interprofessional</i>              | 26 (16.8%)          | 4 (18.2%)  | 6 (19.4%)        | 4 (25.0%)        | 8 (23.5%)        | 1 (5.9%)         | 1 (6.3%)         | 2 (10.5%)        |         |
| <i>Transprofessional</i>              | 119 (76.8%)         | 15 (68.2%)   | 24 (77.4%)       | 9 (56.3%)        | 25 (73.5%)       | 16 (94.1%)       | 15 (93.8%)       | 15 (78.9%)       |         |

\*Totals may differ across themes due to missing values

#### 4.7 Perceived efficiency index

Referring to Table 4.8, Hospitals A ( $p=0.003$ ), C ( $p=0.04$ ) and D ( $p=0.004$ ) were significantly different from others on the perceived efficiency index. The data show Hospital A and C with lower perceived efficiency index mean, median and range results compared to results from Hospital D. It is notable however that all hospitals indicate their rehabilitation services to be relatively healthy on the perceived efficiency index. Cumulative mean, median and range index scores were higher than 3, the mid-point, for all hospitals. A higher perceived efficiency index score suggests greater levels of reported efficiency where the index score results could range from the lowest score of 1 to the highest score of 5.

**Table 4.8:** Perceived efficiency index, by hospital

| Index results   | Rehabilitation services results by hospital |                |                |                |                |                |                |
|-----------------|---|----------------|----------------|----------------|----------------|----------------|----------------|
|                 | General                                     |                |                |                |                |                | Stroke         |
|                 | Hospital A                                  | Hospital B     | Hospital C     | Hospital D     | Hospital E     | Hospital F     | Hospital G     |
| Mean (std dev*) | 3.58<br>(0.61)                              | 4.08<br>(0.48) | 3.79<br>(0.46) | 4.25<br>(0.38) | 4.11<br>(0.50) | 4.22<br>(0.49) | 4.07<br>(0.49) |
| Median          | 3.67  | 4.00           | 3.83           | 4.17           | 4.17           | 4.00           | 4.00           |
| Range           | 3-5   | 3-5            | 3-5            | 4-5            | 3-5            | 4-5            | 3-5            |
| P value†        | 0.003                                       | 0.60           | 0.04           | 0.004          | 0.16           | 0.75           | 0.67           |

With reference to Table 4.9, a large proportion of individual participants from all hospitals selected the ‘to a high degree’ response for all six perceived efficiency index items. Thus participants believed their services were relatively efficient. A high proportion of staff perceive ‘to a high degree’ their services to be goal focused, work efficient, successful, of high quality, meeting patient needs and providing satisfying team work. Nevertheless, the results suggest there is room for improvement as smaller proportions of staff from all hospitals provided ‘to a very high degree’ responses for the six perceived efficiency index items.

**Table 4.9:** Perceived efficiency index items, by hospital

| Index items and level of agreement responses  | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | p<br>Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 1. Team members working towards the same goal |                        |  |                     |                     |                     |                     |                     |                     | 0.11       |
| <i>To a very low degree</i>                   | 2 (1.3%)               | 2 (9.1%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                        | 6 (3.9%)               | 3 (13.6%)  | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| <i>To a neither low or high degree</i>        | 13 (8.4%)              | 3 (13.6%)  | 1 (3.2%)            | 3 (18.8%)           | 1 (2.9%)            | 1 (5.9%)            | 1 (6.7%)            | 3 (15.8%)           |            |
| <i>To a high degree</i>                       | 86 (55.8%)             | 11 (50.0%)   | 18 (58.1%)          | 9 (56.3%)           | 20 (58.8%)          | 7 (41.2%)           | 9 (60.0%)           | 12 (63.2%)          |            |
| <i>To a very high degree</i>                  | 47 (30.5%)             | 3 (13.6%)  | 11 (35.5%)          | 3 (18.8%)           | 13 (38.2%)          | 9 (52.9%)           | 5 (33.3%)           | 3 (15.8%)           |            |
| 2. Efficiency of team work                    |                        |  |                     |                     |                     |                     |                     |                     | 0.02       |
| <i>To a very low degree</i>                   | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                        | 5 (3.2%)               | 2 (9.1%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a neither low or high degree</i>        | 31 (20.1%)             | 9 (40.9%)  | 7 (22.6%)           | 4 (25.0%)           | 1 (2.9%)            | 4 (23.5%)           | 3 (20.0%)           | 3 (15.8%)           |            |
| <i>To a high degree</i>                       | 92 (59.7%)             | 11 (50.0%)   | 18 (58.1%)          | 10 (62.5%)          | 25 (73.5%)          | 7 (41.2%)           | 8 (53.3%)           | 13 (68.4%)          |            |
| <i>To a very high degree</i>                  | 26 (16.9%)             | 0 (0.0%)   | 5 (16.1%)           | 1 (6.3%)            | 8 (23.5%)           | 5 (29.4%)           | 4 (26.7%)           | 3 (15.8%)           |            |
| 3. Success of organization/unit               |                        |  |                     |                     |                     |                     |                     |                     | 0.07       |
| <i>To a very low degree</i>                   | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                        | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a neither low or high degree</i>        | 21 (13.7%)             | 7 (31.8%)  | 4 (12.9%)           | 3 (18.8%)           | 2 (5.9%)            | 1 (6.3%)            | 1 (6.7%)            | 3 (15.8%)           |            |
| <i>To a high degree</i>                       | 94 (61.4%)             | 14 (63.6%)   | 20 (64.5%)          | 12 (75.0%)          | 18 (52.9%)          | 10 (62.5%)          | 9 (60.0%)           | 11 (57.9%)          |            |
| <i>To a very high degree</i>                  | 38 (24.8%)             | 1 (4.5%)   | 7 (22.6%)           | 1 (6.3%)            | 14 (41.2%)          | 5 (31.3%)           | 5 (33.3%)           | 5 (26.3%)           |            |
| 4. Quality of organization/unit               |                        |  |                     |                     |                     |                     |                     |                     | 0.16       |
| <i>To a very low degree</i>                   | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                        | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a neither low or high degree</i>        | 26 (16.9%)             | 8 (36.4%)  | 3 (9.7%)            | 5 (31.3%)           | 2 (5.9%)            | 4 (23.5%)           | 2 (13.3%)           | 2 (10.5%)           |            |
| <i>To a high degree</i>                       | 98 (63.6%)             | 12 (54.5%)   | 23 (74.2%)          | 10 (62.5%)          | 23 (67.6%)          | 9 (52.9%)           | 9 (60.0%)           | 12 (63.2%)          |            |
| <i>To a very high degree</i>                  | 30 (19.5%)             | 2 (9.1%)   | 5 (16.1%)           | 1 (6.3%)            | 9 (26.5%)           | 4 (23.5%)           | 4 (26.7%)           | 5 (26.3%)           |            |

\*Totals may differ across items due to missing values.

*Continued*

| Index items and level of agreement responses | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 5. Meeting of Patient Needs by team          |                        |  |                     |                     |                     |                     |                     |                     | 0.33       |
| <i>To a very low degree</i>                  | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                       | 1 (0.6%)               | 1 (4.5%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a neither low or high degree</i>       | 21 (13.6%)             | 7 (31.8%)  | 4 (12.9%)           | 4 (25.0%)           | 2 (5.9%)            | 2 (11.8%)           | 1 (6.7%)            | 1 (5.3%)            |            |
| <i>To a high degree</i>                      | 96 (62.3%)             | 12 (54.5%)   | 19 (61.3%)          | 9 (56.3%)           | 24 (70.6%)          | 11 (64.7%)          | 8 (53.3%)           | 13 (68.4%)          |            |
| <i>To a very high degree</i>                 | 36 (23.4%)             | 2 (9.1%)   | 8 (25.8%)           | 3 (18.8%)           | 8 (23.5%)           | 4 (23.5%)           | 6 (40.0%)           | 5 (26.3%)           |            |
| 6. Satisfaction with team's work             |                        |  |                     |                     |                     |                     |                     |                     | 0.12       |
| <i>To a very low degree</i>                  | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a low degree</i>                       | 5 (3.2%)               | 3 (13.6%)  | 1 (3.2%)            | 0 (0.0%)            | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>To a neither low or high degree</i>       | 24 (15.6%)             | 6 (27.3%)  | 5 (16.1%)           | 5 (31.3%)           | 1 (2.9%)            | 2 (11.8%)           | 1 (6.7%)            | 4 (21.1%)           |            |
| <i>To a high degree</i>                      | 90 (58.4%)             | 12 (54.5%)   | 17 (54.8%)          | 8 (50.0%)           | 23 (67.6%)          | 11 (64.7%)          | 9 (60.0%)           | 10 (52.6%)          |            |
| <i>To a very high degree</i>                 | 34 (22.1%)             | 1 (4.5%)   | 8 (25.8%)           | 2 (12.5%)           | 9 (26.5%)           | 4 (23.5%)           | 5 (33.3%)           | 5 (26.3%)           |            |

\*Totals may differ across items due to missing values



While differences between hospitals were not statistically significant for five of the index items, a significant difference ( $p=0.02$ ) was noted among the hospitals for the 'efficiency of team work' item. Hospital A had 40.9% and Hospital C had 25.0% of participants giving a neutral response as regards the efficiency of their team work while only one (2.9%) participant from Hospital D gave a neutral response to describe the efficiency of their team work. Hospital D had 23.5% of participants agreeing to a very high degree that the work of their team was efficient while no participants from Hospital A and only 6.3% ( $n=1$ ) from Hospital C had a similar response for the efficiency of their team.

Overall, Hospitals A and C had significantly lower and Hospital D had significantly higher perceived efficiency index scores compared to the other hospitals. The difference in cumulative perceived efficiency index scores among the hospitals is linked to differing results for the index item 'efficiency of team work'.

#### **4.8 Team climate index**

Cumulative team climate index results for Hospital C and Hospital D were significantly different ( $p=0.003$  and  $p=0.000$  respectively) compared with the rest of the hospitals (Table 4.10). Hospital C had significantly lower results and Hospital D had significantly higher results. Using the same scale as the perceived efficiency index, team climate index scores could range from 1 to 5 with a higher score indicating better team climate. All hospitals except Hospital C had mean and median scores above 4 suggesting generally good team climate with scope for improvement. While slightly lower with mean and median scores above 3 and close to 4, team climate for Hospital C was also relatively good in the possible index range.

**Table 4.10:** Team climate index, by hospital

| Index Results   | Rehabilitation services results by hospital |             |             |             |             |             |             |
|-----------------|---|-------------|-------------|-------------|-------------|-------------|-------------|
|                 | General                                     |             |             |             |             |             | Stroke      |
|                 | Hospital A                                  | Hospital B  | Hospital C  | Hospital D  | Hospital E  | Hospital F  | Hospital G  |
| Mean (std dev*) | 4.08 (0.66)                                 | 4.11 (0.62) | 3.61 (0.80) | 4.48 (0.42) | 4.37 (0.41) | 4.44 (0.57) | 4.22 (0.45) |
| Median          | 4.30  | 4.27        | 3.80        | 4.63        | 4.33        | 4.57        | 4.27        |
| Range           | 2.87-5.00                                   | 1.87-4.93   | 1.87-4.87   | 3.07-5.00   | 3.73-5.00   | 3.40-5.00   | 3.40-4.87   |
| P value†        | 0.77  | 0.06        | 0.003       | 0.000       | 0.997       | 0.07        | 0.15        |

\*Standard deviation

†Derived from nonparametric Mann -Whitney tests comparing each hospital against all others combined

Table 4.11 details results for the 15 team climate index items covering aspects of successful teamwork. The highest proportions of participants' responses from all hospitals were in total or partial agreement for all team climate index items. The results suggest the services to be doing well on the aspects of successful teamwork. Significant differences were found among the hospital sample for five team climate index items. That is: team members' ability to provide feedback ( $p=0.006$ ); interest and attention to each other ( $p=0.002$ ); empathy for team members ( $p=0.004$ ); listening to suggestions and ideas of others ( $p=0.005$ ); and the ability of team members to compromise ( $p=0.009$ ). In line with the significant cumulative team climate index difference between hospitals C and D, the proportion of participants in total agreement with the five significant index items was much higher for Hospital D compared with respondents from Hospital C.

In summary, all hospitals had good team climate index results with significantly higher results emanating from Hospital D and significantly lower results from Hospital C. The differences in cumulative index scores are attributable to five significantly different index items.

**Table 4.11:** Team climate index items, by hospital

| Index items and level of agreement responses   | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P Value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |         |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| 1. All members of the team having the ability to provide feedback                                |                        |  |                     |                     |                     |                     |                     |                     | 0.006   |
| <i>Totally disagree</i>  | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Partially disagree</i>  | 7 (4.5%)               | 3 (13.6%)  | 2 (6.5%)            | 1 (6.3%)            | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>   | 3 (1.9%)               | 0 (0.0%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |         |
| <i>Partially agree</i>   | 53 (34.2%)             | 6 (27.3%)  | 16 (51.6%)          | 8 (50.0%)           | 4 (11.8%)           | 5 (29.4%)           | 5 (31.3%)           | 9 (47.4%)           |         |
| <i>Totally agree</i>   | 92 (59.4%)             | 13 (59.1%)   | 12 (38.7%)          | 6 (37.5%)           | 29 (85.3%)          | 12 (70.6%)          | 11 (68.8%)          | 9 (47.4%)           |         |
| 2. The members of the team show each other signs of interest and attention.                      |                        |  |                     |                     |                     |                     |                     |                     | 0.002   |
| <i>Totally disagree</i>  | 2 (1.3%)               | 0 (0.0%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Partially disagree</i>  | 6 (3.9%)               | 2 (9.1%)   | 0 (0.0%)            | 3 (18.8%)           | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>   | 15 (9.7%)              | 2 (9.1%)   | 3 (9.7%)            | 3 (18.8%)           | 1 (2.9%)            | 1 (5.9%)            | 2 (12.5%)           | 3 (15.8%)           |         |
| <i>Partially agree</i>   | 55 (35.5%)             | 6 (27.3%)  | 15 (48.4%)          | 8 (50.0%)           | 6 (17.6%)           | 7 (41.2%)           | 4 (25.0%)           | 9 (47.4%)           |         |
| <i>Totally agree</i>   | 77 (49.7%)             | 12 (54.5%)   | 12 (38.7%)          | 1 (6.3%)            | 26 (76.5%)          | 9 (52.9%)           | 10 (62.5%)          | 7 (36.8%)           |         |
| 3. The members of the team have the ability to identify and feel empathy for other team members. |                        |  |                     |                     |                     |                     |                     |                     | 0.004   |
| <i>Totally disagree</i>  | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Partially disagree</i>  | 4 (2.6%)               | 0 (0.0%)   | 1 (3.2%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>   | 11 (7.1%)              | 1 (4.5%)   | 3 (9.7%)            | 4 (25.0%)           | 0 (0.0%)            | 1 (5.9%)            | 1 (6.3%)            | 1 (5.3%)            |         |
| <i>Partially agree</i>   | 71 (45.8%)             | 13 (59.1%)   | 17 (54.8%)          | 8 (50.0%)           | 13 (38.2%)          | 5 (29.4%)           | 5 (31.3%)           | 10 (52.6%)          |         |
| <i>Totally agree</i>   | 68 (43.9%)             | 8 (36.4%)  | 10 (32.3%)          | 1 (6.3%)            | 21 (61.8%)          | 11 (64.7%)          | 9 (56.3%)           | 8 (42.1%)           |         |

\*Totals may differ across items due to missing values

Continued

| Index items and level of agreement responses  | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |         |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| 4. The members of the team have the ability to listen to the suggestions and ideas of others. |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 2 (1.3%)               | 0 (0.0%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.005   |
| <i>Partially disagree</i>   | 4 (2.6%)               | 2 (9.1%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 10 (6.5%)              | 1 (4.5%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 1 (5.9%)            | 3 (18.8%)           | 3 (15.8%)           |         |
| <i>Partially agree</i>  | 57 (36.8%)             | 7 (31.8%)  | 15 (48.4%)          | 8 (50.0%)           | 8 (23.5%)           | 7 (41.2%)           | 4 (25.0%)           | 8 (42.1%)           |         |
| <i>Totally agree</i>  | 82 (52.9%)             | 12 (54.5%)   | 15 (48.4%)          | 3 (18.8%)           | 26 (76.5%)          | 9 (52.9%)           | 9 (56.3%)           | 8 (42.1%)           |         |
| 5. The members of the team have the ability to clearly express their opinions.                |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 1 (0.6%)               | 0 (0.0%)   | 1 (3.2%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.13    |
| <i>Partially disagree</i>   | 3 (1.9%)               | 2 (9.1%)   | 1 (3.2%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 6 (3.9%)               | 1 (4.5%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 2 (12.5%)           | 1 (5.3%)            |         |
| <i>Partially agree</i>  | 66 (42.6%)             | 8 (36.4%)  | 18 (58.1%)          | 9 (56.3%)           | 12 (35.3%)          | 7 (41.2%)           | 5 (31.3%)           | 7 (36.8%)           |         |
| <i>Totally agree</i>  | 79 (51.0%)             | 11 (50.0%)   | 11 (35.5%)          | 5 (31.3%)           | 22 (64.7%)          | 10 (58.8%)          | 9 (56.3%)           | 11 (57.9%)          |         |
| 6. All members of the team have the ability to both give and take (compromise).               |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.009   |
| <i>Partially disagree</i>   | 4 (2.6%)               | 1 (4.5%)   | 2 (6.5%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 19 (12.3%)             | 3 (13.6%)  | 4 (12.9%)           | 5 (31.3%)           | 1 (2.9%)            | 0 (0.0%)            | 4 (25.0%)           | 2 (10.5%)           |         |
| <i>Partially agree</i>  | 70 (45.2%)             | 11 (50.0%)   | 16 (51.6%)          | 8 (50.0%)           | 14 (41.2%)          | 10 (58.8%)          | 3 (18.8%)           | 8 (42.1%)           |         |
| <i>Totally agree</i>  | 61 (39.4%)             | 7 (31.8%)  | 9 (29.0%)           | 1 (6.3%)            | 19 (55.9%)          | 7 (41.2%)           | 9 (56.3%)           | 9 (47.4%)           |         |

\*Totals may differ across items due to missing values

*Continued*

| Index items and level of agreement responses                                    | All hospital<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>Value |
|---|-----------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|   |                       | General  |                     |                     |                     |                     |                     | Stroke              |            |
|   |                       | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 7. Work is performed and carried out in an informal and supportive atmosphere.  |                       |  |                     |                     |                     |                     |                     |                     | 0.08       |
| <i>Totally disagree</i>   | 2 (1.3%)              | 0 (0.0%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Partially disagree</i>   | 4 (2.6%)              | 0 (0.0%)   | 1 (3.2%)            | 0 (0.0%)            | 2 (5.9%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Neither agree or disagree</i>  | 19 (12.3%)            | 3 (13.6%)  | 3 (9.7%)            | 4 (25.0%)           | 3 (8.8%)            | 3 (17.6%)           | 0 (0.0%)            | 3 (15.8%)           |            |
| <i>Partially agree</i>  | 66 (42.6%)            | 10 (45.5%)   | 16 (51.6%)          | 8 (50.0%)           | 11 (32.4%)          | 5 (29.4%)           | 5 (31.3%)           | 11 (57.9%)          |            |
| <i>Totally agree</i>  | 64 (41.3%)            | 9 (40.9%)  | 11 (35.5%)          | 2 (12.5%)           | 18 (52.9%)          | 8 (47.1%)           | 11 (68.8%)          | 5 (26.3%)           |            |
| 8. All team members actively participate in team discussions.                   |                       |  |                     |                     |                     |                     |                     |                     | 0.09       |
| <i>Totally disagree</i>   | 2 (1.3%)              | 0 (0.0%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Partially disagree</i>   | 13 (8.4%)             | 2 (9.1%)   | 3 (9.7%)            | 2 (12.5%)           | 4 (11.8%)           | 0 (0.0%)            | 1 (6.3%)            | 1 (5.3%)            |            |
| <i>Neither agree or disagree</i>  | 15 (9.7%)             | 3 (13.6%)  | 6 (19.4%)           | 2 (12.5%)           | 0 (0.0%)            | 1 (5.9%)            | 1 (6.3%)            | 2 (10.5%)           |            |
| <i>Partially agree</i>  | 58 (37.4%)            | 9 (40.9%)  | 15 (48.4%)          | 6 (37.5%)           | 9 (26.5%)           | 8 (47.1%)           | 5 (31.3%)           | 6 (31.6%)           |            |
| <i>Totally agree</i>  | 67 (43.2%)            | 8 (36.4%)  | 7 (22.6%)           | 4 (25.0%)           | 21 (61.8%)          | 8 (47.1%)           | 9 (56.3%)           | 10 (52.6%)          |            |
| 9. Disagreements and differences in views are respected and taken advantage of. |                       |  |                     |                     |                     |                     |                     |                     | 0.34       |
| <i>Totally disagree</i>   | 3 (1.9%)              | 0 (0.0%)   | 1 (3.2%)            | 1 (6.3%)            | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Partially disagree</i>   | 12 (7.7%)             | 3 (13.6%)  | 3 (9.7%)            | 2 (12.5%)           | 2 (5.9%)            | 1 (5.9%)            | 1 (6.3%)            | 0 (0.0%)            |            |
| <i>Neither agree or disagree</i>  | 30 (19.4%)            | 5 (22.7%)  | 6 (19.4%)           | 5 (31.3%)           | 4 (11.8%)           | 1 (5.9%)            | 3 (18.8%)           | 6 (31.6%)           |            |
| <i>Partially agree</i>  | 69 (44.5%)            | 9 (40.9%)  | 14 (45.2%)          | 6 (37.5%)           | 14 (41.2%)          | 9 (52.9%)           | 5 (31.3%)           | 12 (63.2%)          |            |
| <i>Totally agree</i>  | 41 (26.5%)            | 5 (22.7%)  | 7 (22.6%)           | 2 (12.5%)           | 13 (38.2%)          | 6 (35.3%)           | 7 (43.8%)           | 1 (5.3%)            |            |

\*Totals may differ across items due to missing values.

*Continued*

| Index items and level of agreement responses   | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P Value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |         |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| 10. The team strives for consensus in decision making.   |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>  | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.14    |
| <i>Partially disagree</i>  | 6 (3.9%)               | 1 (4.5%)   | 2 (6.5%)            | 1 (6.3%)            | 1 (2.9%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>   | 21 (13.5%)             | 6 (27.3%)  | 3 (9.7%)            | 4 (25.0%)           | 2 (5.9%)            | 0 (0.0%)            | 1 (6.3%)            | 5 (26.3%)           |         |
| <i>Partially agree</i>   | 65 (41.9%)             | 9 (40.9%)  | 14 (45.2%)          | 7 (43.8%)           | 11 (32.4%)          | 9 (52.9%)           | 7 (43.8%)           | 8 (42.1%)           |         |
| <i>Totally agree</i>   | 62 (40.0%)             | 6 (27.3%)  | 12 (38.7%)          | 3 (18.8%)           | 20 (58.8%)          | 7 (41.2%)           | 8 (50.0%)           | 6 (31.6%)           |         |
| 11. Criticisms are expressed in a positive and constructive manner, not as personal offences.  |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>  | 4 (2.6%)               | 2 (9.1%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.12    |
| <i>Partially disagree</i>  | 13 (8.4%)              | 3 (13.6%)  | 2 (6.5%)            | 3 (18.8%)           | 2 (5.9%)            | 0 (0.0%)            | 1 (6.3%)            | 2 (10.5%)           |         |
| <i>Neither agree or disagree</i>   | 21 (13.5%)             | 5 (22.7%)  | 5 (16.1%)           | 4 (25.0%)           | 1 (2.9%)            | 0 (0.0%)            | 2 (12.5%)           | 4 (21.1%)           |         |
| <i>Partially agree</i>   | 64 (41.3%)             | 6 (27.3%)  | 11 (35.5%)          | 6 (37.5%)           | 18 (52.9%)          | 11 (64.7%)          | 5 (31.3%)           | 7 (36.8%)           |         |
| <i>Totally agree</i>   | 53 (34.2%)             | 6 (27.3%)  | 12 (38.7%)          | 2 (12.5%)           | 13 (38.2%)          | 6 (35.3%)           | 8 (50.0%)           | 6 (31.6%)           |         |
| 12. The members of the team are allowed to express feelings and opinions on factual questions. |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>  | 2 (1.3%)               | 1 (4.5%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.30    |
| <i>Partially disagree</i>  | 6 (3.9%)               | 1 (4.5%)   | 1 (3.2%)            | 3 (18.8%)           | 1 (2.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>   | 14 (9.0%)              | 2 (9.1%)   | 2 (6.5%)            | 2 (12.5%)           | 2 (5.9%)            | 1 (5.9%)            | 2 (12.5%)           | 3 (15.8%)           |         |
| <i>Partially agree</i>   | 58 (37.4%)             | 6 (27.3%)  | 16 (51.6%)          | 6 (37.5%)           | 10 (29.4%)          | 7 (41.2%)           | 4 (25.0%)           | 9 (47.4%)           |         |
| <i>Totally agree</i>   | 75 (48.4%)             | 12 (54.5%)   | 12 (38.7%)          | 4 (25.0%)           | 21 (61.8%)          | 9 (52.9%)           | 10 (62.5%)          | 7 (36.8%)           |         |

\*Totals may differ across items due to missing values.

*Continued*

| Index items and level of agreement responses  | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |         |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| 13. The leader of the group does not dominate the work of the group. The leadership style is dependant on circumstances and the nature of the given task. |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 6 (3.9%)               | 3 (13.6%)  | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0.06    |
| <i>Partially disagree</i>   | 9 (5.8%)               | 3 (13.6%)  | 3 (10.0%)           | 0 (0.0%)            | 0 (0.0%)            | 3 (17.6%)           | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 19 (12.3%)             | 3 (13.6%)  | 4 (13.3%)           | 2 (12.5%)           | 3 (8.8%)            | 3 (17.6%)           | 0 (0.0%)            | 4 (21.1%)           |         |
| <i>Partially agree</i>  | 65 (42.2%)             | 8 (36.4%)  | 14 (46.7%)          | 9 (56.3%)           | 13 (38.2%)          | 5 (29.4%)           | 7 (43.8%)           | 9 (47.4%)           |         |
| <i>Totally agree</i>  | 55 (35.7%)             | 5 (22.7%)  | 9 (30.0%)           | 3 (18.8%)           | 18 (52.9%)          | 6 (35.3%)           | 8 (50.0%)           | 6 (31.6%)           |         |
| 14. The team is task oriented   |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.11    |
| <i>Partially disagree</i>   | 5 (3.2%)               | 2 (9.1%)   | 1 (3.2%)            | 1 (6.3%)            | 0 (0.0%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 15 (9.7%)              | 1 (4.5%)   | 4 (12.9%)           | 3 (18.8%)           | 3 (8.8%)            | 2 (11.8%)           | 0 (0.0%)            | 2 (10.5%)           |         |
| <i>Partially agree</i>  | 60 (38.7%)             | 9 (40.9%)  | 10 (32.3%)          | 10 (62.5%)          | 13 (38.2%)          | 6 (35.3%)           | 3 (18.8%)           | 9 (47.4%)           |         |
| <i>Totally agree</i>  | 75 (48.4%)             | 10 (45.5%)   | 16 (51.6%)          | 2 (12.5%)           | 18 (52.9%)          | 8 (47.1%)           | 13 (81.3%)          | 8 (42.1%)           |         |
| 15. The team encourages positive individual achievements and performance.   |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Totally disagree</i>   | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.15    |
| <i>Partially disagree</i>   | 8 (5.2%)               | 1 (4.5%)   | 3 (9.7%)            | 2 (12.5%)           | 1 (2.9%)            | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            |         |
| <i>Neither agree or disagree</i>  | 17 (11.0%)             | 1 (4.5%)   | 3 (9.7%)            | 3 (18.8%)           | 2 (5.9%)            | 3 (17.6%)           | 3 (18.8%)           | 2 (10.5%)           |         |
| <i>Partially agree</i>  | 55 (35.5%)             | 12 (54.5%)   | 11 (35.5%)          | 6 (37.5%)           | 14 (41.2%)          | 4 (23.5%)           | 1 (6.3%)            | 7 (36.8%)           |         |
| <i>Totally agree</i>  | 74 (47.7%)             | 8 (36.4%)  | 14 (45.2%)          | 4 (25.0%)           | 17 (50.0%)          | 10 (58.8%)          | 11 (68.8%)          | 10 (52.6%)          |         |

\*Totals may differ across items due to missing values.

#### **4.9 Teamwork comments**

Teamwork comments elicited from clinicians in the final section of the survey questionnaire are grouped into four categories (Table 4.12). The categories are: importance of teamwork; factors influencing teamwork; positive perception towards aspects of teamwork in service; and negative or need for improvement perception towards aspects of teamwork in service. The proportions of participants affirming the importance of teamwork ranged between 6.3% (Hospital C) to 31.6% (Hospital G). The proportion of comments with input on factors influencing teamwork ranged from 0% at Hospital F to 47.1% at Hospital E. Comments on factors influencing teamwork covered communication, goals, team members, leadership, professional discipline managers, patients and bed pressure. The factors put forward overlap with elements of teamwork and HRM areas covered in the next chapter. Large proportions of participant comments had a positive perception towards aspects of teamwork in their respective services with percentages ranging from 36.8% (Hospital G) to 68.8% (Hospital F). Participants at all hospitals made comments about negative perceptions or the need for improvement with regards to their services. However, the proportion from Hospital C was substantial (56.3%) compared to the proportions from other hospitals that ranged between 9.7% (Hospital B) and 25.0% (Hospital F). The high proportion of comments from Hospital C suggesting the necessity for team improvement correlates with the team characteristics findings of its service. It is noted that the service from Hospital C was the only service with a lack of team type index consensus together with low team climate index results.



**Table 4.12:** Teamwork comments categorization, by hospital

| Category   | General            |                    |                    |                    |                    |                    | Stroke             |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Hospital A<br>n=22 | Hospital B<br>n=31 | Hospital C<br>n=16 | Hospital D<br>n=34 | Hospital E<br>n=17 | Hospital F<br>n=16 | Hospital G<br>n=19 |
| Importance of teamwork   | 5<br>(22.7%)       | 2<br>(6.5%)        | 1<br>(6.3%)        | 9<br>(26.5%)       | 2<br>(11.8%)       | 3<br>(18.8%)       | 6<br>(31.6%)       |
| Factors influencing teamwork   | 4<br>(18.2%)       | 6<br>(19.4%)       | 6<br>(37.5%)       | 3<br>(8.8%)        | 8<br>(47.1%)       | 0<br>(0.0%)        | 7<br>(36.8%)       |
| Positive perception towards aspects of teamwork in service                         | 10<br>(45.5%)      | 13<br>(41.9%)      | 7<br>(43.75%)      | 20<br>(58.8%)      | 10<br>(58.8%)      | 11<br>(68.8%)      | 7<br>(36.8%)       |
| Negative or need for improvement perception towards aspects of teamwork in service | 5<br>(22.7%)       | 3<br>(9.7%)        | 9<br>(56.3%)       | 4<br>(11.8%)       | 3<br>(17.6%)       | 4<br>(25.0%)       | 4<br>(21.1%)       |

n = number of participants

\*Percentage totals may differ to comments falling into more than one category or section in survey being left blank

#### 4.10 Overall job satisfaction scale

Hospitals D, E and F were significantly different from other hospitals in their overall job satisfaction scale results with p values of 0.009, 0.008 and 0.02 respectively (Table 4.13). Hospital E has comparatively lower overall job satisfaction scale mean, median and range scores when contrasted with Hospital D and Hospital F which had the highest mean scores. While results from Hospital C were not statistically significant, it had the lowest overall job satisfaction scale mean, median and range scores in the group. As cumulative scale results were calculated in the same way as the two previously presented team characteristics indexes, scale score range could be from 1 to 5. Hospitals A, B, C, E and G had median scores above 3.5. Hospitals D and E had median scores of 4 and above. The cumulative overall job satisfaction scale median score results show that collectively, staff from the hospitals have strong reported job satisfaction levels. However all hospitals except Hospital F have ranges starting with above 2 scores. Hospital F has a starting range score of above 3. The starting range figures imply that within all hospitals except Hospital F, there are some rehabilitation services staff who are dissatisfied with their overall job satisfaction.

**Table 4.13:** Overall job satisfaction scale, by hospital

| Index results   | Rehabilitation services results by hospital |                |                |                |                |                |                |
|-----------------|---|----------------|----------------|----------------|----------------|----------------|----------------|
|                 | General                                     |                |                |                |                |                | Stroke         |
|                 | Hospital A                                  | Hospital B     | Hospital C     | Hospital D     | Hospital E     | Hospital F     | Hospital G     |
| Mean (std dev*) | 3.65<br>(0.63)                              | 3.72<br>(0.55) | 3.50<br>(0.54) | 3.96<br>(0.48) | 3.56<br>(0.45) | 4.12<br>(0.45) | 3.60<br>(0.42) |
| Median          | 3.63  | 3.87           | 3.60           | 4.00           | 3.73           | 4.03           | 3.53           |
| Range           | 2.33-4.80                                   | 2.40-4.87      | 2.27-4.20      | 2.67-4.80      | 2.27-4.20      | 3.47-5.00      | 2.87-4.27      |
| P value†        | 0.11  | 0.38           | 0.39           | 0.009          | 0.008          | 0.02           | 0.13           |

\*Standard deviation

†Derived from nonparametric Mann Whitney tests comparing each hospital against all others combined

In Table 4.14, with the exception of the item ‘the way the hospital is managed’, all other items in the overall job satisfaction scale elicited a ‘satisfied’ response with the highest proportion of the total individual participants. The higher proportion of overall participants with ‘satisfied’ responses compared to the lower proportions of staff with ‘very satisfied’ responses for all scale items indicates room for improvement in all the aspects contributing to job satisfaction. For scale item ‘the way the hospital is managed’, the response with the highest proportion of total study participants was ‘neither satisfied nor dissatisfied’ (39.2%). The findings in relation to the way the hospital is managed suggest lesser satisfaction in this area compared to other overall job satisfaction scale items. Significant differences were also found between hospitals for the item evaluating the way the hospital is managed ( $p = 0.00$ ). Other overall job satisfaction scale items which showed statistically significant differences between hospitals were physical conditions ( $p=0.00$ ), hours of work ( $p=0.00$ ) and job security ( $p=0.003$ ).

Differences in results from Hospitals D, E and F for the overall job satisfaction scale items of significance are presented in line with the significant cumulative scale results from these hospitals. While 20.6% of participants from Hospital D and 25.0% of participants from Hospital F were ‘very satisfied’ with the physical conditions in which they worked, none from Hospital E gave a ‘very satisfied’ response for their physical work conditions. For the item evaluating the way their hospital is managed, 31.3% from Hospital F and 18.2% from Hospital D were ‘very satisfied’ while none from Hospital E were ‘very satisfied’. Concerning the hours of work item, 50.0% of participants from Hospital F and 23.5% of participants from Hospital D were ‘very satisfied’ with their working hours while 6.3% of participants from Hospital E were ‘very satisfied’. For the item ‘job security’, 44.1% of participants from Hospital D and 43.8% of participants from Hospital F were ‘very satisfied’ while 17.6% of participants from Hospital E were ‘very satisfied’.

**Table 4.14:** Overall job satisfaction scale items, by hospital

| Scale items and level of satisfaction<br>* responses | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>Value |
|--|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|  |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|  |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 1. The physical conditions                           |                        |  |                     |                     |                     |                     |                     |                     | 0.00       |
| <i>Very dissatisfied</i>                             | 6 (3.9%)               | 0 (0.0%)   | 2 (6.7%)            | 3 (18.8%)           | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                                  | 22 (14.4%)             | 3 (13.6%)  | 8 (26.7%)           | 4 (25.0%)           | 1 (2.9%)            | 3 (18.8%)           | 0 (0.0%)            | 3 (15.8%)           |            |
| <i>Neither satisfied nor dissatisfied</i>            | 21 (13.7%)             | 1 (4.5%)   | 4 (13.3%)           | 4 (25.0%)           | 0 (0.0%)            | 4 (25.0%)           | 4 (25.0%)           | 4 (21.1%)           |            |
| <i>Satisfied</i>                                     | 86 (56.2%)             | 15 (68.2%)   | 14 (46.7%)          | 5 (31.3%)           | 26 (76.5%)          | 8 (50.0%)           | 8 (50.0%)           | 10 (52.6%)          |            |
| <i>Very satisfied</i>                                | 18 (11.8%)             | 3 (13.6%)  | 2 (6.7%)            | 0 (0.0%)            | 7 (20.6%)           | 0 (0.0%)            | 4 (25.0%)           | 2 (10.5%)           |            |
| 2. Freedom to choose your own<br>working methods     |                        |  |                     |                     |                     |                     |                     |                     | 0.64       |
| <i>Very dissatisfied</i>                             | 1 (0.6%)               | 1 (4.5%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                                  | 5 (3.2%)               | 1 (4.5%)   | 0 (0.0%)            | 1 (6.3%)            | 2 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| <i>Neither satisfied nor dissatisfied</i>            | 27 (17.5%)             | 3 (13.6%)  | 6 (20.0%)           | 3 (18.8%)           | 4 (11.8%)           | 5 (29.4%)           | 1 (6.3%)            | 5 (26.3%)           |            |
| <i>Satisfied</i>                                     | 81 (52.6%)             | 10 (45.5%)   | 19 (63.3%)          | 8 (50.0%)           | 17 (50.0%)          | 8 (47.1%)           | 8 (50.0%)           | 11 (57.9%)          |            |
| <i>Very satisfied</i>                                | 40 (26.0%)             | 7 (31.8%)  | 5 (16.7%)           | 4 (25.0%)           | 11 (32.4%)          | 4 (23.5%)           | 7 (43.8%)           | 2 (10.5%)           |            |
| 3. Fellow workers                                    |                        |  |                     |                     |                     |                     |                     |                     | 0.06       |
| <i>Very dissatisfied</i>                             | 2 (1.3%)               | 0 (0.0%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                                  | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Neither satisfied nor dissatisfied</i>            | 18 (11.7%)             | 5 (22.7%)  | 6 (20.0%)           | 3 (18.8%)           | 1 (2.9%)            | 1 (5.9%)            | 0 (0.0%)            | 2 (10.5%)           |            |
| <i>Satisfied</i>                                     | 85 (55.2%)             | 13 (59.1%)   | 15 (50.0%)          | 7 (43.8%)           | 17 (50.0%)          | 11 (64.7%)          | 9 (56.3%)           | 13 (68.4%)          |            |
| <i>Very satisfied</i>                                | 48 (31.2%)             | 4 (18.2%)  | 9 (30.0%)           | 3 (18.8%)           | 16 (47.1%)          | 5 (29.4%)           | 7 (43.8%)           | 4 (21.1%)           |            |
| 4. Recognition for good work                         |                        |  |                     |                     |                     |                     |                     |                     | 0.21       |
| <i>Very dissatisfied</i>                             | 3 (2.0%)               | 0 (0.0%)   | 0 (0.0%)            | 2 (12.5%)           | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                                  | 13 (8.6%)              | 1 (4.5%)   | 4 (13.3%)           | 3 (18.8%)           | 2 (6.1%)            | 0 (0.0%)            | 0 (0.0%)            | 3 (15.8%)           |            |
| <i>Neither satisfied nor dissatisfied</i>            | 30 (19.7%)             | 7 (31.8%)  | 3 (10.0%)           | 3 (18.8%)           | 6 (18.2%)           | 4 (25.0%)           | 2 (12.5%)           | 5 (26.3%)           |            |
| <i>Satisfied</i>                                     | 79 (52.0%)             | 10 (45.5%)   | 18 (60.0%)          | 8 (50.0%)           | 17 (51.5%)          | 9 (56.3%)           | 8 (50.0%)           | 9 (47.4%)           |            |
| <i>Very satisfied</i>                                | 27 (17.8%)             | 4 (18.2%)  | 5 (16.7%)           | 0 (0.0%)            | 8 (24.2%)           | 2 (12.5%)           | 6 (37.5%)           | 2 (10.5%)           |            |

\*Totals may vary across items due to missing values

*Continued*

| Scale items and level of satisfaction responses | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 5. Immediate manager                            |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Very dissatisfied</i>                        | 3 (2.0%)               | 1 (4.8%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            | 0.07       |
| <i>Dissatisfied</i>                             | 7 (4.6%)               | 2 (9.5%)   | 1 (3.3%)            | 1 (6.3%)            | 1 (2.9%)            | 1 (5.9%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| <i>Neither satisfied nor dissatisfied</i>       | 21 (13.7%)             | 5 (23.8%)  | 5 (16.7%)           | 1 (6.3%)            | 2 (5.9%)            | 5 (29.4%)           | 1 (6.3%)            | 2 (10.5%)           |            |
| <i>Satisfied</i>                                | 65 (42.5%)             | 5 (23.8%)  | 11 (36.7%)          | 11 (68.8%)          | 13 (38.2%)          | 9 (52.9%)           | 7 (43.8%)           | 9 (47.4%)           |            |
| <i>Very satisfied</i>                           | 57 (37.3%)             | 8 (38.1%)  | 13 (43.3%)          | 2 (12.5%)           | 18 (52.9%)          | 2 (11.8%)           | 8 (50.0%)           | 6 (31.6%)           |            |
| 6. Amount of responsibility given               |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Very dissatisfied</i>                        | 1 (0.6%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0.28       |
| <i>Dissatisfied</i>                             | 6 (3.9%)               | 1 (4.5%)   | 1 (3.3%)            | 2 (12.5%)           | 2 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Neither satisfied nor dissatisfied</i>       | 17 (11.0%)             | 3 (13.6%)  | 3 (10.0%)           | 2 (12.5%)           | 1 (2.9%)            | 4 (23.5%)           | 1 (6.3%)            | 3 (15.8%)           |            |
| <i>Satisfied</i>                                | 88 (57.1%)             | 9 (40.9%)  | 20 (66.7%)          | 9 (56.3%)           | 18 (52.9%)          | 10 (58.8%)          | 9 (56.3%)           | 13 (68.4%)          |            |
| <i>Very satisfied</i>                           | 42 (27.3%)             | 9 (40.9%)  | 6 (20.0%)           | 3 (18.8%)           | 13 (38.2%)          | 2 (11.8%)           | 6 (37.5%)           | 3 (15.8%)           |            |
| 7. Rate of pay                                  |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Very dissatisfied</i>                        | 25 (16.2%)             | 4 (18.2%)  | 5 (16.7%)           | 2 (12.5%)           | 6 (17.6%)           | 2 (11.8%)           | 3 (18.8%)           | 3 (15.8%)           | 0.97       |
| <i>Dissatisfied</i>                             | 25 (16.2%)             | 5 (22.7%)  | 4 (13.3%)           | 1 (6.3%)            | 6 (17.6%)           | 3 (17.6%)           | 2 (12.5%)           | 4 (21.1%)           |            |
| <i>Neither satisfied nor dissatisfied</i>       | 30 (19.5%)             | 2 (9.1%)   | 7 (23.3%)           | 4 (25.0%)           | 5 (14.7%)           | 7 (41.2%)           | 3 (18.8%)           | 2 (10.5%)           |            |
| <i>Satisfied</i>                                | 55 (35.7%)             | 7 (31.8%)  | 11 (36.7%)          | 7 (43.8%)           | 12 (35.3%)          | 5 (29.4%)           | 6 (37.5%)           | 7 (36.8%)           |            |
| <i>Very satisfied</i>                           | 19 (12.3%)             | 4 (18.2%)  | 3 (10.0%)           | 2 (12.5%)           | 5 (14.7%)           | 0 (0.0%)            | 2 (12.5%)           | 3 (15.8%)           |            |
| 8. Opportunity to use abilities                 |                        |  |                     |                     |                     |                     |                     |                     |            |
| <i>Very dissatisfied</i>                        | 0 (0.0%)               | 0 (0.0%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.07       |
| <i>Dissatisfied</i>                             | 6 (3.9%)               | 1 (4.5%)   | 2 (6.5%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 2 (10.5%)           |            |
| <i>Neither satisfied nor dissatisfied</i>       | 19 (12.3%)             | 0 (0.0%)   | 0 (0.0%)            | 4 (25.0%)           | 5 (14.7%)           | 3 (17.6%)           | 4 (25.0%)           | 3 (15.8%)           |            |
| <i>Satisfied</i>                                | 98 (63.2%)             | 13 (59.1%)   | 21 (67.7%)          | 9 (56.3%)           | 24 (70.6%)          | 12 (70.6%)          | 8 (50.0%)           | 11 (57.9%)          |            |
| <i>Very satisfied</i>                           | 32 (20.6%)             | 8 (36.4%)  | 8 (25.8%)           | 2 (12.5%)           | 5 (14.7%)           | 2 (11.8%)           | 4 (25.0%)           | 3 (15.8%)           |            |

\*Totals may vary across items due to missing values

*Continued*

| Scale items and level of satisfaction responses | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P<br>Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |            |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |            |
| 9. Relations between management and staff       |                        |  |                     |                     |                     |                     |                     |                     | 0.13       |
| <i>Very dissatisfied</i>                        | 3 (1.9%)               | 2 (9.1%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                             | 12 (7.7%)              | 4 (18.2%)  | 2 (6.5%)            | 2 (12.5%)           | 0 (0.0%)            | 1 (5.9%)            | 0 (0.0%)            | 3 (15.8%)           |            |
| <i>Neither satisfied nor dissatisfied</i>       | 23 (14.8%)             | 5 (22.7%)  | 5 (16.1%)           | 1 (6.3%)            | 5 (14.7%)           | 3 (17.6%)           | 1 (6.3%)            | 3 (15.8%)           |            |
| <i>Satisfied</i>                                | 86 (55.5%)             | 7 (31.8%)  | 15 (48.4%)          | 9 (56.3%)           | 23 (67.6%)          | 12 (70.6%)          | 9 (56.3%)           | 11 (57.9%)          |            |
| <i>Very satisfied</i>                           | 31 (20.0%)             | 4 (18.2%)  | 9 (29.0%)           | 3 (18.8%)           | 6 (17.6%)           | 1 (5.9%)            | 6 (37.5%)           | 2 (10.5%)           |            |
| 10. Future chance of promotion                  |                        |  |                     |                     |                     |                     |                     |                     | 0.31       |
| <i>Very dissatisfied</i>                        | 6 (3.9%)               | 1 (4.5%)   | 1 (3.3%)            | 1 (6.3%)            | 1 (2.9%)            | 1 (5.9%)            | 1 (6.3%)            | 0 (0.0%)            |            |
| <i>Dissatisfied</i>                             | 13 (8.4%)              | 3 (13.6%)  | 3 (10.0%)           | 0 (0.0%)            | 3 (8.8%)            | 2 (11.8%)           | 1 (6.3%)            | 1 (5.3%)            |            |
| <i>Neither satisfied nor dissatisfied</i>       | 54 (35.1%)             | 9 (40.9%)  | 9 (30.0%)           | 7 (43.8%)           | 9 (26.5%)           | 4 (23.5%)           | 5 (31.3%)           | 11 (57.9%)          |            |
| <i>Satisfied</i>                                | 66 (42.9%)             | 6 (27.3%)  | 14 (46.7%)          | 8 (50.0%)           | 19 (55.9%)          | 8 (47.1%)           | 4 (25.0%)           | 7 (36.8%)           |            |
| <i>Very satisfied</i>                           | 14 (9.1%)              | 3 (13.6%)  | 3 (10.0%)           | 0 (0.0%)            | 2 (5.9%)            | 1 (5.9%)            | 5 (31.3%)           | 0 (0.0%)            |            |
| 11. The way the hospital is managed             |                        |  |                     |                     |                     |                     |                     |                     | 0.00       |
| <i>Very dissatisfied</i>                        | 6 (3.9%)               | 1 (4.5%)   | 2 (6.5%)            | 1 (6.3%)            | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 1 (5.3%)            |            |
| <i>Dissatisfied</i>                             | 30 (19.6%)             | 10 (45.5%)   | 3 (9.7%)            | 3 (18.8%)           | 3 (9.1%)            | 7 (43.8%)           | 0 (0.0%)            | 4 (21.1%)           |            |
| <i>Neither satisfied nor dissatisfied</i>       | 60 (39.2%)             | 8 (36.4%)  | 13 (41.9%)          | 8 (50.0%)           | 8 (24.2%)           | 7 (43.8%)           | 5 (31.3%)           | 11 (57.9%)          |            |
| <i>Satisfied</i>                                | 43 (28.1%)             | 3 (13.6%)  | 10 (32.3%)          | 4 (25.0%)           | 16 (48.5%)          | 1 (6.3%)            | 6 (37.5%)           | 3 (15.8%)           |            |
| <i>Very satisfied</i>                           | 14 (9.2%)              | 0 (0.0%)   | 3 (9.7%)            | 0 (0.0%)            | 6 (18.2%)           | 0 (0.0%)            | 5 (31.3%)           | 0 (0.0%)            |            |
| 12. Attention paid to suggestions               |                        |  |                     |                     |                     |                     |                     |                     | 0.06       |
| <i>Very dissatisfied</i>                        | 3 (2.0%)               | 1 (4.8%)   | 0 (0.0%)            | 1 (6.3%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.6%)            |            |
| <i>Dissatisfied</i>                             | 12 (7.9%)              | 5 (23.8%)  | 2 (6.5%)            | 2 (12.5%)           | 2 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.6%)            |            |
| <i>Neither satisfied nor dissatisfied</i>       | 48 (31.6%)             | 5 (23.8%)  | 9 (29.0%)           | 5 (31.3%)           | 7 (20.6%)           | 8 (50.0%)           | 3 (18.8%)           | 11 (61.1%)          |            |
| <i>Satisfied</i>                                | 73 (48.0%)             | 8 (38.1%)  | 17 (54.8%)          | 8 (50.0%)           | 20 (58.8%)          | 7 (43.8%)           | 9 (56.3%)           | 4 (22.2%)           |            |
| <i>Very satisfied</i>                           | 16 (10.5%)             | 2 (9.5%)   | 3 (9.7%)            | 0 (0.0%)            | 5 (14.7%)           | 1 (6.3%)            | 4 (25.0%)           | 1 (5.6%)            |            |

\*Totals may differ across items due to missing values

*Continued*

| Scale items and level of satisfaction responses | All hospitals<br>n (%) | Rehabilitation services participant response results by hospital |                     |                     |                     |                     |                     |                     | P Value |
|---|------------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------|
|   |                        | General  |                     |                     |                     |                     |                     | Stroke              |         |
|   |                        | Hospital A<br>n (%)  | Hospital B<br>n (%) | Hospital C<br>n (%) | Hospital D<br>n (%) | Hospital E<br>n (%) | Hospital F<br>n (%) | Hospital G<br>n (%) |         |
| 13. Hours of work                               |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Very dissatisfied</i>                        | 1 (0.6%)               | 1 (4.5%)   | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.00    |
| <i>Dissatisfied</i>                             | 14 (9.1%)              | 5 (22.7%)  | 6 (19.4%)           | 0 (0.0%)            | 2 (5.9%)            | 0 (0.0%)            | 0 (0.0%)            | 1 (5.3%)            |         |
| <i>Neither satisfied nor dissatisfied</i>       | 22 (14.3%)             | 2 (9.1%)   | 2 (6.5%)            | 2 (12.5%)           | 1 (2.9%)            | 6 (37.5%)           | 1 (6.3%)            | 8 (42.1%)           |         |
| <i>Satisfied</i>                                | 91 (59.1%)             | 11 (50.0%)   | 20 (64.5%)          | 13 (81.3%)          | 23 (67.6%)          | 9 (56.3%)           | 7 (43.8%)           | 8 (42.1%)           |         |
| <i>Very satisfied</i>                           | 26 (16.9%)             | 3 (13.6%)  | 3 (9.7%)            | 1 (6.3%)            | 8 (23.5%)           | 1 (6.3%)            | 8 (50.0%)           | 2 (10.5%)           |         |
| 14. Amount of variety in job                    |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Very dissatisfied</i>                        | 1 (0.6%)               | 0 (0.0%)   | 1 (3.2%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.11    |
| <i>Dissatisfied</i>                             | 9 (5.8%)               | 0 (0.0%)   | 0 (0.0%)            | 1 (6.3%)            | 5 (14.7%)           | 1 (5.9%)            | 0 (0.0%)            | 2 (10.5%)           |         |
| <i>Neither satisfied nor dissatisfied</i>       | 21 (13.5%)             | 3 (13.6%)  | 1 (3.2%)            | 5 (31.3%)           | 7 (20.6%)           | 1 (5.9%)            | 1 (6.3%)            | 3 (15.8%)           |         |
| <i>Satisfied</i>                                | 95 (61.3%)             | 13 (59.1%)   | 23 (74.2%)          | 7 (43.8%)           | 18 (52.9%)          | 13 (76.5%)          | 9 (56.3%)           | 12 (63.2%)          |         |
| <i>Very satisfied</i>                           | 29 (18.7%)             | 6 (27.3%)  | 6 (19.4%)           | 3 (18.8%)           | 4 (11.8%)           | 2 (11.8%)           | 6 (37.5%)           | 2 (10.5%)           |         |
| 15. Job security                                |                        |  |                     |                     |                     |                     |                     |                     |         |
| <i>Very dissatisfied</i>                        | 1 (0.6%)               | 0 (0.0%)   | 1 (3.2%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0 (0.0%)            | 0.003   |
| <i>Dissatisfied</i>                             | 6 (3.9%)               | 1 (4.5%)   | 1 (3.2%)            | 2 (12.5%)           | 0 (0.0%)            | 1 (5.9%)            | 1 (6.3%)            | 0 (0.0%)            |         |
| <i>Neither satisfied nor dissatisfied</i>       | 17 (11.0%)             | 0 (0.0%)   | 4 (12.9%)           | 2 (12.5%)           | 2 (5.9%)            | 1 (5.9%)            | 5 (31.3%)           | 3 (15.8%)           |         |
| <i>Satisfied</i>                                | 85 (54.8%)             | 16 (72.7%)   | 14 (45.2%)          | 12 (75.0%)          | 17 (50.0%)          | 12 (70.6%)          | 3 (18.8%)           | 11 (57.9%)          |         |
| <i>Very satisfied</i>                           | 46 (29.7%)             | 5 (22.7%)  | 11 (35.5%)          | 0 (0.0%)            | 15 (44.1%)          | 3 (17.6%)           | 7 (43.8%)           | 5 (26.3%)           |         |

\*Totals may differ across items due to missing values

In summary, the rehabilitation services from the hospitals generally had good overall job satisfaction scale scores of above 3.5 (Hospitals A, B, C, E and G) and above 4 (Hospitals D and E). Comparing cumulative scores, Hospitals D and F had significantly higher scores while Hospital E had a significantly lower score compared to the other hospitals. The differences in cumulative score results are attributable to differing attitudes toward scale items ‘the physical conditions’, ‘the way the hospital is managed’, ‘hours of work’ and ‘job security’.

#### **4.11 Rehabilitation medicine clinical indicator data**

Table 4.15 presents data from the six rehabilitation medicine clinical indicators for the seven hospitals which were evaluated in relation to benchmark group and national data to determine substantial variations in level of compliance. The table also presents rankings of hospitals based on team dependant process indicators results and by results of all indicators. It is noted that the ranking of the seven hospitals represented relatively marginal differences in indicator results among the sample.

Noticeable variation in results was observed from two hospitals for the first indicator ‘assessing timely assessment of function on admission’. For the first indicator, Hospitals A and C had compliance results of 64.0% and 81.3% respectively. On this indicator, results from Hospitals A and C were substantially lower than the other hospitals’ results (93.1-100.0%), compared with the benchmark for the group (90.1%) and national (94.6%) results. The low first indicator results from Hospitals A and C validated the previously highlighted low clinician reported perceived efficiency results obtained at the two hospitals. However, the low perceived efficiency results from Hospitals A and C did not correspond to low compliance rates for the other process indicators that could also be dependent on team efficiency. There were no other substantial differences between hospitals for the first four indicators that collectively describe the efficiency of the cross professional team working in the rehabilitation services.



**Table 4.15:** Rehabilitation medicine clinical indicator data results demonstrating level of compliance, by hospital

| Clinical indicators*   | Benchmark group %   | National %          | Rehabilitation services indicator compliance by hospital |                |                 |                 |                 |                |                |
|--|---------------------|---------------------|--|----------------|-----------------|-----------------|-----------------|----------------|----------------|
|  |                     |                     | General  |                |                 |                 |                 |                | Stroke         |
|  |                     |                     | Hospital A %   | Hospital B %   | Hospital C (%)  | Hospital D (%)  | Hospital E (%)  | Hospital F (%) | Hospital G (%) |
| 1. Timely assessment of function (within 72 hours) on admission  | 90.1%<br>n = 25,228 | 94.6%<br>n = 69,411 | 64.0%<br>n=172   | 97.8%<br>n=368 | 81.3%<br>n=352  | 99.7%<br>n=781  | 96.6%<br>n=293  | 93.1%<br>n=407 | 100.0%<br>n=52 |
| 2. Assessment of function (within 72 hours) prior to episode end | 92.3%<br>n =20,721  | 96.1%<br>n = 61,798 | 94.0%<br>n =134  | 98.0%<br>n=294 | 93.9%<br>n=296  | 100.0%<br>n=671 | 97.9%<br>n=239  | 90.2%<br>n=326 | 100.0%<br>n=44 |
| 3. Rehabilitation plan   | 86.5%<br>n = 23,691 | 93.8%<br>n = 63,798 | 92.0%<br>n= 163  | 98.0%<br>n=347 | 97.6%<br>n=332  | 100.0%<br>n=736 | 94.7%<br>n=281  | 92.5%<br>n=373 | 98.0%<br>n=51  |
| 4. Discharge plan  | 89.5%<br>n =20,721  | 96.3%<br>n = 61,798 | 100.0%<br>n=134  | 97.6%<br>n=294 | 100.0%<br>n=296 | 100.0%<br>n=671 | 100.0%<br>n=239 | 98.8%<br>n=326 | 97.7%<br>n=44  |
| Cumulative team dependant indicators ranking of hospitals        |                     |                     | 6  | 4              | 5               | 1               | 3               | 7              | 2              |
| 5. Functional gain Achieved                                      | 94.0%<br>n =20,721  | 95.9%<br>n = 61,798 | 92.5%<br>n=134   | 79.9%<br>n=294 | 92.6%<br>n=296  | 97.8%<br>n=671  | 95.4%<br>n=239  | 96.3%<br>n=326 | 95.5%<br>n=44  |
| 6. Discharge Destination   | 74.7%<br>n =20,721  | 82.4%<br>n = 61,798 | 81.3%<br>n= 134  | 82.7%<br>n=294 | 83.8%<br>n=296  | 81.4%<br>n=671  | 63.6%<br>n=239  | 63.2%<br>n=326 | 77.3%<br>n=44  |
| Cumulative all indicators ranking of hospitals                   |                     |                     | 6  | 4              | 3               | 1               | 4               | 7              | 2              |

\*Refer to Chapter 3 (Research Methodology) for numerator and denominator definitions

Indicator results from the hospitals ranged between 90.2% and 100.0% for the second indicator ‘assessing function prior to episode end’. For the third indicator concerning ‘the rehabilitation plan’ the hospitals had results between 92.0% and 100.0%. The fourth indicator pertaining to the ‘discharge plan’ had the hospitals with results ranging from 97.6%-100.0%. All hospitals had above the benchmark average for the group and above the average of national results for the fourth indicator. It was noted that in the ranking of hospitals based on the team dependent indicators cumulative compliance percentages, Hospital D was first and Hospital G second.

Indicators five and six which measured patient care outcomes might be significantly influenced by patient health and socio-economical status. The fifth indicator result from Hospital B and the sixth indicator results from Hospital E and F were substantially lower compared to the results from other hospitals, the benchmark group and the national average. For the fifth indicator pertaining to ‘functional gain achieved’, Hospital B’s result of 79.9% was much lower than the benchmark average of the group at 94.0% and a national result of 95.9%. Data from other hospitals in the study for the fifth indicator ranged between 92.5% and 97.8 %. Hospitals A, B, C, D, and G had higher than the group average for the sixth indicator ‘discharge destination’. Hospitals E and F had indicator six results substantially lower than the average of the group (74.7%) with scores of 63.6% and 63.2% respectively. Based on all indicators calculated by cumulative compliance percentages, Hospital D was ranked first and Hospital G second.

Among the hospitals offering general rehabilitation services, Hospital D stands out with above benchmark group and national compliance percentages for the first five indicators. For the sixth indicator Hospital D had higher than benchmark group results and was marginally lower than, but close to the national result. Indicator results from the stroke rehabilitation service at Hospital G also stood out with above the average group and national results for the first four indicators and slightly lower but close to national results for the fifth and sixth indicators.

In summary, compared to benchmark group and national clinical indicators results, Hospitals A and C had substantially lower results for the first indicator, Hospital B had a substantially lower result for the fifth indicator and Hospitals E and F had substantially lower results for the sixth indicator. All other results from the hospitals were higher or close to benchmark group and national results. Besides being ranked first

and second respectively among the hospitals for their indicators results, all indicators results from Hospital D and G are near or exceeding benchmark group and national results.

#### **4.12 Association between team characteristics and performance**

As mentioned in the methodology chapter, associations between team characteristics and performance results were determined based on significant and substantially different findings at the participating hospitals. Previous tables in this chapter have provided detailed information on the study's team characteristics and performance variables. Table 4.16 presents significant individual team member characteristics, cumulative indexes, scale results, and clinical indicators with notable results as well as pooled rankings. Individual team member characteristics results were classified as noteworthy if statistical testing revealed significant differences among the services. Significantly higher indexes and scale results indicate statistically better outcomes compared to the other services while significantly lower indexes and scale results indicate statistically poorer outcomes in comparison with the other participating services. The use of Fisher's Exact Monte Carlo test and non parametric methods, specifically the Mann Whitney test contributed towards differentiating significant team characteristics and job satisfaction findings among the services. Comparison against benchmark and national compliance rates together with aggregated ranking of indicator results were used to determine noteworthy clinical indicator findings among the services before these were matched with team characteristics and job satisfaction results.

**Table 4.16:** Summary of significant items, indexes, scale and indicator results, by hospital

| Variable/Index/Scale/<br>Item/ Indicators with<br>significant difference<br>between hospitals | Results by hospital |            |            |            |            |            |            |
|---|---------------------|------------|------------|------------|------------|------------|------------|
|   | General             |            |            |            |            |            | Stroke     |
|   | Hospital A          | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Number of years in<br>rehabilitation team<br>(p=0.001)  |                     |            |            |            |            |            |            |
| < 1   | 0.0%                | 32.3%      | 18.8%      | 41.2%      | 18.8%      | 0.0%       | 36.8%      |
| 1-<5  | 13.6%               | 32.3%      | 50.0%      | 14.7%      | 25.0%      | 43.8%      | 26.3%      |
| 5- 10   | 40.9%               | 19.4%      | 12.5%      | 29.4%      | 18.8%      | 50.0%      | 21.1%      |
| > 10  | 45.5%               | 16.1%      | 18.8%      | 14.7%      | 37.5%      | 6.3%       | 15.8 %     |
| Number of years in<br>current rehabilitation team<br>(p=0.003)                                |                     |            |            |            |            |            |            |
| < 1   | 9.1%                | 48.4%      | 20.0%      | 47.1%      | 25.0%      | 12.5%      | 36.8%      |
| 1-<5  | 31.8%               | 25.8%      | 60.0%      | 17.6%      | 25.0%      | 50.0%      | 31.6%      |
| 5- 10   | 27.3%               | 25.8%      | 13.3%      | 29.4%      | 18.8%      | 31.3%      | 21.1%      |
| > 10  | 31.8%               | 0.0%       | 6.7%       | 5.9%       | 31.3%      | 6.3%       | 10.5%      |
| Team type index<br>cumulative results<br>(p=0.56)   |                     |            |            |            |            |            |            |
|   | p> 0.05             | p> 0.05    | p=0.009    | p> 0.05    | p> 0.05    | p> 0.05    | p> 0.05    |
| Multiprofessional   | 4.5%                | 0.0%       | 18.8%      | 2.9%       | 0.0%       | 0.0%       | 5.3%       |
| Interprofessional   | 63.6%               | 64.5%      | 37.5%      | 61.8%      | 58.8%      | 68.8%      | 63.2%      |
| Transprofessional   | 31.8%               | 35.5%      | 43.8%      | 35.3%      | 41.2%      | 31.3%      | 31.6%      |

*Continued*

| Variable/Index/Scale/<br>Item/ Indicator with<br>significant difference<br>between hospitals | Results by hospital   |   |  |   |   |  |   |
|--|---|---|--|---|---|--|---|
|  | General   |   |  |   |   |  | Stroke  |
|  | Hospital A  | Hospital B  | Hospital C   | Hospital D  | Hospital E  | Hospital F   | Hospital G  |
| Perceived efficiency<br>index  | Mean = 3.58<br>Median = 3.67<br>p = 0.003<br><br>Significantly lower<br>compared to other<br>hospitals        | Mean = 4.08<br>Median = 4.00<br>p = 0.60<br><br>Not significantly<br>different compared<br>to other hospitals | Mean= 3.79<br>Median=3.83<br>p = 0.04<br><br>Significantly<br>lower compared<br>to other hospitals               | Mean= 4.25<br>Median=4.17<br>p = 0.004<br><br>Significantly<br>higher compared<br>to other hospitals    | Mean = 4.11<br>Median = 4.17<br>p = 0.16<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 4.22<br>Median =4.00<br>p = 0.75<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 4.07<br>Median = 4.00<br>p = 0.67<br><br>Not significantly<br>different compared<br>to other hospitals |
| Team climate index   | Mean = 4.08<br>Median = 4.30<br>p = 0.77<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 4.11<br>Median = 4.27<br>p = 0.06<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 3.61<br>Median = 3.80<br>p = 0.003<br><br>Significantly<br>lower compared<br>to other hospitals           | Mean = 4.48<br>Median = 4.63<br>p= 0.000<br><br>Significantly<br>higher compared<br>to other hospitals  | Mean= 4.37<br>Median=4.33<br>p=0.997<br><br>Not significantly<br>different compared<br>to other hospitals     | Mean= 4.44<br>Median=4.57<br>p=0.07<br><br>Not significantly<br>different compared<br>to other hospitals     | Mean= 4.22<br>Median= 4.27<br>p= 0.15<br><br>Not significantly<br>different compared<br>to other hospitals    |
| Overall job<br>satisfaction scale  | Mean = 3.65<br>Median = 3.63<br>p = 0.11<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 3.72<br>Median = 3.87<br>p = 0.38<br><br>Not significantly<br>different compared<br>to other hospitals | Mean = 3.50<br>Median = 3.60<br>p = 0.39<br><br>Not significantly<br>different<br>compared to<br>other hospitals | Mean = 3.96<br>Median = 4.00<br>p = 0.009<br><br>Significantly<br>higher compared<br>to other hospitals | Mean = 3.56<br>Median =3.73<br>p = 0.008<br><br>Significantly lower<br>compared to other<br>hospitals         | Mean = 4.12<br>Median = 4.03<br>p = 0.02<br><br>Significantly<br>higher compared to<br>other hospitals       | Mean = 3.60<br>Median = 3.53<br>p = 0.13<br><br>Not significantly<br>different compared<br>to other hospitals |

*Continued*

| Variable/Index/Scale<br>/Item/ Indicator with<br>significant difference<br>between hospitals                               | Results by hospital |            |            |            |            |            |            |
|--|---------------------|------------|------------|------------|------------|------------|------------|
|  | General             |            |            |            |            |            | Stroke     |
|  | Hospital A          | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| 1. Timely assessment<br>of function (within<br>72 hours) on<br>admission<br>Benchmark<br>group = 90.1%<br>National = 94.6% | 64.0%               | 97.8%      | 81.3%      | 99.7%      | 96.6%      | 93.1%      | 100.0%     |
| Cumulative team<br>dependant indicators<br>ranking of hospitals  | 6                   | 4          | 5          | 1          | 3          | 7          | 2          |
| Cumulative all<br>indicators ranking of<br>hospitals   | 6                   | 4          | 3          | 1          | 4          | 7          | 2          |

There were no obvious associations between the structural team characteristics of team size and team tenure with the other team characteristics or performance. While two services (Hospital B and D) had large team sizes, only Hospital D had significantly better team functioning and clinical performance compared to the other services. Services from Hospitals A, E and F had similar team sizes but had differing team functioning results. While the service from Hospital A had significantly lower perceived efficiency, the services from Hospitals E and F did not show any notable team functioning results. In terms of team tenure, while services from Hospitals A, C, D and E were all more than 15 years of age, the services showed different team functioning, job satisfaction and clinical performance results. Services from Hospitals A and C had both low perceived efficiency and low compliance for the first clinical indicator. Hospital C's service also had a lack of team type categorization consensus. The service from Hospital D had good team functioning, high job satisfaction and high compliance in clinical performance. The service from Hospital E was found to have low job satisfaction results compared to the other services. The variations in team functioning and performance results from the participating rehabilitation services therefore do not present any linking associations team size and team tenure.

Individual team member characteristics of rehabilitation team experience and experience in the current team were found to have statistically significant variation for the services. While some services had high proportions of staff with many years of rehabilitation or current team experience, other services had high proportions of staff with fewer years of such working experiences. The variations in rehabilitation team experience and current team experience did not show any association with team functioning, job satisfaction and performance. However, lesser rehabilitation team experience or lesser experience in the current rehabilitation team among a high proportion of team members in a rehabilitation service did not compromise perceived team efficiency, team climate, overall job satisfaction and clinical indicator process performance. This deduction is possible from the collective results of Hospitals B, D and G. Hospitals B, D and G all had high proportions of staff with lesser rehabilitation team experience and lesser experience in the current rehabilitation team, but none of these hospitals showed low team functioning, low job

satisfaction or low clinical indicator process performance. The services from Hospitals D and G stood out with high clinical indicator process performance and Hospital D also had good team climate and efficiency.

Team type index results not dominantly interprofessional were found to be associated with lower team climate index results. Hospital C showed team type index results with a lack of consensus among a substantial proportion of participants and a team type categorization distribution that varied compared with the rest of the sample. The differing team type index results from Hospital C corresponded with lower team climate index results.

The findings suggest that high perceived efficiency index results are associated with high team climate index results. The positive perceived efficiency and team climate association was from Hospital D.

Lower perceived efficiency index results were found to be associated with lower than benchmark group results for the ‘timely assessment of function on admission’ clinical indicator. The negative perceived efficiency and first clinical indicator results association was found in Hospitals A and C. Besides lower perceived efficiency being associated with lower scores for the first clinical indicator, no other association between team characteristics and clinical process or outcome performance was found.

Independently, overall job satisfaction scale results were not found to have an association with team characteristics and clinical process indicators. Hospital D and F had higher job satisfaction results while Hospital E had lower job satisfaction results compared to other hospitals. Unlike perceived efficiency, team climate and clinical process indicators results from Hospital D, team characteristics and clinical process performance results from Hospitals E and F were not significantly or substantially different from the other hospitals.

A dominant interprofessional team type, high perceived efficiency, high team climate combined with high overall job satisfaction is associated with above benchmark group results for process and outcome clinical indicators and first ranking for all clinical indicators results cumulatively. The wide ranging team characteristics and performance association was found in Hospital D. Hospital G with the specialized stroke rehabilitation service was the only other hospital in the study with universally above benchmark group



results across all clinical indicators. Among the hospitals, Hospital G came second for both process indicators and all indicators rankings. However, while being dominantly interprofessional in team type, the team characteristics and job satisfaction results for Hospital G were not significantly different from the other hospitals. It is noted that the number of cases in the clinical indicator results for Hospital D were substantially higher than other hospitals in the study, while the number of cases from Hospital G were substantially lower. The positive team characteristics and performance results from Hospital D are especially noteworthy as they were obtained in the context of a much higher case load of patients compared to other hospitals in the study.

#### **4.13 Discussion**

In satisfying the aim of examining the relationship between team characteristics and performance, this chapter's findings indicate associations between team functioning characteristics and clinical indicator performance. Findings presented are inconclusive for the association between teamwork and job satisfaction. However, holistically positive team functioning was linked to both clinical performance and job satisfaction. There was no clear association between individual characteristics of team members and structural team characteristics with performance from the services. Nevertheless, assessing the levels of rehabilitation experience and current team experience among clinicians offered a noteworthy insight with regards to team composition.

Lesser rehabilitation team experience among a significant proportion of rehabilitation service members was found not to adversely affect team functioning, job satisfaction and clinical performance. The presence of very experienced rehabilitation members might be the mitigating factor compensating for the newer team members' lack of rehabilitation service experience. Even when comprising a smaller proportion in the team, the more clinically experienced seniors and managers in the service are evidently sufficient for the delivery of quality rehabilitation services.

Despite a strong teamwork emphasis being ascribed to the field of rehabilitation, team type categorization results generally did not suggest the highest levels of integration, that is

transprofessional teams. While participants are oriented toward teamwork, it seems professional boundaries are being maintained within their teams. The lack of consensus on team type being associated with lower team climate suggests expectations towards team organization and integration to be linked with social and task oriented aspects of teamwork. Based on specific index items findings, task interdependence in the classification of team type is likely to be connected with a couple of team climate elements. The team climate elements are feedback provision, interest and attention, empathy, listening and compromising. The high perceived efficiency association with high team climate indicates good team functioning with regards to social and task aspects as contributing to the efficiency of teamwork among rehabilitation service members.

The results of lower perceived efficiency being identified with lower compliance for the process indicator ‘timely assessment of function on admission’ suggest that team efficiency could be especially important during a patient’s entry into the rehabilitation process. As there were no other substantial differences between hospitals for the first four process indicators and perceived efficiency results, it could be deduced that perceived efficiency within a team is more likely to be associated with impacting compliance to the first process indicator compared to the subsequent process indicators.

As independently, the overall job satisfaction scale results did not show any clear association with team functioning or clinical performance, inferences from HRM findings will be made in the final chapter of the thesis. A combination of an interprofessional team type categorization, high perceived efficiency and high team climate, occur together with good job satisfaction and clinical indicator performance. This would suggest that a holistic approach could be needed in creating a positive association between team characteristics, job satisfaction and clinical performance. Good overall clinical performance from the stroke rehabilitation service despite not having significant team functioning or job satisfaction results could be associated with the focused nature of the service. While general rehabilitation services would deal with a range of patient conditions requiring rehabilitation services, a stroke rehabilitation service specializes only on patients with stroke specific rehabilitation requirements. The specialized stroke rehabilitation service would therefore have less patient diversity and unpredictability than a general rehabilitation service. The

narrow patient focus of the stroke rehabilitation service enables a more standardized protocol in managing patients. The more standardized management of patients could possibly mitigate team functioning demands in complying with clinical requirements. The good clinical performance findings of the specialized stroke rehabilitation service was possible without significantly high team functioning results.

Overall, discussion in this chapter focused on drawing inferences from significant insights and associations between team characteristics with job satisfaction and clinical performance findings. The discussion fulfills the first research aim of this thesis in examining the association between team characteristics and performance measures.

#### **4.14 Conclusion**

This chapter has presented team characteristics and performance findings elicited from rehabilitation services in the seven hospitals that participated in the study. The next chapter presents findings from the hospitals pertaining to the areas of HRM evaluated.

## **Chapter 5: Human Resource Management**

### **5.1 Introduction**

This chapter presents findings pertaining to HRM obtained from interviews and focus groups with managerial HR staff and rehabilitation services clinical staff. The interview and focus group questions were grouped under eight themes covering: the general site and study elements feedback; HR planning and evaluation; healthcare staff work systems; healthcare staff education, training and development; healthcare staff well-being and satisfaction; healthcare context; general people management in the organization; and views on HRM. Specific focus areas evaluated under the eight defined themes with HR staff and clinical staff are detailed in the respective sections of this chapter. Recall, that there were fewer questions under the themes for clinical staff compared to HR staff. This compromise was necessary given the higher number of participants in a clinical staff focus groups compared to interview sessions with HR staff. Table 5.1 presents a breakdown of individual participants according to interview or focus group research session and profession, by hospital.

The chapter sections are populated with quotes to illuminate the analysis and highlight salient issues. As discussed in the method chapter, when conducting the analysis, matrixes confirming HR staff and clinical staff responses across hospitals and study themes' questions were developed; these are provided in appendicized Tables 5.2-5.17. The matrixes are a record of evidence for the consistency of findings for individual organizations for each theme question (columns) and, simultaneously, also for each theme question across the organizations (rows). A summary table of common and unique findings among the hospitals is presented before this chapter's discussion section (Table 5.18). The sections in this chapter cover: 5.2 HR staff findings; 5.3 Clinical staff findings; 5.4 Notable common and unique HRM findings across hospitals; and 5.5 Discussion.

**Table 5.1:** Breakdown of individual participants according to interview or focus group research session and profession, by hospital

| Staff category | General          |  |                  |  |                  |   |
|----------------|------------------|--|------------------|--|------------------|---|
|                | Hospital A       |  | Hospital B       |  | Hospital C       |   |
|                | Research session | Participants' profession   | Research session | Participants' profession   | Research session | Participants' profession                      |
| HR staff       | Interview        | HR manager   | Interview i      | Employment relations manager   | Interview        | HR director                                   |
|                |                  |  | Interview ii     | HR manager   |                  |   |
| Clinical staff | Interview i      | O.T.   | Interview        | Nurse  | Focus group i    | Nurse (3)<br>S.T.                             |
|                | Interview ii     | O.T.   | Focus group i    | Doctor (3)<br>Nurse  |                  |   |
|                | Focus group i    | Doctor (2)<br>Physiotherapist<br>Psychologist  | Focus group ii   | Doctor (3)<br>Nurse<br>Physiotherapist (6)<br>O.T. (2)<br>Social worker (2)<br>S. T.<br>Psychologist | Focus group ii   | Doctor (2)<br>Physiotherapist (2)<br>O.T. (4) |
|                | Focus group ii   | Doctor<br>Nurse (2)<br>Physiotherapist (2)<br>O.T.<br>Social worker (2)<br>S. T.<br>Psychologist | Focus group iii  | Nurses (10)  | Focus group iii  | Nurse (2)                                     |
|                | Focus group iii  | Nurse (6)  |                  |  | Focus group iv   | Nurse (2)                                     |
| Total          | 6                | 23   | 6                | 33   | 5                | 17  |

†O.T. - Occupational therapist, ‡S.T. - Speech therapist

\*Number in bracket included for more than one participant in represented profession

*Continued*

| Staff category | General          |   |                  |  |                  |  |
|----------------|------------------|---|------------------|--|------------------|--|
|                | Hospital D       |   | Hospital E       |  | Hospital F       |  |
|                | Research session | Participants' profession  | Research session | Participants' profession                             | Research session | Participants' profession                                   |
| HR staff       | Interview        | Chief Executive Officer (CEO)<br>Workforce services manager             | Interview        | HR manager   | Interview i      | People service manager                                     |
|                |                  |   |                  |  | Interview ii     | Head of learning and development department                |
|                |                  |   |                  |  | Interview iii    | Acting head of allied health                               |
| Clinical staff | Interview i      | Doctor  | Interview        | Doctor   | Focus group i    | Doctor<br>Physiotherapist<br>O.T. (2)<br>S.T.<br>Dietician |
|                | Interview ii     | Nurse   |                  |  |                  |  |
|                | Interview iii    | Nurse   | Focus group i    | Physiotherapist (3)<br>O.T. (2)<br>Social worker (2) |                  |  |
|                | Focus group i    | Doctor<br>Nurse<br>Physiotherapist<br>O.T.<br>Social worker             |                  |  |                  |  |
|                | Focus group ii   | Doctor (2)<br>Nurse<br>Physiotherapist<br>O.T.                          | Focus group ii   | Nurse (3)  | Focus group ii   | Doctor<br>Physiotherapist<br>O.T.<br>Social worker (2)     |
|                | Focus group iii  | Doctor (3)<br>Nurse<br>Physiotherapist<br>O.T. (2)<br>Social worker (2) | Focus group iii  | Nurse (2)  | Focus group iii  | Nurses (5)   |
|                | Focus group iv   | Nurse (14)  |                  |  |                  |  |
| Total          | 8                | 38  | 5                | 14   | 6                | 19   |

†O.T. - Occupational therapist, ‡S.T. - Speech therapist

\*Number in bracket included for more than one participant in represented profession

*Continued*

| Staff category | Stroke           |  |
|----------------|------------------|--|
|                | Hospital G       |  |
|                | Research session | Participants' profession                                   |
| HR staff       | Interview        | Acting HR manager  |
| Clinical staff | Interview        | Doctor   |
|                | Focus group i    | Nurse (5)  |
|                | Focus group ii   | Physiotherapist<br>O.T.<br>S.T.<br>Dietician<br>Orthoptist |
|                | Focus group iii  | Nurse (4)  |
|                | Focus group iv   | Doctor (2)<br>Nurse  |
| Total          | 6                | 19   |

†O.T. - Occupational therapist, ‡S.T. - Speech therapist

\*Number in bracket included for more than one participant in represented profession

## **5.2 HR staff findings**

Interview findings from HR staff are presented in line with the eight study themes that were defined in evaluating related elements and aspects of HRM. Common views and significant differences among the participating hospitals are highlighted for all interview themes.

### **5.2.1 General site and study elements**

General site and study elements questions elicited HR staff responses on their healthcare organization, rehabilitation service, and factors influencing teamwork and performance. The matrix analysis of HR staff responses by question and hospital is presented in Table 5.2.

#### *5.2.1.1 Healthcare organization*

When asked to describe their healthcare organization, responses from the HR staff covered input on the organizational size, complexity, diversity of service, values and perceptions of the institution being a good healthcare provider. Hospitals A, B and E were described as large and complex, Hospital G medium sized and Hospitals C, D and F as small. The diversity of services and complexity at a large healthcare organization are captured in the following response:

“It is complex with different services and 25 different awards.”

(Hospital A, HR staff interview)

The diversity of services offered was highlighted in HR staff views from Hospitals A, B, E and G while organizational values were mentioned at all hospitals except Hospital C. HR staff from Hospitals B, C and F presented positive comments concerning their healthcare organization being a good healthcare provider. These positive comments reflect organizational values of inclusiveness and continuous improvement:

“The hospital is a family experience, everyone knows everyone, everyone pitches in.” (Hospital C, HR staff interview)



“Our organization has very welcoming services, it is constantly striving to fill gaps in patients’ needs.” (Hospital F, HR staff interview iii)

#### *5.2.1.2 Rehabilitation service*

HR staff from Hospitals A and G exhibited a lack of knowledge when requested to describe their organization’s rehabilitation service. HR staff input from Hospitals A, C and F described their respective rehabilitation services positively. That is, for example:

“The service is a cohesive and organized team.” (Hospital F, HR staff interview iii)

Responses from Hospital B and F emphasized the team effort required for the delivery of rehabilitation services. Staff from Hospitals B, D, E and F described the rehabilitation service as multidisciplinary. Managerial awareness of the multidisciplinary composition of a rehabilitation service can be observed in this answer:

“The service is multidisciplinary, physios (physiotherapist), OTs (occupational therapists), doctors and psychological (psychologist) staff are part of the rehabilitation process.” (Hospital B, HR staff interview ii)

#### *5.2.1.3 Factors influencing teamwork*

HR staff from a majority of hospitals, that is, Hospitals A, B, D, E and F, viewed leadership as a factor influencing teamwork. The medical and nursing leadership roles influencing teamwork were put forward:

“Leadership from staff specialist, director and NUM influences teamwork.”  
(Hospital F, HR staff interview iii)

Team composition was viewed as a factor influencing teamwork at Hospitals D and F. Communication was related to teamwork in responses from Hospitals A, B and C. Input from Hospital G suggested teamwork to be influenced by the responsibility and openness of people to be responsive to a team environment.

#### *5.2.1.4 Factors influencing performance*

Input from HR staff at Hospitals B, D, E and F implied teamwork as a factor influencing performance. The linking of teamwork with performance by HR staff affirms this study's research focus and theoretical framework where team characteristics are studied in relation to clinical and job satisfaction performance outcomes. These responses indicate performance as being influenced by teamwork:

“Working in a team influences performance.” (Hospital D, HR staff interview)

“Performance comes from having a motivated team with sufficient resources, both physical and human.” (Hospital E, HR staff interview)

HR staff input from Hospitals A, B and F suggested leadership to have an influence on performance. It is noted that leadership was linked to teamwork in the previous sub section. In influencing individual staff performance, the role of leadership in healthcare delivery was articulated as follows:

“If you have a good leader, manager, a person will perform well.”  
(Hospital F, HR staff interview i)

Individual characteristics of staff were viewed to influence performance in HR staff comments from Hospitals B, F and G. Staff development was put forward as a factor for performance by HR staff from Hospitals A, C and F. Resources were mentioned as a prerequisite for good performance by HR staff at Hospitals A, B and E. Performance management was identified by HR staff of Hospitals D and G as a factor influencing performance. This response presents the challenge of promoting individual staff performance that conforms to organizational requirements:

“The individual's perception of what their performance should be and the organization's expectations, there is sometimes a gap.”  
(Hospital G, HR staff interview)

### **5.2.2 HR planning and evaluation**

Under HR planning and evaluation, study questions covered: factors influencing HR planning in the organization; selection and recruitment; attributes important for staff employed; influence of existing staff on selection and recruitment of new staff; staff evaluation; staff learning their jobs; management and clinical staff relationships; staff motivation; and provision of leadership. The matrix analysis of HR staff responses by question and hospital is provided in Table 5.3.

#### *5.2.2.1 Factors influencing HR planning in the organization*

Meeting staffing requirements was put forward as a factor influencing HR planning in the organization by HR staff from all participating hospitals. Staffing in HR planning was described as:

“Providing sufficient and skilled employees.” (Hospital E, HR staff interview)

Difficulty in ensuring adequate staffing was acknowledged as well. For example, the HR staff at Hospital A explained:

“In terms of finances and budget, there is a limited budget compared to the number of staff needed.” (Hospital A, HR staff interview)

The other factors influencing HR planning indicated by HR staff were: funding (Hospitals A, B and D); demographics of patients (Hospitals A, C, F and G); service requirements (Hospitals A, D and F); staff surveys (Hospital C); and responsibility to staff (Hospital F). The responsibility towards staff mentioned at Hospital F covered providing staff with a safe work place and having equal opportunity for professional development.

#### *5.2.2.2 Selection and recruitment*

When asked about how staff are selected and recruited, input from HR staff at all hospitals suggested a rigorous process. These responses represent the views expressed:

“Staff are selected using a vigorous and rigorous program.”  
(Hospital C, HR staff interview)

“Selection and recruitment is done through a rigorous process, a lot of rigour in the process.” (Hospital D, HR staff interview)

Elements of selection and recruitment that were dominantly mentioned by HR managers were: advertising (Hospitals A, B, D, F and G); position description (Hospitals A, B, E and F); interviews (Hospitals A, B, C, D, E and F); merit based equal employment opportunity (Hospitals A, D, E, F and G); electronic recruitment (Hospitals B, C and E); and selection committee (Hospitals B, C, D, E and F). The selection committee mentioned generally comprises of three members (Hospitals C, E and F) including a convener (Hospitals C and D). Given that all hospitals are public healthcare providers and the overlap in responses, selection and recruitment stages and processes might have many commonalities across services.

#### *5.2.2.3 Attributes important for staff employed*

Responses from HR staff at Hospitals A, B, D, E and F suggested attributes important for staff employed are linked to organizational policy, mission and values. The connection can be seen in this response:

“Staff employed here have to be happy and able to work within the mission and values of the organization.” (Hospital F, HR staff interview iii)

It was mentioned that the specifically required attributes would vary according to the type of professional role (Hospitals A, B, C and D). The ability to work in a team was cited as an important attribute for staff employed by HR staff from Hospitals A, B and F. On the other end of the work continuum, the ability to work autonomously was also cited as an important attribute (Hospital F). The ability to maintain a professional approach was cited in HR input from Hospital G as an important attribute for staff employed.

#### *5.2.2.4 Influence of existing staff on selection and recruitment of new staff*

With regard to the question on the influence of existing staff on selection and recruitment of new staff, it was mentioned that existing staff would have direct influence if they were a member of the selection committee (Hospitals A, B, C, D and F). The input provided by all HR staff bar one suggested that the convener of the selection committee is the new recruit's head of department or the person the new recruit would report to (Hospital A, B, C, D, E and F). It was pointed out that most work colleagues would have little or no direct influence on the recruitment of a new staff (Hospitals A, D and F). However, existing staff have an indirect influence on the selection and recruitment of new staff through the team and culture expectations panel members carried. That is, they sought new staff who could fit within the established team, as suggested in this input:

“I suppose, we are looking at people who can fit into the environment with a certain group of staff.” (Hospital G, HR staff interview)

#### *5.2.2.5 Staff evaluation*

In answering the question on how staff are evaluated, HR staff mentioned the use of appraisals (Hospitals B, D, E, F and G) and the role of managers in evaluating staff (Hospitals A, B, D and F). The following response provides indication of the frequency in which formal staff evaluation involving the manager is performed:

“Staff appraisal is carried out every 12 months, completed by the manager.”  
(Hospital B, HR staff interview i)

Staff evaluation was said to include aspects of performance management (Hospitals B and D) and performance development (Hospitals A, B, C and F). Informal and regular feedback was connected to staff evaluation in HR staff input from Hospitals C, D, F and G.

#### *5.2.2.6 Staff learning their jobs*

Colleagues or team members were reported to contribute to staff learning their jobs in views from HR staff at all hospitals. Team meetings and on the job training were scenarios where collegial passing down of knowledge took place:

“I would guess that knowledge would be shared in team meetings.”  
(Hospital E, HR staff interview)

“Passing down of knowledge from previous or existing staff would be part of on the job training.” (Hospital B, HR staff interview i)

The HR staff from Hospitals B, D, E, F and G explained that staff learn their jobs initially through training via degrees and qualifications relevant to their task. Staff learning their jobs was reported by HR staff to be dependent on their type of job or professional group (Hospitals A, B, C and F). Training, education and development provided, or supported, by the organization was cited as contributing to staff learning their job by HR staff from all organizations bar Hospital E. Formal workplace orientation was mentioned by HR staff from Hospitals B, F and G. The role of the manager in helping staff learn their jobs was highlighted by HR staff from Hospitals A, B and F. The manager’s role for allied health staff in job learning is revealed in this response:

“Each staff member in allied health has a supervisor. If there is specific skill or knowledge base that is required, the supervisor will support the staff in learning and developing.” (Hospital F, HR staff interview iii)

#### *5.2.2.7 Management and clinical staff relationships*

Reflecting upon the question examining management and clinical staff relationships, HR staff from Hospitals A, B, C, D, F and G explained that the relationship between the two groups in their healthcare organization was good. These responses show the perceived good relationships:

“Generally, with regards to management and clinical staff relationships, the place works well.” (Hospital A, HR staff interview)

“Generally, management and clinical staff relationships are good. Both sides are for patient care directly and indirectly.” (Hospital B, HR staff interview ii)

The HR manager from Hospital E mentioned not knowing about management and clinical staff relationships. An open door policy for communication between clinicians and management was cited by HR staff from Hospitals C and F. It was indicated by HR staff from Hospital F that giving clinical staff the opportunity to provide input for decision making is important and contributes to job satisfaction. The HR staff response from Hospital D indicated distinctly positive management and clinical staff interactions:

“Senior managers are visible, accessible, people feel comfortable approaching people.” (Hospital D, HR staff interview)

#### *5.2.2.8 Staff motivation*

To the question pertaining to how staff are motivated, HR staff from Hospital A indicated motivating staff to be difficult. This difficulty was attributed to the inability to reward and recognize staff due to public sector constraints. The role of immediate managers in motivating staff was highlighted by HR staff from Hospitals A and C. Patient feedback and outcomes was stated to be a source of motivation by HR staff from Hospitals D and F. HR staff from Hospitals E and F put forward monetary reward as influencing staff motivation. The organizational mission and values were considered motivating elements by HR staff from Hospitals B and D. Organizational reward and recognition schemes were considered staff motivators by HR staff at Hospitals A, F and G. The following HR staff comments present motivating incentives used by several of the public healthcare organizations:

“Employee of the month, long service - 15 years medal ceremony are some of the incentives used for staff motivation.” (Hospital A, HR staff interview)

“Staff excellence awards are available as incentives in motivating staff.”  
(Hospital G, HR staff interview)

#### *5.2.2.9 Provision of leadership*

HR staff from all hospitals cited the role of managers as an important source of leadership in their organizations. Leadership by managers is described in these responses:

“Divisions in the organization have leadership positions. For example, clinical programs have departments with units and each level has a manager in some capacity.” (Hospital A, HR staff interview)

“Leadership is provided via the executive and service managers maintaining a relationship with their subordinates.” (Hospital G, HR staff interview)

HR input from Hospitals A, B, D and E highlighted the role of organizational structure, while organizational policies were mentioned in HR input from Hospitals E and F. The general manager’s approach to lead by example was mentioned in HR input from Hospital C. Leadership development efforts were put forward by HR staff from Hospitals B and F.

### **5.2.3 Healthcare staff work systems**

Questions covered under healthcare staff work systems focused on: individual work and teamwork requirements; staff decision making responsibility; staff recognition and reward; support for staff innovation; and HR response for staff innovation support requirement. The matrix analysis is presented in Table 5.4.

#### *5.2.3.1 Individual work and teamwork requirements*

For the question pertaining to describing individual work and teamwork requirements for staff employed here, HR staff from Hospitals A and F mentioned that it was a difficult question to answer. HR staff input from Hospitals A, B, C, D, F and G suggest that individual work and teamwork requirements would depend on the specific job, discipline or profession. A substantial proportion of healthcare work was said to be individual in responses obtained from HR staff at Hospitals B, F and G. Nevertheless, HR staff input from all hospitals suggests that most healthcare jobs are part of a team. These responses



indicate the necessity for clinicians who are team players, team decision making and multidisciplinary teamwork in the delivery of healthcare:

“Majority of people would have to be team players, a nurse cannot do the job on her own.” (Hospital B, HR staff interview ii)

“Nobody in healthcare can work in isolation, decisions should be made with consideration of the team.” (Hospital C, HR staff interview)

“For inpatient units, multidisciplinary team involved in care.”  
(Hospital D, HR staff interview)

HR staff input from Hospital E speculates a ratio of 40:60 for individual and teamwork requirement in a rehabilitation service. HR staff input from Hospital B pointed out how teamwork is sometimes restricted by the lack of resources in the form of team players.

#### *5.2.3.2 Staff decision making responsibility*

HR staff input from all hospitals indicated that staff decision making responsibility would depend on the professional discipline or seniority level. This response conveys the link between the two:

“Decision making responsibility depends on role definition, how long staff have been in the job, senior staff would be more trusted to make decisions.”  
(Hospital B, HR staff interview i)

HR input from Hospital A suggests staff have a responsibility on how they behave and what task they work on at a particular time. It was highlighted in HR input from Hospitals B and E that staff decision making responsibility is restricted by organizational policy.

#### *5.2.3.3 Staff recognition and reward*

Feedback on staff recognition and reward showed some overlap with previous sub section responses pertaining to staff motivation. Organizational reward and recognition schemes were cited by HR staff from all hospitals in response to the questions on when and how

staff were recognized and rewarded. HR input from Hospitals A, D, F and G suggested staff are recognized and rewarded for performance that is above expectation. Long service awards were cited in HR staff responses from all organizations except Hospital G.

Organizations recognized different periods of employment for long service awards:

“Service awards reflecting time in the organization, 10, 15, 35, 40 years are used for staff recognition.” (Hospital E, HR staff interview)

The role of the manager in staff recognition and reward was mentioned in HR input from Hospitals A, B, C, F and G. Managerial influence on staff reward and recognition is evident in these responses:

“Currently a reward and recognition program for individual staff is available for use by managers.” (Hospital B, HR staff interview i)

“In providing recognition, the general manager may write to the specific staff a glowing letter which would go into their personal file.”  
(Hospital C, HR staff interview)

HR input from Hospital B indicated that there was limited flexibility in rewarding staff due to the public service strict award structure in terms of salary, and also the lack of bonuses. The role of patient feedback contributing to staff recognition was mentioned in HR input from Hospitals C and G. Rewarding staff with development opportunities was put forward by HR staff from Hospitals A, B, C, D and F. The following HR input stipulate development opportunities such as courses, projects, conference attendance support and scholarships that are used to reward and recognize staff:

“Whenever appropriate, courses and projects when available.”  
(Hospital A, HR staff interview)

“Support for attending conferences, staff have received scholarships.”  
(Hospital D, HR staff interview)

“Opportunities to attend conferences and support in their professional development.” (Hospital F, HR staff interview iii)

#### *5.2.3.4 Support for staff innovation*

The question inquiring about how much support staff have to try out new and innovative procedures resulted in HR staff from all hospitals expressing support for innovation. The support for staff innovation was clearly highlighted:

“Support for innovation would be part of our quality program which is in place.”  
(Hospital E, HR staff interview)

“I think that given the circumstances, anything staff want to initiate would be seriously looked at.” (Hospital G, HR staff interview)

Significant support for innovation was expressed in HR input from Hospitals B, C and F. However HR input, from all organizations bar Hospital C, was that support for innovation would depend on the feasibility and practicality of the proposed idea or plan. The HR staff input from Hospital A was unsure with regards to innovation in clinical aspects.

#### *5.2.3.5 HR response for staff innovation support requirement*

In regards to how the HR department would respond if staff required more support to try out new and innovative procedure, HR input from Hospitals A, E and G indicated that the HR department would not be involved in the decision to implement innovation. HR input from Hospital C stated that the HR department would respond to request for staff innovation with consultation. It was mentioned in HR input from Hospitals A, F and G that policy and procedure advice would be provided to staff with ideas for innovation. HR input from Hospitals B and F expressed support for staff proposing innovations in work procedure. The role of the manager in approving and deciding new innovative procedures proposed by staff was highlighted in HR input from Hospitals A, D and F. This response highlights the manager’s function in responding to staff innovation requirements:

“It would be the service manager who’d have a greater role in supporting innovation, things are consultative. If there are workforce implications with an intervention, it would have to be discussed with the service manager.”  
(Hospital D, HR staff interview)

#### **5.2.4 Healthcare staff education, training and development**

The matrix analysis of HR staff responses to the question exploring the healthcare staff education, training and development theme is presented in Table 5.5. For the question pertaining to staff development in the organization, HR input from Hospitals A, D, F and G indicates that training would vary by type of staff and profession. Profession specific training in healthcare is emphasized:

“Generally, different staff classifications would have different training.”  
(Hospital A, HR staff interview)

“Staff are encouraged to take professional development in their own areas.”  
(Hospital G, HR staff interview)

Staff development is said to be encouraged in HR input from Hospitals A, B, F and G. The other HR input obtained on the range of available staff development options suggests that the encouragement of staff development is common across hospitals. The range of development options indicate that encouragement for staff development might be at the organizational, service or disciplinary level. The role of the manager was cited in HR input from Hospital B in encouraging staff development and from Hospital F in evaluating the relevance of staff development. Staff development benefits mentioned by HR staff included education sponsorship (Hospitals B, E and G), education allowance (Hospitals C, F and G) and study leave (Hospitals B, C, F and G). The role of the learning and development department for staff development was highlighted by HR staff from Hospitals B and F.

#### **5.2.5 Healthcare staff well-being and satisfaction**

For healthcare staff well-being and satisfaction, questions covered: positives for staff working in the organization; negatives for staff working in the organization; suggestions for improving staff well-being and satisfaction in the healthcare organization; reasons for staff turnover; and HR department effort to retain healthcare staff. The matrix analysis of HR staff responses by question and hospital is presented in Table 5.6.

#### *5.2.5.1 Positives for staff working in the organization*

For the question inquiring about the positives for staff working in the organization, HR staff from all organizations indicated that their hospitals provided learning and development opportunities for staff. Indication of staff development opportunities as a positive element of the organization was expressed in this way:

“There are opportunities for people to develop in training and acting positions.”  
(Hospital D, HR staff interview)

“We support a learning environment.” (Hospital E, HR staff interview)

Organizational employment benefits were also cited in HR input from all hospitals. An employee assistance program, annual and long service leave, and flexible working arrangements are some of the employment benefits put forward:

“There is a free employee assistance program that provides counselling for work related, personal and family issues.” (Hospital A, HR staff interview)

“Benefits include four weeks a year annual leave, long service leave after 10 years of employment.” (Hospital C, HR staff interview)

“We have flexible working arrangements. If someone wants flexibility, we have part-time employment.” (Hospital F, HR staff interview i)

A culture for continuous improvement was mentioned in HR input from Hospital D, they also mentioned that support from managers is rated highly and also identified for improvement. The good reputation of the organization was cited as a positive in HR input from Hospitals B and E. HR staff from Hospitals A and G mentioned that job security as a positive for public healthcare staff. Other positives mentioned by HR staff included: their hospital’s location (Hospitals A and E); having a supportive environment (Hospitals D and F); staff enjoying their work (Hospital D); and opportunities for promotion (Hospital A).

#### *5.2.5.2 Negatives for staff working in the organization*

When asked about the negatives for staff working in the organization, HR staff put forward a range of issues. Funding and budget issues due to public service restrictions were mentioned by HR staff from Hospitals A and B. HR input from Hospitals B and D indicated the inability to provide financial incentives for staff as a negative. The lack of resources was mentioned in HR staff input from Hospital G. There is overlap with the issues raised at Hospitals A, B, D and G with regards to funding, provision of incentives and resources. At two of the smaller hospitals in the study, there were responses suggesting restriction on career progress and development:

“There is limited scope for career progression.” (Hospital D, HR staff interview)

“The fact that it is small, the amount of career opportunities can be limiting.”  
(Hospital F, HR staff interview ii)

Limited clinical exposure to wider patient group was put forward as the only negative in HR input from Hospital C. The input suggesting limited exposure to the wider patient group could be related to Hospital C’s distance from the main parent hospital. Lack of parking together with the acknowledgement that some staff might feel unsupported was cited in HR input from Hospital E:

“Lack of parking for cars. Most of our surveys come up – lack of parking. The odd person may say ‘I’m not supported’.” (Hospital E, HR staff interview)

Staff being afraid of change was mentioned as a negative in HR input from Hospital D. Uncertainty due to health service restructuring and ownership change of the organization was highlighted by HR staff from Hospital F:

“I think the changes within the health service and our organization can at times be unsettling and staff may not feel secure.” (Hospital F, HR staff interview iii)

“I think for staff in transition of Group F acquiring the hospital, there has been an air of uncertainty that unsettled people, cultural change.”  
(Hospital F, HR staff interview ii)

#### *5.2.5.3 Suggestions for improving staff well-being and satisfaction in the healthcare organization*

In relation to what would improve staff well-being and satisfaction, the ability to reward and recognize staff was mentioned in HR input from Hospitals A, B, D and F. The intention to reward staff for improved staff satisfaction is apparent in these responses:

“The ability to reward staff more would result in greater staff satisfaction. Under HR best practice, reward and recognition are very important.”  
(Hospital A, HR staff interview)

“Staff well-being could be improved with more flexibility in the remuneration, a better ability to reward staff.” (Hospital B, HR staff interview i)

HR input from Hospital C indicated that there were no significant problems in the organization. HR input from Hospital E cited family friendly work practices and flexible work practices for improving staff well-being and satisfaction. Improving communication was cited in HR input from Hospitals D and F, while listening to staff was mentioned in input from Hospital B. The need for more resources especially in relation to staffing was highlighted in HR responses from Hospitals B and G:

“More resources, being able to replace staff that leave. May not always be possible or it may be delayed.” (Hospital B, HR staff interview ii)

“Probably more resources, increasing staffing numbers.”  
(Hospital G, HR staff interview)

#### *5.2.5.4 Reasons for staff turnover*

HR staff input from the hospitals suggested many reasons for staff turnover. Better opportunities with regards to career development and progress was a dominant factor across participating hospitals. The following responses stipulate career development as a reason for turnover:

“Career progression, one of the NUMs left her job at Hospital C for Hospital XYZ.”  
(Hospital C, HR staff interview)

“People leave due to promotions.” (Hospital E, HR staff interview)

Dissatisfaction with colleagues (Hospitals A, B and E), boss or manager (Hospital A) and pay (Hospital A) were also perceived by HR staff to be reasons for staff to leave. At Hospital D, a majority of turnover was implied by HR staff as being due to short term contracts coming to an end. Not being a team player was put forward as a reason for turnover in HR input from Hospital B. Retirement (Hospitals C and G) and terminal illness (Hospital C) were other reasons for staff turnover cited by the HR staff. Not collecting exit information or having no data to explain staff turnover was mentioned by HR staff from Hospitals A and F. It was mentioned by HR staff from Hospitals A and G that not many staff complete or take up exit interviews.

#### *5.2.5.5 HR department effort to retain healthcare staff*

In response to the question on the HR department’s effort to retain healthcare staff, various efforts were mentioned by the HR staff interviewed. These included providing a safe work environment (Hospitals A and E), development and training (Hospitals A and B) and addressing staff issues through protocols and procedures (Hospitals B and C). It was acknowledged in HR staff responses that efforts from the HR department alone were insufficient for retaining healthcare staff (Hospitals B and F). The role of managers and leaders was singled out by HR staff as important in retaining staff (Hospitals B, D and F). The following responses highlight the need for managers and leaders to play a part in promoting staff retention:

“The retention of staff can’t be done by HR alone, it requires managers and leaders to play their role. Hence, courses and training for leaders.”  
(Hospital B, HR staff interview ii)

“Retention is about identifying what motivates people, individual managers have to consider this. Different people have different motivations.”  
(Hospital D, HR staff interview)

While being proactive in supporting staff and building a positive culture was mentioned by Hospital F, input from Hospital G implied the HR department as not having the resources



for retaining staff. It was indicated that the HR department's main roles were limited to payroll and providing employment advice:

“The HR department is responsible for ensuring staff receive their entitlements and are appropriately paid, and providing advice to staff promptly and efficiently.”  
(Hospital G, HR staff interview)

### **5.2.6 Healthcare context: influence of different departments and units on one another**

The question for the healthcare context theme evaluated the influence of different departments and units on one another in the organization. The matrix analysis of HR staff responses by hospital is included in Table 5.7. Some HR staff answers indicated significant connection between departments (Hospitals A, B, C and D). These responses point out the significant relationship between departments and units in healthcare organizations due to patients, administrative and service delivery requirements:

“Yes, a lot of connection between departments. Patients move throughout the hospital. People don't work in silos. Collegial approach in working for the common good of the patients. For example, emergency department patients might be moved to a ward.” (Hospital A, HR staff interview)

“If medical records isn't doing its job, it would impact on the ward.”  
(Hospital C, HR staff interview)

“Staff have an informal and formal relationship with one another. Rehabilitation and palliative work together. Allied health rotate between services. At executive level, all services are combined.” (Hospital D, HR staff interview)

Interaction between departments and units was considered essential in HR feedback from Hospitals B and D. HR input from Hospital G suggests that all departments interrelated in some way and issues in one area can influence other areas of the hospital. At the other end of the spectrum, it was suggested that there is limited cross communication as the different departments and units see themselves as separate entities (Hospital F). In HR feedback from Hospitals C and D, the small size of the organization was said to contribute to interaction between the departments. It was mentioned in HR responses from Hospitals A,

B, E and F that interaction between departments would depend on the care patients required. HR input from Hospital E suggests that patients with complicated and multiple care needs would impact on different departments.

### **5.2.7 General people management in the organization**

For the general people management in the organization theme, questions focused on: healthcare staff management in the organization; HR department's influence on staff; and usefulness of HR department increasing its involvement in staff management. The matrix analysis of HR staff responses by hospital is presented in Table 5.8.

#### *5.2.7.1 Healthcare staff management in the organization*

The management of staff was perceived positively in HR input from Hospitals B, C, E and F. It was expressed in HR responses from Hospitals A and B that there are sometimes problems in the management of staff which can be both caused and resolved by managers:

“Some managers are skilled and some are not. This sometimes makes it difficult.”  
(Hospital A, HR staff interview)

“Sometimes simple problems, big problems. HR depends a lot on managers and leaders.” (Hospital B, HR staff interview ii)

The important role of managers was cited in HR feedback from Hospitals A, B, D, F and G. It was indicated in HR input from Hospital A that there would be problems if the senior clinician appointed to a managerial position was not a good manager. Input from HR staff at Hospitals D and E highlighted the significance of policies in influencing healthcare staff management. The impact of structure on the management of staff was mentioned in HR feedback from Hospitals D and G. HR comments from Hospitals E and F indicated that the management of healthcare staff could be better. HR input at Hospital F explained that ‘a lead by example approach to staff management’ is fostered in the organization.

#### *5.2.7.2 HR department's influence on staff*

In enquiring on how much influence the HR department has on staff, HR staff answers from all hospitals highlighted the role of the HR department in providing policy and procedure guidance. The provision of procedural guidance by the HR departments is evident in the following:

“I think the HR department's role is to provide good advice on how to resolve issues that arise and to ensure that managers and the staff are interacting appropriately.” (Hospital G, HR staff interview)

The HR department was said to have a significant influence on staff in HR input from Hospitals B and C. The resolving of staff grievances by the HR department was mentioned by HR staff from hospitals B, F and G. The HR department's influence on staff through its role in facilitating managers was cited in HR comments from all hospitals, bar one (Hospital A). It was mentioned in HR input from Hospital D that managers could be performing substantial HRM. Nevertheless, HR input reports that the HR department has functions in preventing workplace bullying and harassment (Hospital D), dealing and negotiating with unions (Hospital A) and in protecting the organization (Hospital D).

#### *5.2.7.3 Usefulness of HR department increasing its involvement in staff management*

HR input from Hospitals A, B, F and G suggested that increasing the HR department's involvement in staff management would be useful. This response captures the view of the need for greater HR department involvement in staff management:

“I think greater involvement in planning, evaluation and professional development.”  
(Hospital F, HR staff interview iii)

However, it was mentioned in HR staff answers, from Hospitals A, B and G, that increasing the HR department's involvement in staff management would depend on the availability of resources. Reasons put forward by HR staff for increasing the HR department's staff management involvement include discouraging work place politics (Hospital F) and due to some managers not having the skills to manage staff (Hospital G). HR input from Hospital

A suggested that it would be useful to develop the skills of managers further. Being able to assist managers more was mentioned in HR input from Hospital B. HR input from Hospital G stated that increasing the HR department's influence in staff management would require a shift in thinking as HR responsibilities in the current system have been devolved to managers. HR staff responses from Hospitals C and E were against increasing the HR department's involvement in staff management to avoid organizational bureaucracy and to emphasize the responsibility of managers in performing HR functions:

“It would be too bureaucratic. It would change from a friendly environment to an arms distance approach that would not be appropriate.”

(Hospital C, HR staff interview)

“We are actually decreasing our involvement because it is the manager's responsibility. We provide the policies and guidelines but responsibility lies with the line managers. So line managers are the HR managers.”

(Hospital E, HR staff interview)

### **5.2.8 Views on HRM**

The final interview question for HR staff elicited final comments on HRM. The matrix analysis of HR staff responses by hospital is included in Table 5.9. The beneficial importance of HRM and the necessity for HRM to be performed well was highlighted by HR staff from Hospitals A, F and G:

“HRM is very beneficial and an important part of any organization.”

(Hospital A, HR staff interview)

“HRM should be done right. It needs to be a well thought out process that can't be rushed.” (Hospital F, HR staff interview i)

“I think HRM is extremely important in achieving an organization's goals. Staff issues that go wrong involve using resources which could be better spent in providing healthcare services.” (Hospital G, HR staff interview)

It was mentioned in HR input from Hospital A that HRM was quite limited in the public sector due to the lack of resources. Input from HR staff at Hospital B related to how its HR department was doing a good job. The HR staff response from Hospital C pointed to the

importance of the HR department treating people fairly with regards to the application of policies and procedures. HR input from Hospital D related HRM to the skilling of managers to be confident in dealing with staff and ensuring staff are clear on their responsibilities. It was suggested in the HR staff view from Hospital E that the HR department adds value to HRM by providing advice and guidance to line managers and senior managers.

### **5.3 Clinical staff findings**

Clinical staff findings are presented in line with the study's focus group themes. Focus group themes explored with clinical staff are identical to interview themes used with managerial HR staff. As with the previous section, common views and significant differences among the participating healthcare organizations are highlighted for all the themes explored.

#### **5.3.1 General site and study elements**

Questions for clinical staff under the general site and study elements theme covered: description of team; factors influencing teamwork; and factors influencing performance. The matrix analysis of clinical staff responses on the general site and study elements theme by question and hospital is presented in Table 5.10.

##### *5.3.1.1 Description of team*

When requested to describe their team, clinical staff from all hospitals indicated broadly positive perceptions. Some positive perceptions pertaining to the rehabilitation service teams were connected with the good working relationships among team members:

“I think it is a dynamic rehabilitation team. There are a lot of people within the team that have been working together for a very long time so there is a lot of respect that seems to be there amongst peers. I guess it is a nice team to work for and

people generally seem to be supportive of each other within the team.”  
(Hospital A, Clinical staff interview ii)

“I think we are an excellent team. Excellent, we’ve got good communication between nursing staff and other allied health staff.”  
(Hospital D, Clinical staff interview iii)

“We actually interact with each other, do joint sessions and work very well together.” (Hospital G, Clinical staff focus group ii)

Input from all hospitals also highlighted the multidisciplinary nature of the team. A response from Hospital A suggested that the team could benefit from greater nursing staff participation in multidisciplinary meetings. The team was seen to offer a learning opportunity in a response from Hospital B. Clinical staff from Hospitals E, F and G described their team as being client or patient focused and centered.

A variety of unique and differing input was obtained from clinical staff at Hospital C. While it was mentioned at Hospital C that the team was currently stable and that there was quite a lot of changes to staff prior to that, there was also a couple of dissatisfactions within the team. Clinical staff dissatisfactions were generally related to nursing staff issues, namely staff shortages, grievances among nursing staff with fellow nurses and communication problems with the NUM. These are captured in these responses:

“I think one challenge though is the lack of nursing staff and that nurses are put under so much pressure to just do the basics like showering and dressing. It’s hard for them to actually be rehab nurses which is what they are here for.”  
(Hospital C, Clinical staff focus group i)

“Some people don’t want to listen, don’t want to do the job.”  
(Hospital C, Clinical staff focus group iii)

“We are not consulted at all and any suggestions made are not taken into account. I’m doing my masters and there is whole lot of protocols that I have come up with and have told the NUM about it and he doesn’t seem to be interested. That really worries me because that will help all the nurses here in what they do. So personally I feel like, when you highlight the issues, it is always pushed aside. Whether it has to do with general ward working or working among ourselves.”  
(Hospital C, Clinical staff focus group iv)

#### *5.3.1.2 Factors influencing teamwork*

For the question enquiring about influences on teamwork, clinical staff responses from all hospitals touched on communication and team members. Clinical staff input from Hospitals A, C, D and E made reference to goals as an influence on teamwork. Respect was cited in clinical input from Hospitals A, B, C and G. Other input put forward by clinical staff from more than one hospital were: staffing (Hospitals A, B, C, F and G); patients (Hospitals A, B and F); leadership (Hospitals B, D, F and G); and workload (Hospitals B, C, F and G). Systems and processes as an influence on teamwork was mentioned by clinical staff at Hospital B, and resources were mentioned by clinicians at Hospital C. These responses highlight some of the elements associated with HRM such as staffing, leadership and work system arrangements:

“I think when there is equality with regards to staffing that can make a team work more effectively. So the way that works is I guess is equally distributed depending on how many of those people are within the team. So if there are four people in one profession and only two people in another profession but the same amount of responsibility is given to all those people, it is not really equal is it?”

(Hospital A, Clinical staff interview ii)

“I think good leadership. We have a direction, like a purpose.”

(Hospital F, Clinical staff focus group ii)

“Having formalized meetings. So we have at least one where the doctors come and I think maybe two extra ones where you have on the ward. That forces teamwork because everyone has to come together. We talk about our patients.”

(Hospital G, Clinical staff focus group iv)

The feedback obtained indicates the clinical staff perception that managerial aspects and HRM related elements have an influencing association with teamwork. The linking of leadership with teamwork by clinical staff mirrors HR staff input on this issue.

#### *5.3.1.3 Factors influencing performance*

Team members, or teamwork, were cited by clinicians from all hospitals as having an influence on performance. This clinical staff input linking teamwork with performance

shows similarities with some of the HR staff feedback reported earlier. The following clinical staff responses, which link performance to elements of good teamwork such as team member communication and cohesiveness, support this study's teamwork-performance path of inquiry:

“Performance comes from everybody working together, a team.”  
(Hospital A, Clinical staff focus group iii)

“Sharing ideas, just liaising with one another influences performance.”  
(Hospital B, Clinical staff interview)

“Mutual respect and cohesiveness, that makes the team effective. So don't operate in silos, we listen to each other, take on board. So it is a unified approach to the patient and the family. And we tend to sort issues out here and compromise and then present a unified front rather than being fragmented, which I think is important.” (Hospital D, Clinical staff focus group iii)

“Teamwork, good staff interaction, meetings and communication can influence performance.” (Hospital E, Clinical staff focus group ii)

Education, training and development were cited in responses from clinicians at all hospitals except Hospital E. Other responses from clinicians which were common across more than one hospital were: patients (Hospitals A, C, E and F); job satisfaction (Hospitals A and B); communication (Hospitals A, B, D, E and G); goals (Hospitals A, E and G); staffing (Hospitals A, C, F and G); reward and recognition (Hospitals B and C); resources (Hospital B, C, D and F); and workload (Hospitals C and D). Overall, the clinician input across hospitals provides strong inferences in linking associated elements and components of HRM with performance. These responses indicate HRM aspects of staffing, recognition, education and staff well-being to be connected with performance issues and outcomes:

“With regards to performance, I guess if you are constantly working within an area where you are constantly understaffed and the capacity to supply is outweighed by the demand, you can get very burnt out.” (Hospital A, Clinical staff interview ii)

“I think acknowledgement of work well done is very important in influencing performance, rewards and recognition.” (Hospital B, Clinical staff focus group iii)

“Access to professional development and education level are important for performance.” (Hospital C, Clinical staff focus group i)



“Performance is about how well people get on together, how much they have a perceived common sense of purpose that they actually feel they are doing something worthwhile.” (Hospital A, Clinical staff focus group i)

Evidence based practice was a unique factor put forward as an influence on performance in clinical input from Hospital G. The issue was expressed in the following way:

“I guess we’re got a number of research projects going on at the moment over or across a number of different disciplines which are also reinforcing performance through evidence based practice.” (Hospital G, Clinical staff focus group ii)

### **5.3.2 Human resource planning and evaluation**

For human resource planning and evaluation, study questions covered two areas, namely selection and recruitment, and staff evaluation. The matrix analysis of responses from clinical staff by question and hospital is provided in Table 5.11.

#### *5.3.2.1 Selection and recruitment*

For the question on how members of the rehabilitation team were selected and recruited, clinical responses from all hospitals could be summarized into four common categories. These are: selection and recruitment by own professional group; the use of advertisements; the use of interviews; and rotations for some members of the rehabilitation team. The involvement of an interview panel for selection and recruitment was mentioned in clinical responses from Hospitals A, B, C, E and F. Referee checks were put forward in clinician responses from Hospitals B, C and D. Clinicians from Hospitals B and D described the selection and recruitment process as fair. The clinical staff input from the hospitals indicates that comprehensive and thorough selection and recruitment processes are utilized. Clinician feedback from Hospital B, for example, suggesting that the selection and recruitment of team members was a rigorous process accurately summarizes the existing practices and affirms previously reported HR staff input.

Clinical staff from Hospitals A and C brought up shortcomings in the recruitment process. Recruitment was thought to be inefficient in filling vacancies and recruitment inefficiency has an adverse impact on service delivery:

“Large delays occur and long periods of staff vacancies which then means that overburdens and overloads the rest of the team and it means that the rehab service has a reduced ability to service the population. Which could essentially increase length of stay. If you’ve got, if you have, people are reliant on getting a certain amount of service to get out of here, out of the hospital system, safely and in a coordinated way, within a benchmarked time frame, if you then have less staff to do that, it is going to take longer.” (Hospital A, Clinical staff interview ii)

The clinical response from Hospital A corresponds to the issue raised by HR staff from the same hospital. HR staff from Hospital A reported that limited budget restricted staff recruitment.

It was mentioned in clinical responses from Hospital C that the recruitment process does not always result in the best team person filling the job. This was reportedly due to interviews having a dominant impact on the recruitment process:

“Problem with recruitment is they present well during the interview but on the clinical performance, it may vary. So I don’t think formal interview is a good gauge. I think we also have to consider the clinical performance of the staff.”  
(Hospital C, Clinical staff focus group ii)

“The system is standardized. Problem is that in most interview panels. And the panels are standardized between no matter what profession comes into it whether it is doctors, nurses or allied health or cleaners, it doesn’t matter. The problem is, in my opinion, there’s too much weight given to the questions. The questions have to be standardized because for equal employment opportunity and other purposes. The questions cannot, tend not to be very searching and very not specific. At the end of the day, the reality is that a person who performs well in questioning will usually get the job irrespective of if they have good clinical background or not and a person could have 10 or 20 years of experience and that doesn’t count for much. It counts for less than the interview. Whereas, it should be, the interview should probably represent perhaps 5% to 10% maximum and the majority should be based upon the person’s clinical capacity. But the system now is weighted so heavily towards the interview.” (Hospital C, Clinical staff focus group ii)

### *5.3.2.2 Staff evaluation*

For the question on how staff are evaluated, clinical responses across hospitals identified evaluations within professional discipline groups and annual appraisals. Recall that the use of annual appraisals for clinicians was also reported in HR staff responses. Discipline specific evaluation of rehabilitation service members from nursing, medical and occupational therapy professions can be observed in the following:

“From a nursing perspective, and admin, we give appraisals annually, which is based on their key performance indicators which is dictated within their job description. And it’s self evaluation and then it is discussed at the level with the nurse and the NUM.” (Hospital B, Clinical staff focus group i)

“The medical staff, performance appraisal every year. That is a requirement to be done. And regarding the registrars, they come in for six months and then a comprehensive mid term assessment. And an end of term written assessment, which goes back to the faculty of rehab medicine. They can find on that what their performance is. If they are underperforming, it is taken up with the faculty, definitely after the six month mark. If they are underperforming in between, it is up to the supervisor’s role to address those issues.”  
(Hospital C, Clinical staff focus group ii)

“I guess, we, occupational therapy has a system using competencies. So we have competencies with different areas for certain assessments and interventions. Then we also do performance management on a yearly basis. And you come up with a plan of what you want to work on for that year.”  
(Hospital G, Clinical staff focus group ii)

Other clinical staff input suggested evaluation being conducted informally as needed (Hospitals B and G), patient feedback as a form of evaluation (Hospital A) and evaluation if there has been incidents (Hospital C). It was mentioned in a clinical staff response from Hospital C that cross discipline peer review as a form of evaluation had been discussed but was yet to be started. Some clinical staff complained of having not had or having delayed formal evaluations (Hospitals A, B and C). Shortcomings of staff evaluation mentioned by clinical staff were staff evaluations perfunctorily addressing the position, not the person (Hospital B) and poor monitoring of staff performance (Hospital A). These responses reflect the critical shortcoming in staff evaluation at Hospital A:

“Never have it. I think I’ve had it once in 22 years. I’m serious, yes I am. Put my name to it.” (Hospital A, Clinical staff interview i)

“I know of people that have been here for years and have had no evaluation of their performance. A policy exist but managers conforming to the policy is poor. And that means to me that the value that our managers have in performance appraisals, in feedback and evaluation and supervision. They don’t hold that as a valuable tool in developing staff and in helping staff be the best that they can be and monitoring what’s going on.” (Hospital A, Clinical staff interview ii)

### **5.3.3 Healthcare staff work systems**

For healthcare staff work systems, questions covered individual work and teamwork requirements, and staff recognition and reward. The matrix analysis of responses from clinical staff by question and hospital is provided in Table 5.12.

#### *5.3.3.1 Individual work and teamwork requirements*

For the question requesting input on individual work and team work requirements in the rehabilitation team, there were common views held by clinical staff across hospitals. Respondents suggested work within the rehabilitation service was mostly individual but highlighted interdisciplinary communication and collaboration was important. These responses highlight the overlap between individual work and teamwork requirements in the delivery of patient care and interdisciplinary collaboration:

“It is hard to separate it out because the patients are the common entity. I suppose you practice as an individual. You are bringing your individual skills but you are working as a team. There’s a lot of collaboration, there’s a lot of discussion both formally and informally.” (Hospital B, Clinical staff focus group i)

“Even though a physiotherapist maybe working individually, generally they are working in the gym with other physiotherapist and other staff such as occupational therapist and they might be doing things together, teamwork.”  
(Hospital D, Clinical staff interview i)

“We all work individually but because we’re obviously working different parts of a person’s care, we have to work closely as a team as well. You need to be able to

work autonomously as well as within the team.”

(Hospital F, Clinical staff focus group ii)

The use of team meetings were mentioned in clinical input from all hospitals, therefore providing an indication where some formal interdisciplinary communication and collaboration occurs. Some responses from Hospitals D, F and G suggested rehabilitation work to be predominantly team based. Defining individual work and teamwork requirements in rehabilitation teams was implied as a hard question to answer in clinical responses from Hospitals B, E and G. However in elaborating on the difficulty of differentiating rehabilitation services work requirements, the following responses suggest having common goals or team goals as the link between individual work and teamwork:

“That’s really hard, because we are all working individually with the patients but we have common goals. So it is like we are working as part of a virtual team the whole time.” (Hospital B, Clinical staff focus group ii)

“It is a very hard question because everyone has got their individual goals and a team goal. I’d say that the team goal is to work together to get the patient to the best outcome possible regardless of where that might be. But the individual goal is to put what ever knowledge you have to getting that person to where the team goals is.” (Hospital E, Clinical staff focus group i)

“It’s hard for one to say. I think even when people are doing individual therapy with patients in their discipline, it is still part of the teamwork because you are all working towards common goals as such.”

(Hospital G, Clinical staff focus group ii)

Having team goals was mentioned by clinical staff from Hospitals A, B, C, E and G.

Clinical staff responses suggested teamwork within rehabilitation depended on seven factors namely: staffing (Hospitals A, B and E); patient needs (Hospitals A, B, E, F and G); team members (Hospital A); procedures (Hospitals B, E and G); day of the week (Hospital C); shift (Hospital G); and professional discipline (Hospital G). Clinical staff from Hospital D revealed distinct cross professional sub teams within the rehabilitation service work system. It was noted that the medically led rehabilitation sub teams with core memberships being more permanent, enabled trust and close working relationships within the service. The importance of trust among members in a multidisciplinary rehabilitation sub team at Hospital D is evident in this response:

“What was burning about in the back of my head was that trusting what is brought to case conference for example. I can trust A (OT) has seen that person in the shower and her report is accurate and the same with you N (physiotherapist), I’ve seen you at the bedside and I’ve seen relatives going to you and I’ve seen you talking to relatives and D (nurse specialist) talking to nurses and things getting carried out. Coming from another hospital where people come to case conference who haven’t actually been the person treating, they come with a handover. I had to spend a lot of time back tracking and checking for myself and finding therapists who actually did do that home visit themselves. Because there’s all sorts of other information that wasn’t in the handover that springs into my mind and I just want to clarify. So ours is first hand, first hand knowledge of the person rather than some written down handover. Which comes down to trust.”

(Hospital D, Clinical staff focus group i)

Close working relationships and inclusive decision making among rehabilitation team members from different disciplines was valued at Hospital D. As the following comments detail:

“If you need a nursing job, when a nurse, you know, cares for the patient, showers them and does everything for that patient, I do not recognize that as individualized care because from there they have to feedback to the social worker who’ll want to know their self care needs and that kind of stuff. So it is usually very multidisciplinary.” (Hospital D, Clinical staff interview ii)

“I (OT) don’t think I ever do anything without telling H (social worker) or N (physiotherapist), K (rehabilitation physician), or D (nurse specialist) about it. So a lot of it comes back to the team.” (Hospital D, Clinical staff focus group i)

“Each person has their own individual tasks to do but we also liaise together as a team. It is all about planning because what we do depends on where the patient is at in the other areas. So we can’t move forward without consulting everyone else. For example, can’t take someone on a home visit until they meet certain functional requirements. Got to find out from everyone.”

(Hospital D, Clinical staff focus group ii)

#### *5.3.3.2 Staff recognition and reward system*

Clinical staff across hospitals highlighted recognition from patients and informal recognition from rehabilitation service colleagues as important workplace rewards.

Recognitions from patients involve expressions and tokens of appreciation as detailed in these responses:

“Sometimes patients tell A (nurse educator) or the NUM and then you get feedback from them. Spontaneous feedback.” (Hospital A, Clinical staff focus group iii)

“I think from the patients though, they definitely express their gratitude. Cards and chocolates from families, the family members. Occasionally, they might write a letter that might be passed around.” (Hospital B, Clinical staff focus group ii)

“Very occasionally we get letters of appreciation from families. We get thank you cards and chocolates and I’ve had flowers and other goodies.”  
(Hospital D, Clinical staff focus group i)

The recognition received from colleagues often stems from the successful achievement of good clinical outcomes for patients. The point was made in the following ways:

“I think there is general peer recognition of successful outcomes which is probably another way of getting positive reinforcement.”  
(Hospital C, Clinical staff focus group ii)

“I think we are quite encouraging of each other. In case conferences, if somebody has done a particularly good job, bring that up and you know the team sort of acknowledges that. If you have had a really hard case and you know, you did a really outstanding job helping this patient get home. And I think the team knows that. There might not be a specific award but acknowledging everybody’s hard work.” (Hospital E, Clinical staff focus group i)

“I think individually we might say to each other, ‘Thank you so much for doing that, you did a good job, good teamwork, well done’. Things like that. On a day to day basis as a NUM, I give positive feedback on an individual basis when it occurs and also through our ward monthly meeting with the nurses. That’s when I’ll give my encouragement and feedback.”  
(Hospital G, Clinical staff focus group iv)

Clinical staff cited a lack of or inadequate formal organizational recognition. The perceived lack of organizational recognition by clinicians validates similar HR staff feedback on the issue. The following responses present clinician grievances with the lack of organizational recognition for their efforts:

“For the last, over one year that I have been employed here in the rehab ward, apart from my monetary salary increase, there has been no recognition for the effort or anything good that I have been doing.” (Hospital C, Clinical staff focus group iv)

“There is nothing from the organization, not that we know of.”  
(Hospital F, Clinical staff focus group i)

“It’s very poor. I don’t think there’s enough (recognition). I don’t think there’s enough, here’s your compliments, here’s the good things. I think we as a healthcare organization, as a hospital, we need to look at recognizing people the staff members more often. And I didn’t feel that until I became acting NUM because I feel for my staff members now, like more.”  
(Hospital G, Clinical staff focus group iv)

The response that work is intrinsically rewarding was obtained from clinical staff at Hospitals B and D. Celebrations and special days were pointed out in clinical responses from Hospitals B, C and G. Staff recognition awards were mentioned in clinical responses from Hospitals D, F and G. Free massages and cheap theater tickets were a form of reward mentioned by clinical staff at Hospital D.

#### **5.3.4 Healthcare staff education, training and development**

The matrix analysis of clinical staff responses to the question exploring the healthcare staff education, training and development theme is presented in Table 5.13. Clinical staff responses common across hospitals suggested staff development in the organization to vary according to professional discipline group. These responses present the varying staff development requirements and opportunities by professional disciplines namely nursing, medical and allied health staff:

“Our nursing registration now dictates that we have 20 points or something. That’s to maintain our registration. Sometimes, between A and J, our nurse educator and NUM, they give use some study days.” (Hospital A, Clinical staff focus group iii)

“Registrars have a monthly rehabilitation medicine specific training session which they are severely encouraged to attend. Plus additional workshops and things that are run on weekends and we run some of those here. Nursing staff have regular in-service programs which are run on the ward. The allied health staff have at least once a week educational meetings.” (Hospital E, Clinical staff interview)



“For medical, all staff specialist are actually enrolled in the college continuous professional development program and we need to fulfil a certain requirement for our ongoing registrations.” (Hospital F, Clinical staff focus group ii)

“Physiotherapy in terms of professional development has about \$500 per person in the budget per year.” (Hospital G, Clinical staff focus group ii)

With the exception of Hospital E, mandatory training was mentioned in clinical staff responses. It was highlighted in clinical responses from all hospitals except Hospital D, that opportunities for development would depend on staffing levels and workload. However, the situation at Hospital D is likely to be the same as the rehabilitation service staff at the site have highlighted facing inadequate staffing and a heavy workload in response to a focus question in the subsequent section pertaining to staff well-being. The trade off between staffing requirements and workload with staff development in the services is observable in the following responses:

“The bottom line is, you have to do a flow chart to ensure that provision of services isn’t compromised because it is compromised. How could it not be? But we all lie and say ‘No, it isn’t’ because people need to go for professional development.”  
(Hospital A, Clinical staff focus group i)

“I think the issue when we do attend those development things, it is the cover because our patient loads suffer. But I think in the long run patients benefit from the extra skills we bring back from those courses.”  
(Hospital B, Clinical staff focus group ii)

“Lot of problems last year because of staffing. So development things got cancelled. I mean normally you bring it to them and say ‘Hey, I want to do this’ and if you get the time off, you get the time off.” (Hospital C, Clinical staff focus group iv)

Development was necessary for maintaining professional registration in clinical input from Hospitals A, B, C, D and F. Development was said to be encouraged in clinical responses from Hospitals E, F and G. However, a clinical response from Hospital C suggested that development is neither encouraged nor discouraged. Clinical input obtained from Hospital B mentioned that staff have to be self motivated in personal development. While responses from Hospitals A, B, E and F indicated limited funding for development, clinical input from Hospital A suggested minimal and limited support for developing through educational courses. It was pointed out in clinical input that development was dependant on manager’s

approval (Hospitals C, F and G). Some development benefits mentioned by clinical staff across hospitals are study leave (Hospitals A, B, C, F and G), development allowance (Hospitals C and G) and sponsorship (Hospital D).

### **5.3.5 Healthcare staff well-being and satisfaction**

In relation to healthcare staff well-being and satisfaction, the question for clinical staff on what it is like working in their organizations, specifically sought to determine positive and negative aspects of their work experience. The matrix analysis of responses on the theme by question and hospital is provided in Table 5.14.

#### *5.3.5.1 Positives for staff working in the organization*

Common clinical input across hospitals on positives for staff working in the organization were concerned with enjoying work and working with colleagues, and learning opportunities. These responses show the collegial and enjoyable work environments in the healthcare organizations:

“General positive for me is that I really enjoy working within the rehabilitation team. I think they are committed and are a hardworking group of individuals. I’d like to think that we achieve good outcomes and that I like being in a team that achieves good outcomes. The people within the rehabilitation team are friendly and are supportive.” (Hospital A, Clinical staff interview ii)

“Everyone is really pleasant and encouraging. That’s not just my department but from everyone and everyone is actually willing to give you feedback on how you’re going.” (Hospital C, Clinical staff focus group ii)

“So far the behaviour of the staff is really good. I have to tell you that, really good. And the understanding between the staff member is really good and that makes me feel to come to work. That’s the positive thing.”  
(Hospital D, Clinical staff interview iii)

Satisfaction from good patient outcomes and improvements was mentioned in clinical input at all hospitals except Hospital C. The satisfaction derived from successful patient outcomes is presented in the following:

“It’s good to see patients getting better and getting discharged more independently.”  
(Hospital B, Clinical staff interview i)

“We recently discharged a patient after two years in a hospital. She’d done the rounds of nearly every hospital here and we got her home. And I think that was absolutely a feather in our cap. Nobody every believed it. We all thought she’d go to a nursing home in the beginning and we got her to a wonderful outcome. So, that was a challenge and that was a positive.”  
(Hospital E, Clinical staff focus group i)

The location and convenience of the healthcare organization was seen as a positive in clinical input from Hospitals A, B, C, D and F. Clinical input from Hospitals C, D and F suggested that the small hospital enables people to know each other. A clinical response from Hospital B indicated a very good NUM as an organizational positive. Unique clinical input from Hospital F indicated a reasonable workload and a fairly well staffed rehabilitation service. The adequate staffing at Hospital F is affirmed in a response to the healthcare context section’s focus question. This clinical staff response from Hospital F differentiated its well staffed rehabilitation service from the others in the study which faced staffing shortages:

“For me it is a reasonable workload. We are fairly well staffed. It is quite fair to work here.” (Hospital F, Clinical staff focus group iii)

It was seen as a positive by clinical staff at Hospital G that research was being conducted. These responses that highlight research as a positive aspect of the service from Hospital G have congruence with clinical feedback reported earlier that suggested evidence based practice to be a factor influencing performance:

“We have a well recognized unit with lots of research going on. The unit is regarded as a good model of care, efficient and effective.”  
(Hospital G, Clinical staff interview)

“I think it is a really positive place to work in at the moment, especially with the amount of research that is going on.” (Hospital G, Clinical staff focus group ii)

#### *5.3.5.2 Negatives for staff working in the organization*

Clinical staff from all hospitals, except Hospital F, expressed inadequate staffing as a negative for staff working in the organization. The dissatisfaction with understaffing and its adverse consequences on service delivery, team members, staff motivation and patient care can be observed in these responses:

“I think there is poor organizational understanding of staffing issues and the impact staffing has on service delivery first of all and also on team members themselves.”  
(Hospital A, Clinical staff focus group ii)

“Staffing, lack of thereof. Especially OT (occupational therapist) and physio at the moment, we are really stretched, case load, so it is really full on. Makes it hard to stay motivated sometimes.” (Hospital B, Clinical staff focus group ii)

“You don’t always have time because sometimes if you are short staffed and settling five patients, might end up having ten patients. And then that doesn’t give much time to actually spend with patients and identify any critical areas that you should be having a look at. And you know just missing a little thing like a patient vomiting makes sort of a big difference.” (Hospital G, Clinical staff focus group i)

Clinical staff at all hospitals indicated that resources could be better or increased. Besides resource shortages associated with staffing requirements, the shortcomings in resources generally pertained to facilities and equipment:

“Limited resources. Space, equipment, the actual room layout, the ward layout, air conditioning in the rooms.” (Hospital C, Clinical staff focus group ii)

“Facilities, the hospital is quite an old hospital. There’s no free space, there’s no capacity to expand. There’s limited opportunity to develop new service lines because of the lack of space.” (Hospital E, Clinical staff interview)

“The building is a bit old. It would be good if the room is a bit bigger because it is very crowded. Because we are such a big team with the allied staff and all that.”  
(Hospital F, Clinical staff focus group iii)

Heavy workload was highlighted as a negative by clinical staff from Hospitals B, C, D, E and G. Bed pressure from administration was highlighted in clinical input from Hospitals B, C, E and G. Clinical staff at Hospitals B, C and D pointed out getting patients not meant for rehabilitation as a problem. At Hospital D, a clinical response suggested being unable to

accept patients who are unstable due to not having acute services on site if patients became unwell:

“I also find being off site from an acute hospital not ideal. Because I think there is a lot of patients that would benefit from rehab but they aren’t medically stable and we can’t take them until they are stable. So I think it is not the best way to have a rehab ward run where people have to wait before they can come down here because we don’t have doctors on site after hours. We don’t have x-ray facilities, we don’t have an intensive care to take them, we don’t have scanners. Basically, you need to be well, before you come here and that’s not the reality of people recovering from illness.” (Hospital D, Clinical staff focus group i)

A high turnover was a negative brought up by clinicians at Hospitals A and E. Limited opportunities for professional and career development were mentioned in clinical input from Hospitals C and D. Insufficient recognition was mentioned in clinical responses from Hospitals A and F, and constrained monetary or financial incentives was suggested as negative in a clinical response from Hospital D. Delayed recruitment was a negative highlighted in clinical input from Hospital A that confirms the gravity of recruitment inefficiency affecting the service previously reported:

“Sometimes, there can be delays in recruitment when staff leave. I think that’s a really good reason for discontent. There’s a policy of delayed recruitment whenever anyone leaves or even if you don’t call it a policy, there’s a practice of delayed recruitment. I mean by the time you jump through all the hoops, you will be lucky to get someone on the ground within six or eight weeks of maybe when someone left, very luckily too.” (Hospital A, Clinical staff focus group i)

A negative aspect unique to Hospital E was poor leadership for the rehabilitation service. Staff perceived a lack of leadership direction for their service to impact negatively on them:

“I think there is a lack of leadership at times as well. We struggle, I think to get good direction. I feel that the leadership is very self centred. You know, it is like being on the Titanic. But we’re all here and we are all still here so that is the commitment. I think that the rehab leadership is heavily swayed by whatever the hospital’s direction is. Like if there is a huge push from one end, it comes in and it affects that leadership significantly. And other times, we’d be working quite nicely and then again the push will come through.”  
(Hospital E, Clinical staff focus group i)

A perceived lack of allied health staff appreciation towards nurses was highlighted in a clinical response from Hospital G. The allied and nursing staff issue at Hospital G bears similarity with clinical input from Hospital C that suggested a lack of communication between allied health staff and nursing staff. A unique negative for clinicians working at Hospital C was that separation from the main hospital bred ignorance and a lack of understanding of what is done in rehabilitation:

“Our separation here breeds ignorance to the greater part of the medical system. And that often then is reflected in a negative view of what we do here from the acute system. A lack of understanding, of minimization, tend to minimize the value of what is done here. The separation from the main hospital means that their people don’t understand what we are doing and there is a tendency to not have awareness or comprehension. Therefore, to think that nothing goes on here because they don’t know about it. That’s reflected in the way they treat, behave towards us.” (Hospital C, Clinical staff focus group ii)

### **5.3.6 Healthcare context: influence of other staff in the hospital on the rehabilitation team**

The question for the healthcare context theme asked about the influence of other staff in the hospital on the rehabilitation team. The matrix analysis of clinical staff responses by hospital is included in Table 5.15. Other hospital areas referring patients to the rehabilitation service was a common input across hospitals. These responses provide indication of how referrals from other wards or departments can put work pressure on the rehabilitation teams:

“We would feel the pressure from the other wards to take people. They want to move on us and sometimes we are not comfortable about some of them either. I think that’s a natural part of the problem, part of being in hospitals.”  
(Hospital A, Clinical staff focus group i)

“We have networks of referrals. So particular stroke, trauma, vascular services actively seek our assistance in managing their patient throughput.”  
(Hospital E, Clinical staff interview)

“You’ll get a call from the emergency department saying, ‘I’m sending the patient now’. And the bed is not ready yet, and they are pushing and pushing. So many times it happens. That’s a major negative. They send the patient in ten minutes,

inconsiderate.” (Hospital G, Clinical staff focus group iii)

Clinical staff input from Hospital A, B and G suggested other hospital areas supporting additional medical needs of rehabilitation patients. The influence of professional discipline managers was mentioned in clinical staff input from Hospitals A and C. A clinical response from Hospital C suggested external influence on the rehabilitation team coming from decisions made by the executive management with the larger main hospital. Non clinical support staff were said to influence the rehabilitation team in clinician responses from Hospitals C and D. Clinical input obtained at Hospital B and E suggested that bed pressure influenced the rehabilitation team. Two influences on the rehabilitation team brought up by clinical staff at Hospital A were other hospital areas accepting rehabilitation patients who are medically unwell, and recruitment and filling of vacancies. The hospital’s managerial structure was mentioned in clinical responses from Hospitals B, C, E and F. Clinical input unique to Hospital F suggested the rehabilitation team was affected by another hospital department borrowing rehabilitation staff:

“They take our staff because we are well established and well staffed. If they are understaffed, they demand to be fully staffed. So they will actually take our staff when are short staffed.” (Hospital F, Clinical staff focus group iii)

The borrowing of rehabilitation staff by another department at Hospital F highlights the rehabilitation service’s adequate staffing. Despite the various external influences on the rehabilitation team put forward by clinical staff, there were also responses suggesting not much influence by staff outside rehabilitation (Hospitals C, D, E and G). These responses provide an alternative view in suggesting that the rehabilitation services operate with relatively little external influence:

“Other staff, not really much. We are pretty self sufficient.”  
(Hospital D, Clinical staff focus group i)

“I guess we’re our own little team. Once they transfer their patients, we never see those other team players again. Once they (patients) come in, the other teams are gone.” (Hospital E, Clinical staff focus group iii)

### **5.3.7 General people management in the organization**

For the general people management in the organization theme, questions focused on three areas: healthcare staff management or people management in the organization; HR department influence on the rehabilitation team; and rehabilitation team reaction to people management efforts from the HR department. The matrix analysis of responses by question and hospital is provided in Table 5.16.

#### *5.3.7.1 Healthcare staff management or people management in the organization*

Clinical input on people management from Hospitals A, B, C, F and G described healthcare staff management to be affected by professional discipline department or unit. There were both positive (Hospitals B, C, D and G) and negative (Hospitals C and E) perceptions from clinical staff towards people management in the organization. The mixed responses from clinicians indicating both positive and negative elements of healthcare staff management showed similarities with previously reported HR staff input. People management was described by clinical staff as multilayered or hierarchical (Hospitals B and E) and bureaucratic (Hospital C). Some of the people management issues raised by clinical staff are understaffing (Hospitals C, E and G), poor communication and consultation (Hospitals A and B), and insufficient reward and recognition (Hospitals A and B). People management issues unique to clinical staff from Hospital A are inefficient recruitment and replacement of staff; and a lack of accountability in managers towards performance management and evaluation. The issues are explained in the following comments:

“I find that the process of recruiting staff and retaining staff difficult here. I get a sense that performance appraisal and performance management is not something that is strong across several areas and that it is managed in an ad hoc way. There does not seem to be a lot of accountability of our managers.”

(Hospital A, Clinical staff interview ii)

“I’ve quite aware that hospital management wide, the people management process in terms of recruitment, replacement and all sorts of other things is incredibly cumbersome.” (Hospital A, Clinical staff focus group ii)



A clinical response from Hospital G suggested upper management were not approachable. It was put forward in clinical input from Hospital C that leadership from the previous NUM was less than ideal, but the current NUM has made a great difference:

“I think E (NUM) being our manager here has made a great difference. I love E (NUM). I think we had a few years where the leadership from the NUM was less than ideal. So we have a lot more stability and organization. Just shows the difference one person can make.” (Hospital C, Clinical staff focus group ii)

“I think we are managed well. If some problem occurs, the NUM will try to resolve the problem for us.” (Hospital C, Clinical staff focus group iii)

While some Hospital C clinicians were satisfied with the new NUM, others were not. There was clinical staff input from Hospital C expressing severe dissatisfaction with the new NUM:

“I would rate it on a scale as the worst management. I’ve been a manager in my country myself. This is the worst management style that I’ve ever seen. It’s got everything in it. You can’t make out whether it’s laissez-faire or whether it is autocratic or it’s up or down. I mean, since I’ve started, if I’ve had any problems, I’ve always gone to my immediate supervisor. Nine out of ten times, I was told, ‘You go call HR, you go and see the director of nursing’. It’s rubbish, it is the worst management I’ve ever come across. I mean, the manager that we had prior to him, another male, most of the staff rubbished him but he was a lot fairer and a lot more consistent than what we’ve got now. ”

(Hospital C, Clinical staff focus group iv)

Clinical staff input from Hospital C indicated that general hospital management is flexible. However, they also stressed the need for them to be informed of issues affecting the rehabilitation service:

“Regarding the hospital management as such, they certainly are flexible but they do need to be put in the picture quite often. Once they are put in the picture, they are not bad. But they do work among their own constraints.”

(Hospital C, Clinical staff focus group ii)

The need for hospital management to be informed of issues affecting the rehabilitation service overlaps with previously reported clinical input highlighting Hospital C’s separation from its main parent hospital. It was positively asserted in clinical input from

Hospital D that positions are quickly filled and the hospital was a rare place where staff know the chief executive officer (CEO):

“I’ve found that it has been quite good in the last few years in that it hasn’t been too much of drama. If someone resigns, trying to get someone to fill that position, that happens quite quickly. It is a rare place like for here for instance, to know your CEO for instance and to be confident that you could speak to them and that’s the difference here. I find it amazing. I’d say good day K (CEO) as you walk by.”

(Hospital D, Clinical staff focus group i)

The clinical staff feedback from Hospital D validates previously reported HR staff input suggesting comfortable interactions between senior managers and clinicians. Clinician input from Hospital F mentioned that people management has improved with new management from ownership change:

“I think its improved from when group F took over. I think its changed for the better. I think everyone here is actually given a lot of freedom to make the right choices. We’re not micro managed. I don’t think we are.”

(Hospital F, Clinical staff focus group iii)

#### *5.3.7.2 HR department influence on the rehabilitation team*

In requesting clinical staff feedback on HR department influence on the rehabilitation team, input from all hospitals, except Hospital D, indicated minimal HR influence on the team. HR department was primarily involved for recruitment and filling of vacancies. These responses indicate the minimum influence of the HR departments on the services and how recruitment is influenced by the HR departments:

“Well, they (HR department) are invisible. I think they get involved when someone is a new staff member. When you come in and you’ve got all this paper work to fill up.” (Hospital B, Clinical staff focus group iii)

“Not much. For us, it (HR department) is based at the main hospital. So they are there for interviews and selections panels.”

(Hospital C, Clinical staff focus group ii)

“If you have got a position vacant, you have to get approved by HR to recruit.”

(Hospital F, Clinical staff focus group ii)

Clinical staff at Hospital D indicated not having a HR department. It was suggested that as a result some HR functions are performed by the CEO:

“I think not having a specific dedicated HR department has been a negative. Its meant the CEO has had to do more than she probably has time to do. ”

(Hospital D, Clinical staff interview i)

Responses from Hospitals D and G indicated HRM or HR functions being performed within clinical disciplines. This was explained in these terms:

“Each discipline is responsible for their own HR business. I’m employed as an occupational therapist but I could spend certain parts of my week being a HR manager. I could be spending my whole morning, which I’ve done this morning, ringing up new staff members and organizing their orientation.”

(Hospital D, Clinical staff focus group i)

“Whether it is medical, allied health or nursing, I think HR is more controlled at each individual discipline’s manager. So the speech (speech therapist) manager, the OT manager, physio manager. I don’t think the HR department has any more control than they do.” (Hospital G, Clinical staff focus group ii)

There were several other issues which the HR department was perceived by clinical staff to exerted influence over the rehabilitation team. These were: for salary and payroll purposes (Hospitals B and C); for resolving employee issues (Hospitals A and F); and in supporting managers (Hospital A).

#### *5.3.7.3 Rehabilitation team reaction to people management efforts from the HR department*

For the question on the rehabilitation team’s reaction to people management efforts from the HR department, clinical input across hospitals, except Hospital D, reported such efforts were not necessary. Clinician reasons for resisting greater HR department involvement in staff management include the perception that that such involvement would not add value for the team and that the HR department lacks an appreciation for clinical matters:

“I think it would still be the same because there wouldn’t be anything more. We all work already in a team, there’d be nothing they (HR department) could improve on.” (Hospital E, Clinical staff focus group iii)

“They (HR department) wouldn’t know. They wouldn’t know the difference between treating a stroke patient and treating like a hip replacement like, for a physio. You know, with a stroke patient, you really need to see them one on one. Whereas a HR person whose just been doing admin the whole time, can come around and go, ‘Oh no, you are going to, we are going to have like groups’. But it doesn’t work like that, you know what I mean. So if they don’t have the clinical experience, they wouldn’t know what to do.”

(Hospital F, Clinical staff focus group ii)

The negative responses by clinicians towards more HR department involvement in staff management contrasts with HR staff input reported which suggested that greater involvement in certain organizational areas could be useful. Clinical responses from Hospitals C, D, E and F suggested staff not being sure or not knowing what would be the their teams’ reaction to HR department efforts in people management. Input suggested that clinician response to HR department people management efforts would depend on the reasons for the efforts (Hospitals A, C, D and F) and the approach (Hospital A). People management efforts from the HR department would be considered interference if it amounted to telling clinicians how to do their job (Hospital D). On the other hand, people management efforts from the HR department would be welcome by clinicians for: better recruitment (Hospital A); promoting managerial accountability (Hospital C); for the HR department to have a public face (Hospital C); for learning, education and development (Hospitals C and D); and for building the team and administrative tasks (Hospital D).

### **5.3.8 Views on HRM**

Final comments on people management were sought from clinical staff. The matrix analysis of responses by hospital is presented in Table 5.17. Communication and consultation was cited by clinical staff from all hospitals as an important aspect of people management. Communication and consultation were not emphasized in HR staff responses on HRM. These responses capture clinician views on the importance of communication and consultation:

“I think people need to listen a little bit more, it is basic. I think people are managed if they are listened to. If you understand an organization, you can manage it well.”

(Hospital A, Clinical staff focus group ii)

“Listening to other people, don’t have to agree but you can listen and respect.”  
(Hospital G, Clinical staff focus group iv)

With the exception of Hospital E, respect was highlighted as an important aspect of people management in clinical input from participants. Other aspects perceived by clinicians to be important for people management were: recognition (Hospitals A, B, C and F); the manager’s role (Hospitals A, C and G); fairness (Hospitals C, F and G); staffing (Hospitals E and G); and staff development (Hospital A). The usefulness of HR terminology and systems was highlighted in clinical responses from Hospitals D and G. At Hospital D, clinical responses indicated management to be perceived positively but with room for improvement. Other clinical responses from Hospital D considered people management vital for the development of the good team and that a HR department would be welcome to answer questions. Nevertheless, it was suggested in clinical input from Hospital D that the rehabilitation service works well because it is responsible for its own HR management:

“There isn’t a HR department at Hospital D. Don’t know if that would be a benefit or wouldn’t be a benefit. Maybe that’s why it works. It is because we are so responsible for our own HR management. That’s why it works because we do have that other knowledge about the profession. Like you know, our own profession.”  
(Hospital D, Clinical staff focus group i)

Clinical responses from Hospital E advocated for people management to be patient oriented, for greater flexibility within the team and for better leadership. This response from Hospital E provides further indication of the perceived need for better rehabilitation service leadership:

“I think better leadership, like directing where to go. Like not letting you there floating not knowing where to go. I think it really depends on the qualities of that person that’s considered the leader.” (Hospital E, Clinical staff focus group i)

A clinical response from Hospital B indicated the desire for more autonomy to make decisions. A few issues were put forward in clinician responses from Hospital C. At Hospital C, there were concerns within rehabilitation about whether the hospital understands what it is actually managing. Input from Hospital C also suggested misalignment in rehabilitation team goals and hospital management goals. It was pointed

out in a clinical response at Hospital C that there is a long way to go before clinicians are driving the delivery of healthcare.

#### **5.4 Notable common and unique HRM findings across hospitals**

Common and unique HRM findings across participating hospitals were distilled from HR staff and clinical staff interview and focus group input. The common findings are detailed under the four HRM areas of the study, while unique findings are subsequently highlighted by hospital. A summary of common and unique findings by HRM area is presented in Table 5.18.

Under the HR planning and evaluation area, HR planning in the organization is largely influenced by the aim of meeting staffing requirements. Selection and recruitment of clinicians is held to be a rigorous process, conducted by professional discipline group rather than by the rehabilitation service or department. Annual appraisals within professional discipline group are to be carried out for staff evaluation, however variability in the application of this policy by managers was noted. The role of managers was identified as central to well functioning teams, in particular the provision of leadership was highlighted. For the healthcare staff work systems area, clinical work involves individual activities with the necessity for team based interdisciplinary communication and collaboration. For reward and recognition under the work systems theme, constraints on formal organizational reward and recognition for clinical staff was highlighted. However, there was recognition from patients and informal recognition from colleagues for clinicians. For the area of education, training and development, activities are undertaken largely by professional discipline group. Opportunities either depend on staffing levels and workload. In the healthcare staff well-being and satisfaction area, learning opportunities, enjoying work and working with colleagues are positives for clinical staff. With the exception of Hospital F, understaffing was the major negative factor identified.

Some unique HRM findings by hospital are noteworthy. These findings are listed by hospital to provide a differentiating snapshot of each participating site. Hospital A, which is a large organization, identified inefficiency in recruitment and selection, and limited

monitoring of staff performance as problematic issues. There were no HRM aspects, either advantages or shortcomings, from Hospital B that were markedly different compared to the other participating hospitals. While Hospital B is similar to Hospitals A, E and G in terms of size, its publicly funded services but private ownership is similar to Hospitals D and F. This combination of features at Hospital B appears to have evened out its HRM policy and practice from showing unique differences when compared to the other participating hospitals. An overemphasis on interview in selection and recruitment of clinicians was highlighted at Hospital C. There was a nursing managerial change in the rehabilitation service at Hospital C that has left the multidisciplinary team and some nursing staff satisfied, but other nursing staff dissatisfied. Similarly at Hospital C, while some clinical staff view hospital management positively, other clinicians have a negative view. While Hospital C is a small hospital, its overall hospital administration is located off site at a larger tertiary hospital. Clinical staff stated the need for three changes, that is, that: hospital management need to be informed of issues affecting the rehabilitation service; there is a need to align management's goals with rehabilitation's goals; and there is a need for clinicians to play a greater role in driving organizational decisions.

Input from HR staff indicated Hospital D to be a small facility and the only organization without a HR department. The effectiveness of the rehabilitation service perceived to be a result of doing its own HRM. Nevertheless, there was also the desire from clinical staff for a HR department to provide HRM services. Hospital D's rehabilitation service was divided into distinct sub teams, with more permanence in core memberships and the valuing of trusting team working relationships. The accessibility of clinical staff to the highest executive of the hospital at Hospital D is in line with HR staff input from the site indicating senior managers are visible and accessible. Being unable to accept patients who are unstable, and not having acute services on site if patients are unwell, were viewed negatively in clinical input from Hospital D.

The sole pressing issue for Hospital E was that, clinical staff perceived a lack of leadership for the rehabilitation service and argued that better leadership is required. Hospital F has recently experienced an ownership change and this change is perceived to have resulted in improved management. Hospital F was the only site with clinicians viewing the service

being well staffed and having a reasonable workload. In Hospital G, a rehabilitation service specializing in stroke conditions, the research activity was perceived positively. This point corresponded with the view by its clinical staff that performance is influenced by evidence based practice.



**Table 5.18:** Summary of common and unique findings, by HRM area

| HRM area                      | Common findings   | Unique findings |  |
|-------------------------------|---|-----------------|--|
| HR planning and evaluation    | Influenced by the aim of meeting staffing requirements  | Hospital A      | Inefficiency in selection and recruitment  |
|                               |   |                 | Poor monitoring of staff performance   |
|                               | Rigorous selection and recruitment process conducted by professional discipline group   | Hospital D      | Positions are quickly filled   |
|                               | Annual appraisals within professional discipline group, however variability in the application of this policy by managers was noted | Hospital C      | Overemphasis on interview in selection and recruitment of clinicians   |
| Healthcare staff work systems | Clinical work is individual activities with team based interdisciplinary communication and collaboration                            | Hospital C      | Change in NUM has left some staff satisfied while others are dissatisfied and have communication issues with the new manager   |
|                               |   |                 | Off site location of overall hospital management results in perceived detachment of the executive towards issues affecting the rehabilitation service and its clinicians |
|                               | Constraints on formal organizational reward and recognition   | Hospital D      | No HR department   |
|                               |   |                 | Distinct cross professional sub teams within the rehabilitation service work system  |
|                               |   |                 | Senior executive and managers are visible and accessible to clinicians   |
|                               | Recognition from patients and informal recognition from colleagues for clinicians   | Hospital E      | Lack of leadership for the rehabilitation service  |
|                               |   | Hospital F      | Improved management with hospital ownership change   |
|                               |   | Hospital G      | Specialized stroke rehabilitation service  |

*Continued*

| Theme  | Common findings  | Unique findings                 |  |
|--|--|---------------------------------|--|
| Healthcare staff education, training and development | Development varies by professional discipline group                            | Consistent across all hospitals |  |
|  | Opportunities for development depend on staffing levels and workload           |                                 |  |
| Healthcare staff well-being and satisfaction         | Learning opportunities, enjoying work and working with colleagues as positives | Hospital D                      | Unable to accept patients who are unstable and not having acute services on site if patients are unwell as negatives |
|  |  | Hospital G                      | Research activity as a positive  |
|  | Understaffing as a negative (except Hospital F)                                | Hospital F                      | Well staffed rehabilitation service and reasonable workload as positives   |

## 5.5 Discussion

HRM's association with team characteristics and performance is discussed in detail the next, and final, chapter of the thesis. This discussion focuses solely on the study's findings pertaining to the four defined areas of HRM. The first two HRM factors, that is HR planning and evaluation and healthcare staff work systems, are most directly influenced by specific contextual organizational environments. Conversely, the remaining two factors, healthcare staff education, training and development, and healthcare staff well-being and satisfaction, are revealed to be more uniform across diverse institutions.

HR planning and evaluation aiming to meet staffing requirements was a consistent finding across hospitals but with a different emphasis in different contexts. Staffing, across all sites, was important as it was considered to influence teamwork, impact on development opportunities and is linked to staff satisfaction. These findings highlight the importance of staffing that overlaps with aspects from all the HRM areas. The commonality among hospitals that rigorous selection and recruitment, and annual appraisals being within professional discipline groups, not-with-standing the inconsistent application of appraisal reviews, shows the dual nature by which clinicians are being managed. Clinicians work in a rehabilitation department with common goals requiring collaboration between the different professionals, while being accountable to their professional discipline managers. Collaboration and cooperation between service or department and disciplinary managers may be necessary in ensuring good fit for clinicians recruited for multidisciplinary teamwork. Such cooperation among service and discipline managers may also promote the more consistent application of annual appraisals.

Different organizational contexts shaped the emphasis of the HR planning and evaluation theme. HR planning input, indicating positions to be quickly filled, can be associated in one institution with the decentralization of HRM function to professional discipline managers. Conversely, as identified in another organization, the inefficiency and shortcomings in recruitment and evaluation may be traceable to demands on professional discipline group managers having to provide staff to different departments across a large hospital. A perceived overemphasis on interview in the selection and recruitment of clinicians, at a different hospital, indicates a potential limitation in the

hiring process. In summary, HRM planning and evaluation practice is influenced by, and tailored to, organizational and service factors unique to each hospital context.

The healthcare staff work systems finding common across hospitals with regards to team and individual work, offers an insight in hiring staff for rehabilitation services. Staff hired to work in the rehabilitation services would ideally need to be able to work independently and also be comfortable working collaboratively. The constraints on formal organizational reward and recognition, cited across all institutions could be an area for potential innovation. The hospitals might build upon clinicians receiving recognition from patients and informally from colleagues to introduce or expand formal organizational reward and recognition schemes.

Staff work systems, has been revealed to be significantly shaped by, and also influencing, the local organizational context. Staff satisfaction, leadership, employee management, organizational structuring and direct service delivery are all affected by their immediate and unique institutional arrangements. We find reactions, in positive and negative ways, and even occurring simultaneously, at organizational, team and individual levels in response to changes at these different levels.

HRM area healthcare staff education, training and development showed similarities regardless of organizational or service context. Training varied by professional discipline group across hospitals. Development varying by professional group would be a reflection of the different roles played by the medical, nursing and allied health staff. Each professional discipline group fulfilling a distinct function within a rehabilitation service would naturally necessitate discipline specific development. There may be a need to ensure clinicians receive multidisciplinary team based development in keeping with service delivery requirements. The common finding of development opportunities being dependent upon staffing levels and workload, nevertheless shows how organizational level HR planning and service level workload coordination can influence prospects for staff development.

For healthcare staff well-being and satisfaction, both common and differing findings point towards clinicians having the drive, and desire, to provide good quality patient care. Learning opportunities, enjoying work and working with colleagues contributing towards healthcare staff well-being and satisfaction across hospitals highlight the

positive motivation and collaborative orientation of healthcare professionals. Hospitals could build upon and promote these readily available sources of staff satisfaction given existing constraints and dissatisfaction with resources in public healthcare. Research activity, also cited as a source of satisfaction, could be an indirect form of staff development and contribute towards better care for patients. The ability to provide holistic care for patients would naturally be a source of satisfaction; the converse also holds true. Having services to support patients can provide continuity of rehabilitation service delivery and promote holistic treatment.

Overall, the findings show overlap between the four defined areas of HRM. Staffing under HR planning and evaluation has implications on: teamwork in the healthcare staff work systems; opportunities in healthcare staff education, training and development; and workload pertaining to healthcare staff well-being and satisfaction. The distinct issues of the participating hospitals highlight how the complexity and diversity of HRM practice is associated with the local organizational context, service delivery and individual staff. Staffing practices, structure and change in organizational context, and service delivery impact on the tailoring of HRM to fit specific organizational and service requirements. The need for a ‘best fit’ customized approach to HRM and service delivery is also evident through differing implications of service constraints, team leadership, focused specialization and research activity.

## **5.6 Conclusion**

This chapter has presented HR and clinical staff findings with regards to HRM. Common and unique aspects among the participating hospitals were identified with regards to HRM areas of HR planning and evaluation, healthcare staff work systems, healthcare staff education, training and development, and healthcare staff well-being and satisfaction. The findings in this chapter complement the previous chapter’s team characteristics and performance findings in contributing to fulfilling the study’s research aim. The research aim of analyzing HRM’s influence towards team characteristics and performance is fulfilled in the final chapter of this thesis.

## **Chapter 6: Discussion and Implications**

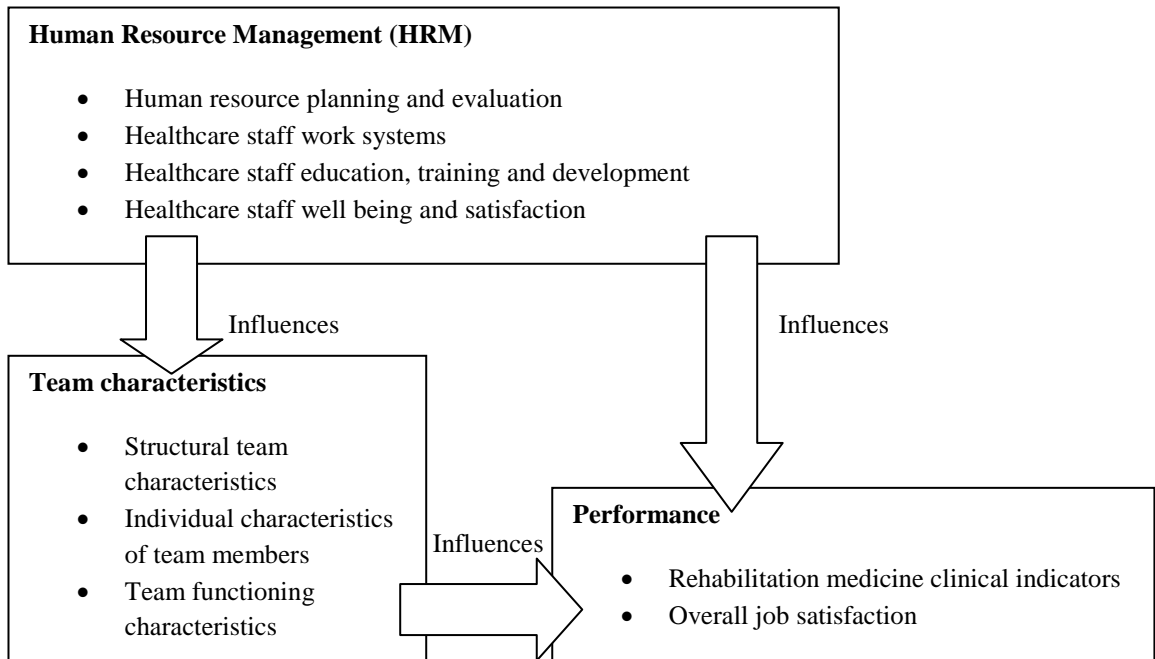
### **6.1 Introduction**

This chapter provides an overarching discussion of the study's aim of exploring the association between HRM, team characteristics and performance in rehabilitation services. In this chapter, results from the two findings chapters are connected and discussed. Implications drawn from the insights obtained are also presented. The sections covered in this chapter are: 6.2 Research foundation, thesis achievement and qualifying limitations; 6.3 Original research contribution; 6.4 Discussion of HRM's association with team characteristics and performance; 6.5 Discussion of specific associations between study variables; and 6.6 Implications.

### **6.2 Research foundation, thesis achievement and qualifying limitations**

This study was rooted in HRM, team characteristics and performance literature. It was centred here because of an absence of research exploring the collective association between all three study variables in healthcare. The literature review identified that team characteristics can influence performance in healthcare depending on context and setting (Gene-Badia et al., 2001). It was however evident from the literature that while HRM has been associated with performance in healthcare (West et al., 2006), HRM's link with healthcare performance is a grey area that has not been adequately explained (Purcell et al., 2003). This study sought to explain and provide insights into the association between HRM and performance in healthcare using team characteristics (Figure 1.1). Rehabilitation services were defined as the team under investigation and provided the study's research setting with their strong teamwork orientation (Strasser et al., 2008, Nelson et al., 2008). In achieving study aims and answering research questions, significant and unique team characteristics, performance and HRM results from the respective healthcare services were matched, and assessed against the study's theoretical framework. Table 6.1 provides an overview of the study aims, research questions, concise answers, and the corresponding thesis chapter and section/s. The table highlights where detailed explanation for the summary findings can be found in the thesis.

**Figure 1.1:** Variables adopted for study's theoretical framework



This study is constrained by task limitations and stipulated completion durations imposed upon an individual PhD candidate. The study aims and questions were addressed using a cross sectional research design with a limited sample of services. The findings obtained therefore demonstrate association instead of causality. The generalizability of findings is affected by the study's assessment of teamwork at the service or department level in Australian rehabilitation contexts. While rehabilitation services are often classified as multidisciplinary teams (Wade and de Jong, 2000, Long et al., 2003, Strasser et al., 2008), it is recognized that clinicians may have differing conceptions of team membership and teamworking relationships. The acknowledged limitations therefore qualify this study's original contribution.

**Table 6.1:** Study aims, research questions, concise answers, and corresponding thesis chapter and section

| Study aims  | Research questions   | Concise answers  | Corresponding thesis chapter and section        |   |
|---|--|--|---|---|
| 1. To examine the relationship between team characteristics and performance                                       | (i) What is the association between team characteristics and performance in the Australian rehabilitation context? | <ul style="list-style-type: none"> <li>Findings indicate associations between team functioning characteristics of climate and efficiency with clinical indicator performance.</li> <li>Findings presented are inconclusive for the association between teamwork and job satisfaction.</li> <li>Holistically positive team functioning was linked to both clinical performance and job satisfaction.</li> <li>There was no clear association between individual characteristics of team members and structural team characteristics with performance from the services.</li> </ul>  | Chapter 4: Team Characteristics and Performance | 4.12 Association between team characteristics and performance                 |
|   |  |  |   | 4.13 Discussion   |
|   |  |  | Chapter 6: Discussion and Implications          | 6.4 Discussion of HRM's association with team characteristics and performance |
| 2.To investigate HRM's influence on performance, both through and without team characteristics as an intermediary | (ii) To what extent does HRM influence team characteristics and performance in the study context?                  | <ul style="list-style-type: none"> <li>While a connection between the study domains is suggested by the findings, there was no association between all variables from all three study domains (HRM, team characteristics and performance).</li> <li>Independent and combined areas of HRM, namely planning and evaluation, work systems and staff well-being are linked with team functioning, job satisfaction and clinical performance in both focused and integrated associations.</li> <li>There was no association between the staff development facet of HRM with team characteristics and performance.</li> </ul> | Chapter 6: Discussion and Implications          | 6.4 Discussion of HRM's association with team characteristics and performance |
|   |  |  |   | 6.5 Discussion of specific associations between study variables               |

*Continued*



| Study aims  | Research questions  | Concise answers   | Corresponding thesis chapter and section |   |
|---|---|---|--|---|
| 2.To investigate HRM's influence on performance, both through and without team characteristics as an intermediary | (iii) Can any HRM influence on team characteristics that are connected with performance explain the link between HRM and performance? | <ul style="list-style-type: none"> <li>The findings provide an affirmative but contextually qualified response to the feasibility of using team characteristics to explain the link between HRM and performance.</li> <li>This study indicates an overlap between managerial and clinical functions by contextually linking HRM areas of planning and evaluation, work systems and staff well-being with team functioning, job satisfaction and clinical performance outcomes.</li> </ul> | Chapter 6: Discussion and Implications   | 6.4 Discussion of HRM's association with team characteristics and performance |
|   |   |   |  | 6.5 Discussion of specific associations between study variables               |
|   | (iv) How and in what ways does HRM influence rehabilitation service performance without team characteristics as an intermediary?      | <ul style="list-style-type: none"> <li>HRM planning, specifically staffing, change leading to improved management, and leadership in the work system, were connected with variations in job satisfaction.</li> <li>Focused work system specialization and research activity contributing to staff well-being appear to be linked with clinical performance.</li> </ul>  | Chapter 6: Discussion and Implications   | 6.4 Discussion of HRM's association with team characteristics and performance |
|   |   |   |  | 6.5 Discussion of specific associations between study variables               |

### **6.3 Original research contribution**

Drawing on the findings, this study contributes to the body of knowledge by using team characteristics to explain the association between two important variables of healthcare. It contributes to the unlocking of HRM's black box link to performance in healthcare (Purcell et al., 2003). Noting the importance of managing people in healthcare, this study addresses the lack of research studying the role of HRM in healthcare (Hyde et al., 2006). While HRM has been linked to performance in healthcare, this link remains under researched (Harris et al., 2007). The combination of results presented in the two previous chapters contributes evidence about the associations between team characteristics and performance being linked with HRM, and links between HRM and performance without team characteristics as an intermediary.

The study makes a unique contribution by evaluating the impact of team characteristics in rehabilitation services in relation to job satisfaction and clinical indicator performance in the Australian context. The study builds upon previous team functioning research in the healthcare field of rehabilitation (Gibbon et al., 2002, Strasser et al., 2005). While teamwork is crucial for the effective delivery of healthcare, describing a team is necessary in determining its effectiveness for different settings (Øvretveit, 1996). The focus on team characteristics was grounded in existing literature highlighting how different variables of team characteristics influence one another and shape different elements of healthcare performance depending on context or setting (Goni, 1999, Deloach, 2002). The rehabilitation context was selected due to the strong teamwork emphasis given to this medical field (Nelson et al., 2008, Shaw et al., 2008) and the lack of research comprehensively evaluating team characteristics in Australian rehabilitation services. The selection of rehabilitation services naturally resulted in rehabilitation medicine clinical indicators being selected as a measure of performance. To ensure prudence in measuring performance, a second performance measure in the form of job satisfaction was mobilized. While literature links job satisfaction with team functioning (Moore et al., 2006, Robertson and Finlay, 2007), job satisfaction is also associated with HRM policy and practice (West et al., 2006, Boselie et al., 2005). This study complements its focus on team characteristics,

job satisfaction and clinical performance in the Australian rehabilitation context by drawing inferences from HRM.

For the first time, to the best of my knowledge, four HRM areas are evaluated together with three defined categories of team characteristics and two measures of performance in healthcare. The comprehensive approach was taken in recognizing the broad scope and multiple facets of the three main study variables. The approach ensured prudence by having multiple facets and measures of the study variables being given attention in a holistic manner. HRM areas covered were: human resource planning and evaluation (Joyce et al., 2004, Pringle et al., 2002); healthcare staff work systems (Carayon et al., 2006); healthcare staff education, training and development (Lammintakanen et al., 2008); and healthcare staff well-being and satisfaction (Medland et al., 2004). Three team characteristics categories were defined for the study based on importance and emphasis in the literature. The team characteristics categories were structural team characteristics, individual characteristics of team members and team functioning characteristics. Structural team characteristics were characteristics determined by context and setting beyond the control of the team (Gene-Badia et al., 2008, Temkin-Greener et al., 2004). In this study they covered team tenure (age) and team size. Individual characteristics of team members pertained to demographic information in the teams' composition (Leggat, 2007, Goni, 1999). Team functioning characteristics were a reflection of how the team behaves and operates collectively (Shortell et al., 2004). Team functioning coverage for the study pertained to team type categorization based on organization and integration, and the evaluation of perceived efficiency and team climate. Rehabilitation medicine clinical indicators as a measure of performance included four process indicators and two outcome indicators. In assessing staff satisfaction towards organizational aspects, job satisfaction provided the second measure of performance.

To meet the unique approach of the study, previously developed research instruments were utilized in a novel, complementary combination. The comprehensive evaluation of HRM in the study was guided by reference to the HRDM category from the MBNQA (Meyer and Collier, 2001). Existing literature contributed to the items selected for structural team characteristics and individual characteristics of team members (Williams and Laungani,

1999, Deo et al., 1997, Friedman and Bernell, 2006). Team functioning in the study was evaluated using three indexes originally developed by Thylefors et. al. (2005): the team type index, the perceived efficiency index and the team climate index. Job satisfaction was measured using the overall job satisfaction scale originally designed by Warr et. al. (1979) and rehabilitation medicine clinical indicators developed by industry stakeholders were adopted for measuring performance.

The specific combination of instruments guided the development of an integrated mix of tools to fulfill the study's aims. Focus group questions for clinicians and interview questions for HR staff were developed eliciting input on HRM policy and practice. From the seven participating hospitals, 152 rehabilitation clinical staff and 11 HR staff participated in 18 interview and 24 focus group sessions. While structural team characteristics were determined from administrative records from the services, a survey questionnaire was put together for the purpose of evaluating individual characteristics of team members, team functioning and job satisfaction. The study elicited 155 survey participations from rehabilitation clinical staff of the participating hospitals. Findings on clinical performance were possible through permission to access clinical indicator data of the rehabilitation services. The combination of tools and methods used succeeded in determining original associations between team characteristics, job satisfaction, clinical indicator performance and HRM. The associations between study variables are discussed in the next section.

#### **6.4 Discussion of HRM's association with team characteristics and performance**

The first findings chapter fulfilled the first study aim of examining the relationship between two of the study's constructs, namely team characteristics and performance. In doing so it addressed the first research question of what associations exist between the constructs in the Australian rehabilitation context. The second findings chapter presented HRM findings from the participating hospitals offering rehabilitation services. The combination of results from the two findings chapters attempt to meet the study's second aim. That is, to investigate associations between variables within the broad research domains of team

characteristics, performance and HRM. While a connection between the study domains is suggested by the findings, there was no association between all variables from all three study domains.

Drawing on the first findings chapter, the results demonstrate that team characteristics, specifically aspects of team functioning, were found to have associations with clinical performance and job satisfaction. Both comprehensive and independent aspects of team functioning, reflecting relationships between team members and team efficiency, showed associations with the study's performance measures. Comprehensively favourable team functioning characteristics are associated with high levels of job satisfaction and clinical performance findings. These results affirm existing literature linking teamwork in rehabilitation to performance (Strasser et al., 2005). However, this study is differentiated from previous research by its Australian context, team functioning focus and facets of performance. The study results indicate that teams with sound relationships, team members who function efficiently and well together, and enjoy a supportive climate, are likely to have positive morale and provide good patient care. The comprehensive team characteristics results support the strong teamwork orientation of rehabilitation services requiring collaboration between medical, nursing and allied health clinicians (Mullins et al., 1999, Gibbon et al., 2002).

Conversely, the study indicated poor efficiency in team functioning to be associated with poor clinical performance during patient admission. While highlighting a specific aspect of service delivery affected by inefficient teamwork, the negative results confirm research by Undre et al. (2006) that poor team functioning limits team efficiency. There were job satisfaction and clinical performance results not explained by team characteristics results. There was no clear association for two categories of team characteristics, namely structural team characteristics and individual characteristics of team members with performance outcomes. Findings from this study therefore differ from previous research where the structural team characteristics determined by local hospital or service context, and team composition, had an association with team and performance outcomes (Borrill et al., 2000, Molyneux, 2001, Temkin-Greener et al., 2004). It is possible that in the context of rehabilitation, team functioning pertaining to interactions between team members, mitigates

the influence of structural team characteristics and individual characteristics of team members. The relationship between team characteristics categories could therefore be an area for further investigation.

In presenting results for the four HRM areas explored in the study, the second findings chapter highlighted contextual variations in policy and practice at the participating hospitals. For the first HRM area pertaining to planning and evaluation, there was variation with regards to efficiency and effectiveness. The second area of healthcare staff work systems showed variation linked to change, structure, leadership and specialization. There were no obvious variations for the third area, that is, healthcare staff education, training and development. For the fourth area healthcare staff well-being and satisfaction, variation between the hospitals was a result of service constraints, research activity and staffing. The variation in HRM areas identified by site provide evidence that validates the contextual nature of healthcare HRM (Dieleman et al., 2009).

Combining results from the two findings chapters show independent and combined facets of HRM, to be linked with team functioning, job satisfaction and clinical performance. The areas of HRM also had an influence on a combination of team functioning and performance outcomes. In demonstrating achievement of the second study aim examining relationships between the three broad domains, and addressing the second research question of determining the extent of association, the study shows that both individual components and integrated areas of HRM can have an influence on team characteristics and performance. The findings confirm existing research documenting the influence of integrated aspects of HRM in healthcare organizations (Lee et al., 2011) and contributes new integration perspectives for HRM areas of planning and evaluation, work systems and staff well-being. There was no association between the staff development facet of HRM with team characteristics and performance. This study's findings therefore contrast with previous evidence that linked staff development with positive outcomes in healthcare settings (Lammintakanen et al., 2008, Wilcock et al., 2009).

Previous studies have identified variables such as culture (Hyde, 2004), networks (Sheaff et al., 2004), turnover (North et al., 2005) and professional training (Perkins et al., 2008) to have implications for health services delivery. This study contributes to the body of health

services literature by using team characteristics, specifically team functioning, to explain how an area or areas of HRM are linked to performance in healthcare. The findings therefore provide an affirmative but contextually qualified response to the third research question pertaining to the feasibility of using team characteristics to explain the link between HRM and performance. While previous healthcare literature suggested HRM's association with teams to be limited to an administrative or logistical connection (West et al., 2002, West et al., 2006), this study indicates an overlap between managerial and clinical functions by contextually linking areas of HRM with team functioning. The results affirm existing literature documenting HRM's association with healthcare performance (West et al., 2002, Meyer and Collier, 2001) by showing HRM to have a relationship with job satisfaction and clinical performance. The research in response to the fourth and final research question explored HRM's link with performance without team characteristics as an intermediary. HRM planning, specifically staffing, change leading to improved management, and leadership in the work system were connected with variations in job satisfaction. Focused work system specialization and research activity contributing to staff well-being appear to be linked with clinical performance.

Clinical performance of the participating services was measured via national and benchmark group clinical indicator compliance rates. The study organizations are typical of hospitals in Australia. Therefore, the findings of this study could be generalized across other Australian organizations with a similar structure, function and context. Lessons learnt could also apply to healthcare organizations and services in other developed countries with similar clinician resources and utilization. Study results may hold transferable applications beyond healthcare for the management of teams with diverse professional membership and varied performance measures. The findings suggest HRM policy and practice to be tailored around the promotion of good relationships and cohesiveness among team members with different expertise. Recruiting team players, assessing the overlap between team and individual roles, development through team discourse and rewarding team outcomes may be prerequisites for efficient and effective team based service delivery and performance.

The study's theoretical framework sought to guide the examination of HRM's influence on performance both through and without team characteristics. The findings suggest

contextual, integrated and facet specific relationships to hold between the study's three constructs. The next section discusses the specific associations between study variables.

## **6.5 Discussion of specific associations between study variables**

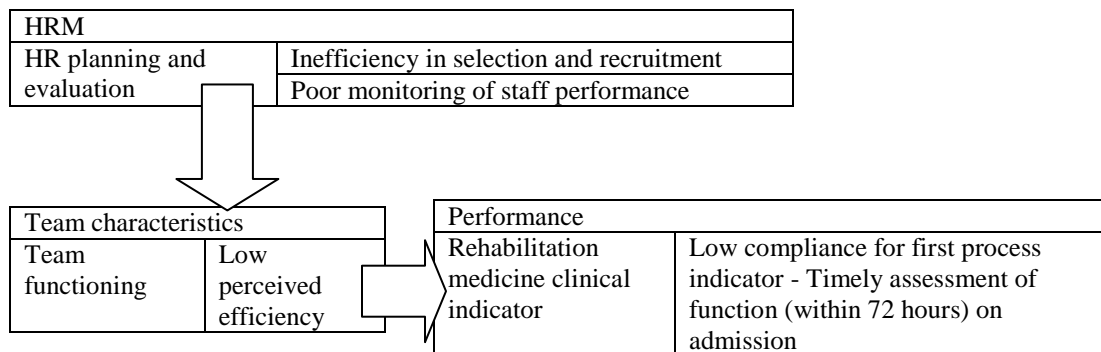
Six specific associations between study variables were derived from the team characteristics, performance and HRM results of the study. Three of these associations pertain to HRM's link to team characteristics and performance results, while the remaining three of the derived associations relate to HRM's association with performance variables of the study. The following sub sections discuss the specific associations between study variables.

### **6.5.1 Association 1: HR planning and evaluation; team functioning; and rehabilitation medicine clinical indicator**

These results indicate staff recruitment and performance monitoring issues to be contextually associated with low perceived efficiency linked to low compliance for the first process clinical indicator (Figure 6.1). When the recruitment of clinicians was reported to be inefficient, and staff informed of appraisals not being carried out consistently, a rehabilitation service is likely to register lower perceived team efficiency. This corresponded with low clinical performance efficiency during patient admission. However, the low team efficiency result was not associated with low performance for other service delivery clinical indicators. A possible explanation could be that greater team efficiency may be required for patient assessment during admission compared to other stages of rehabilitation patient care. Recognizing the multidimensional and conceptually diverse nature of performance outcomes for teamwork in healthcare (Lemieux-Charles and McGuire, 2006), further studies investigating why this one indicator stood out from the others are warranted.



**Figure 6.1:** Association between aspects and elements of: HR planning and evaluation; team functioning; and rehabilitation medicine clinical indicator

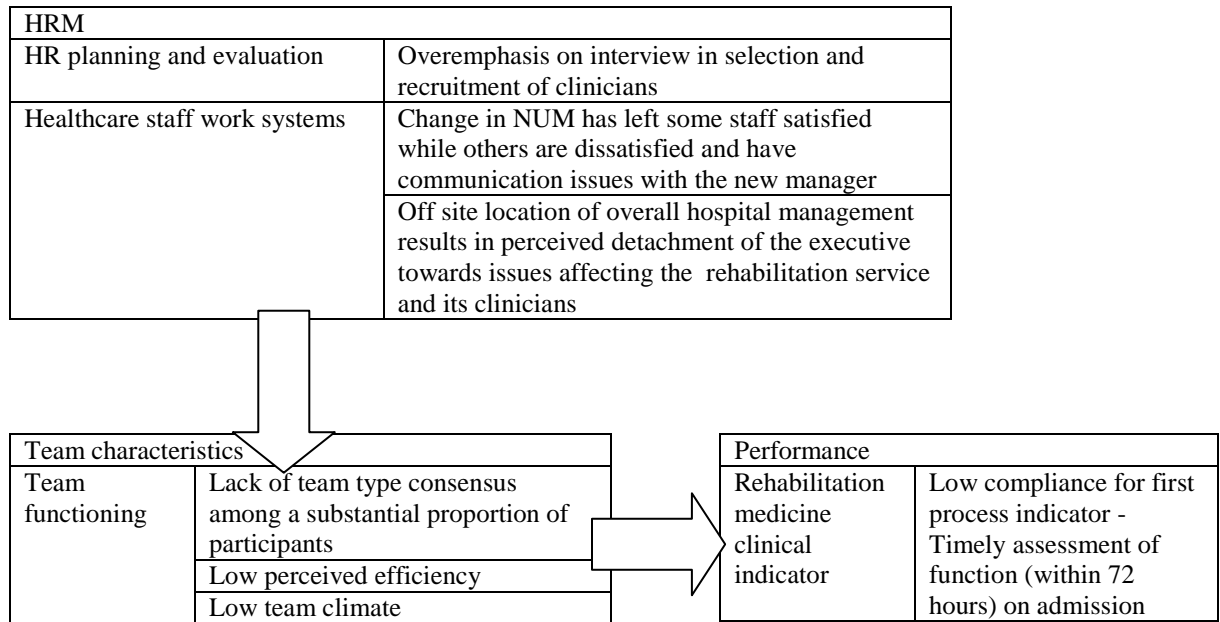


Inefficiency in selection and recruitment may result in vacancies within a service compounding the perceived public healthcare problem of understaffing. The results confirm existing literature highlighting the importance of adequate staffing for multidisciplinary team care (Fleissig et al., 2006) and service delivery (Eaton, 2000). This finding extends existing knowledge by demonstrating how low multidisciplinary team efficiency linked to low process efficiency at the patient care point of entry, is associated with HRM issues of recruitment and evaluation. A rehabilitation service with a strong need for collaboration among members is likely to face difficulty in service delivery if lacking the appropriate numbers of staff. Inadequate staffing could compromise a rehabilitation service's healthcare delivery, therefore being associated with poor team functioning in terms of low perceived efficiency. Low efficiency within the team is connected with low compliance for the first process indicator marking a patient's entry into rehabilitation care. The poor team functioning and clinical performance would likely be prolonged by the poor monitoring of staff performance where no remedial action or intervention is initiated. This finding therefore supports the alignment of healthcare staff evaluation with other HR functions (Khatri et al., 2006) and the role of appraisals in moderating service outcomes (Conlon, 2003).

### **6.5.2 Association 2: HR planning and evaluation; healthcare staff work systems; team functioning; and rehabilitation medicine clinical indicator**

Organizational and service issues in two HRM areas are connected with a lack of team type categorization consensus, low perceived efficiency and low team climate linked to low first clinical process indicator results (Figure 6.2). These results were obtained at an organization where clinicians suggested ineffective recruitment due to an overemphasis on interviews. The input with regards to recruitment effectiveness supports previous research by Ebright et al. (2003) that emphasized the importance of recruiting suitable healthcare workers to match organizational and service needs. The organization's rehabilitation service work system had recently experienced managerial change and the rehabilitation clinicians perceived a sense of detachment from executive management. Clinicians in the rehabilitation service did not show consensus with regards to team integration or organization and also indicated low team efficiency and poor team working relationships compared to other services in the study. The HRM and team characteristics findings pertaining to the service corresponded with low compliance for the first process indicator which evaluated the efficiency of patient assessment during admission. There were no notable differences for the service's other indicator compliance rates. While further investigation may be necessary to explain why low compliance for the first indicator did not correlate with low compliance for the other indicators, there is a possibility that compliance for first indicator is more susceptible to organizational or team influences.

**Figure 6.2:** Association between aspects and elements of: HR planning and evaluation; healthcare staff work systems; team functioning; and rehabilitation medicine clinical indicator



The performance shortcoming pertaining to process efficiency is linked with aspects of team functioning traceable to issues in areas of HRM. Recruitment effectiveness, ward level managerial change and service detachment from an organization's executive administration are connected with team elements of integration, efficiency and working relationships. An overemphasis on interview in selection and recruitment of clinicians is an issue of concern under the area of HR planning and evaluation. Ward managerial change and off site executive management of the organization are healthcare staff work systems elements found to be adversely connected with team functioning and clinical performance results.

The shortcoming in the recruitment of clinicians indicates a perception that the best team candidate may not always be selected for the team. Due to the team effort necessary for the delivery of rehabilitation services, a new recruit who does not fit well with team and service demands could have an association with poor outcomes. In this study, the shortcoming in

recruitment is linked to low efficiency in team functioning and poor compliance with clinical process requirements.

The new ward manager resulted in a divided rehabilitation team, with some members satisfied and other dissatisfied with the change in nursing leadership. The results show congruence with systematic review findings by Cummings et al. (2010) that suggested healthcare leadership and subordinate relationships to be associated with the promotion of staff satisfaction. Division among staff is reflected in a lack of team type categorization consensus within the service with regards to integration levels and team organization. Division among staff arising from the ward managerial change is also associated with poor team functioning in terms of team climate. Poor team climate results under a context of ward managerial change indicate a level of dissatisfaction among team members with regards to social and task oriented aspects of teamwork. This dissatisfaction would be traceable to differing expectation among staff with regards to elements of team climate such as communication, decision making and leadership.

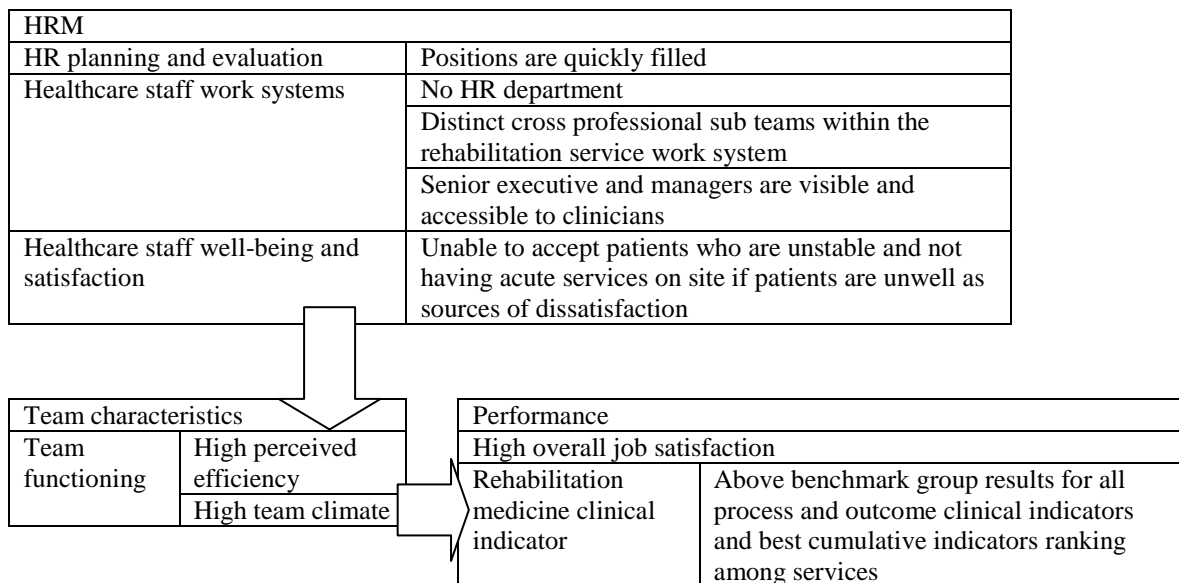
The off site location of executive hospital management potentially creates managerial detachment towards the issue of change affecting frontline clinicians. Off site location of executive management may also present an obstacle for clinicians to have their voices heard in putting forward issues affecting the delivery of healthcare services. These results show similarity with research findings from a study by Carney (2004) where hospitals with complex structures were associated with clinician exclusion in policy making, poor communication flow and limited access to senior management. Remedial attention or mediation could be warranted from the hospital's executive management in moderating work system change.

### **6.5.3 Association 3: HR planning and evaluation; healthcare staff work systems; healthcare staff well-being and satisfaction; team functioning; overall job satisfaction; and rehabilitation medicine clinical indicator**

Issues of efficiency, structure and service constraints affecting HRM were linked to positively comprehensive team functioning and performance findings (Figure 6.3). The

good team functioning and performance findings consisted of high perceived efficiency, high team climate, high overall job satisfaction and good clinical performance at a service which was divided into distinct cross professional sub teams. The service was from an organization with a flat organization structure without a HR department where clinician recruitment was reported to be efficient and senior managers are accessible to clinicians. Clinicians from this high performing service reported dissatisfaction with service constraints affecting patient care.

**Figure 6.3:** Association between aspects and elements of: HR planning and evaluation; healthcare staff work systems; healthcare staff well-being and satisfaction; team functioning; overall job satisfaction; and rehabilitation medicine clinical indicator



The capacity for team functioning in a service is likely to be facilitated by HR planning and evaluation that efficiently ensures staff positions are quickly filled. These findings are in line with existing research highlighting workforce planning and staffing to be crucial for health service delivery and outcomes (O'Rourke and White, 2011, Lankshear et al., 2005, Dimick et al., 2001). The flat organization structure without a HR department has resulted in decentralization of HRM decision making. This decentralization in decision making is

further extended to distinct cross professional sub teams within the larger rehabilitation service. The decentralization in decision making could explain the efficiency and positive climate in team functioning which is linked to good clinical performance. Decentralization would empower clinicians in enabling them to make more decisions without the need for seeking approval or consent from higher levels of management. This empowerment of clinicians is likely to improve efficiency and job satisfaction within a service team. Another benefit of the flat structure is the visibility and accessibility of the senior executive and managers to clinicians. The visibility of managerial staff could serve as a form of indirect recognition for clinicians in making them recognizable within their organization and contributing positively to their job satisfaction. The findings confirm conceptual work by Boon et al. (2004) that advocates for decreasing hierarchical authority structures and promoting structures that enhance communication in healthcare environments. As patients are a source of positive recognition for clinicians (Bartos et al., 2008, Gunderman and Huynh, 2007, Fosbinder, 1994), service constraints impacting on patient care is a source of dissatisfaction for team members of a high performing service.

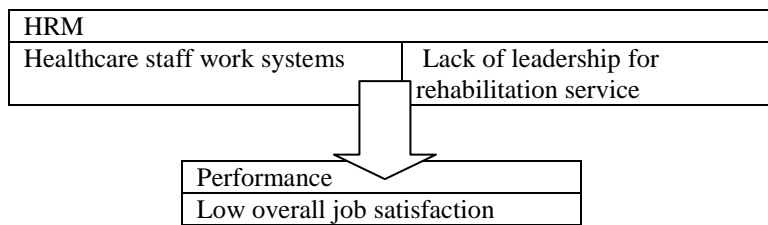
The service's positive findings contribute an integrated association showing the relationship between different facets and aspects of HRM, team characteristics and performance. The HRM facets of the association are staffing efficiency, organization and service structures that promote familiarity and accessibility among the healthcare workforce, and the desire for comprehensive patient care being connected with healthcare staff well-being. The association's team functioning characteristics, particularly team efficiency and teamworking relationships, corresponded with good overall clinical performance and high job satisfaction. In linking variables from the study's three main constructs, the contextually qualified association provides grounding for tracing HRM's influence on healthcare service outcomes using team functioning characteristics.

#### **6.5.4 Association 4: Healthcare staff work systems and overall job satisfaction**

The lack of leadership from the designated head for a rehabilitation service work system was linked to low overall job satisfaction (Figure 6.4). This specific association at one site

between service leadership and clinician job satisfaction did not show a link with team functioning characteristics or clinical performance. These findings, while confirming that poor leadership can adversely impact upon clinicians (Jinks et al., 2003, Olofsson et al., 2003), differs from studies where shortcomings in health service leadership affected service delivery and outcomes (Feng and Manuel, 2008, Kanji and Moura e Sá, 2003). The strong multidisciplinary teamwork emphasis required for the provision of rehabilitation services (Gibbon et al., 2002, Eldar et al., 2008) may have a mitigating influence on service leadership from an individual manager or director, hence reducing the consequence of poor leadership on team functioning and clinical performance. The rehabilitation treatment process, which requires ongoing communication and coordination of care when treating patients across disciplines (Mullins et al., 1999), may also moderate the influence of service leadership on team members and outcomes.

**Figure 6.4:** Association between leadership aspect of Healthcare staff work systems and overall job satisfaction



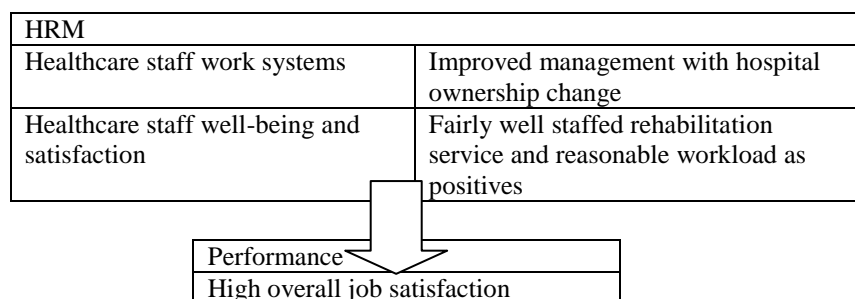
While the lack of leadership was not associated with poor team functioning or low clinical indicator compliance, the association between leadership and job satisfaction draws attention towards the importance of leadership for clinician well-being (Coomber and Barriball, 2007). The strong emphasis on team work between clinicians from diverse professional backgrounds working in rehabilitation could necessitate the designated leader has to play coordinator, and possibly consolidator roles within the service team. It has been identified that multidisciplinary teams require explicit, clear, knowledgeable and accessible leadership on a continuous basis (Albinsson and Strang, 2002). A lack of leadership in a

rehabilitation team is therefore likely to result in members having to function without sufficient direction and support, associated with adverse effects on job satisfaction.

#### 6.5.5 Association 5: Healthcare staff work systems; healthcare staff well-being and satisfaction; and overall job satisfaction

Positive elements under the HRM areas of healthcare staff work systems and healthcare staff well-being and satisfaction were contextually connected with high overall job satisfaction from one of the services (Figure 6.5). For healthcare staff work systems, the positive element was improved management with hospital ownership change. For staff well-being, the positive element pertained to the rehabilitation service being well staffed and having a reasonable workload. Having expectations of management being fulfilled and having good employee experiences, therefore emerges in the form of high job satisfaction.

**Figure 6.5:** Association between aspects and elements of: Healthcare staff work systems; healthcare staff well-being and satisfaction; and overall job satisfaction



The perception of improved management, suggests the ownership change has brought about positive changes for clinicians. The positivity brought about by the change may be linked to the adequate staffing and reasonable workload for the rehabilitation service team that contributes towards high job satisfaction. These findings match existing research suggesting staff well-being in healthcare to be connected with staffing levels (Eisenberg et al., 2001) and workload (Firth-Cozens, 2001). However, the positive organizational and

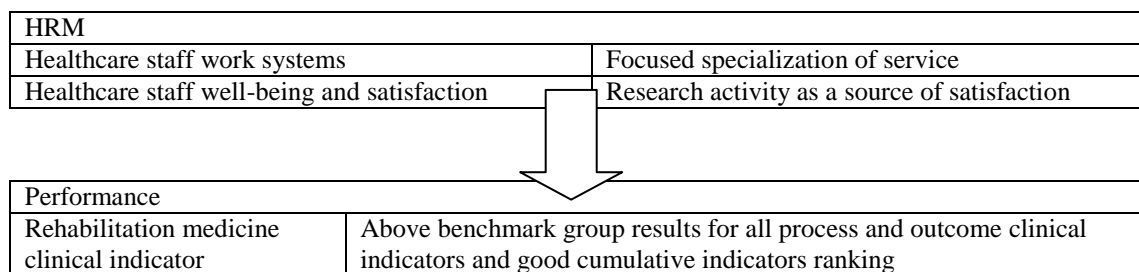


service elements identified were not associated with significantly better team functioning or clinical performance compared to the other participants. The findings therefore suggest that favourable working conditions in healthcare organizations and clinician job satisfaction may not necessarily translate to better teamworking or clinical outcomes in a rehabilitation team setting. The results contrast with the view that service delivery and the provision of quality patient care requires the maintenance of clinician well-being and satisfaction (Medland et al., 2004, Goetzel et al., 2002). Nevertheless, for the service having adequate staffing, a reasonable workload for clinicians and high job satisfaction, there is the possibility that these positive aspects and elements contribute to the service not having poor team functioning or low clinical indicator compliance.

#### **6.5.6 Association 6: Healthcare staff work systems; healthcare staff well-being and satisfaction; and rehabilitation medicine clinical indicator**

The focused work system specialization of the stroke rehabilitation service, with healthcare staff well-being and satisfaction being derived from research activity were linked to good clinical performance (Figure 6.6). The positive performance association was not connected with significantly better team functioning compared to services from the other participating hospitals.

**Figure 6.6:** Association between aspects and elements of: Healthcare staff work systems; healthcare staff well-being and satisfaction; and rehabilitation medicine clinical indicator



This finding differs from previous research by Strasser et al. (2005) that indicated links between stroke rehabilitation performance and team functioning. It is acknowledged that the other services in the study were general services providing care for a wider range of rehabilitation patient conditions. The focused stroke rehabilitation service catering for a narrow patient group enables more standardization in patient care procedures. This standardization in patient protocol might mitigate the demands of team functioning in delivering clinical performance when compared to the general rehabilitation services. The benefits of focused specialization for a service team are comparable to a clinical service line approach, where efficient and effective care by specific disease, population group or clinical intervention (Byrne, 2006) is achieved through the coordination of multiple disciplines structured around clinical outputs (Jain et al., 2006).

Research activity would contribute towards evidence-based practice which is advocated for improving healthcare quality (Krugman, 2003). Having research activity also provides an opportunity for staff development which is linked to positive staff well-being (Levett-Jones, 2005, Lammintakanen et al., 2008). Clinician appreciation for research activity validates previous studies suggesting clinicians to be intrinsically motivated in their roles (Parker et al., 2007, Marshall and Harrison, 2005). Research initiatives could be contributing towards fulfilling clinician motivations for providing quality patient care. While research activity emphasized might reflect a service culture, the nurturing and sustaining of evidence-based practice values and behaviours is likely to require managerial approval, support, direction and leadership. Hence, as with other work cultures incorporated into organizational work systems, there is likely to be an overlap with areas of HRM (Watson, 2004).

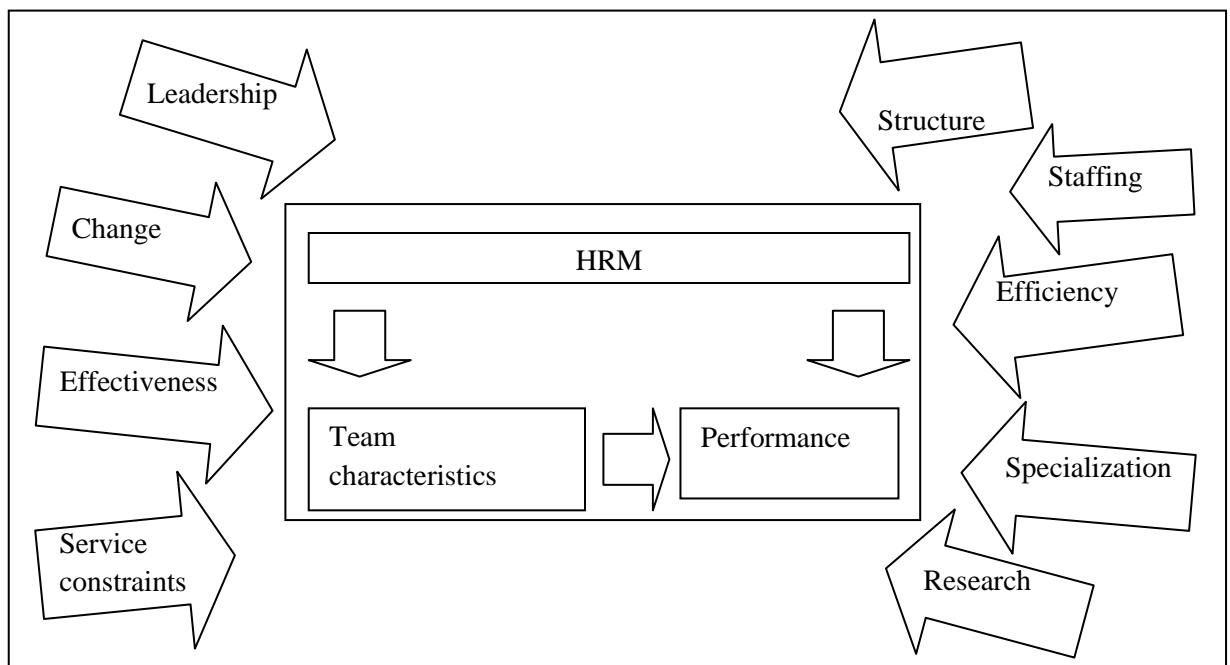
## **6.6 Implications**

Implications drawn from the discussion of the study's findings relate to theory, policy, practice and future research. These implications build upon the study's findings.

### 6.6.1 Theory

Existing healthcare HRM literature highlights the need to explain and improve HRM's link with performance outcomes (Purcell et al., 2003, Kabene et al., 2006). The findings from this research study highlight how HRM can impact on healthcare performance through its influence on team characteristics and also without team characteristics as an intermediary. However, as has been shown, much of this influence is a result of factors associated with organizational and service context (Figure 6.7).

**Figure 6.7:** Contextual influences on HRM's association with team characteristics and performance



Links between three main study constructs are strengthened by the identified contextual factors showing integration and overlap with areas, components and related elements of HRM policy and practice. The findings therefore contribute towards endorsing the 'best fit' approach (Hughes, 2002, Khilji and Wang, 2006) in tailoring HRM for healthcare organizations. Efficiency shortcomings with HR planning and evaluation were found to be detrimental for team functioning and clinical performance. A perceived lack of recruitment effectiveness, service level change and complexities in organizational structure were linked

with poor team functioning and low clinical process performance. Efficient recruitment, organizational and service promoting accessibility and familiarity among staff, and service constraints indicating a desire for comprehensive patient care were connected with good team functioning, good clinical indicator compliance and high job satisfaction. Improved management from organizational level change, adequate staffing and having a reasonable workload were found to influence job satisfaction. Poor service leadership was linked to low job satisfaction. A specialized service with research activity reported good clinical performance. HRM theory in adopting a ‘best fit’ approach could be extended to reflect HRM’s contextually influenced association with team characteristics (Khilji and Wang, 2006, De Prins and Henderickx, 2007). The ‘best fit’ or tailored approach to HRM might specifically consider team functioning. Additionally, the approach could inform the extent to which HRM’s link with or without team functioning characteristics can positively or negatively impact on performance.

### **6.6.2 Policy**

Existing healthcare HRM policy has strived to utilize a range of ‘best practice’ strategies (Leggat et al., 2011, Young et al., 2010) suggesting a standardized approach to staff management across healthcare organizations. As mentioned earlier, the findings recommend the contextual tailoring of HRM in accordance with elements of efficiency, effectiveness, change, structure, service constraints, leadership, staffing, specialization and research. These elements are contextually integrated with HRM’s ability to influence clinicians for efficient and effective service delivery. The findings therefore promote the development of HRM policy in accordance with unique organizational and service requirements.

The findings show planned and unplanned elements of HRM to be associated with team characteristics and performance. Literature indicates HRM policy to inform the promotion of teamwork training in healthcare (Nielsen et al., 2007, Beaubien and Baker, 2004) and the structural coordination of multidisciplinary teams (Greenberg et al., 2003, Duffy and Lemieux, 1995). Beyond these two teamwork related aspects, HRM policy development

gives little consideration for HRM's potential to improve healthcare performance through influence on team characteristics. Future development of HRM policy could adopt a more evidence based and context sensitive approach that takes into account beneficial and adverse influences HRM might have on team characteristics and performance.

### **6.6.3 Practice**

The overlap between HRM and team characteristics in influencing healthcare outcomes would indicate the need for greater collaboration and consensus between clinicians and managers to promote desired team functioning, staff job satisfaction levels and clinical indicator performance. The managerial coordination of staff recruitment and evaluation could utilize clinician input to promote the efficiency and effectiveness of such practices, and support aspects of HR planning that do not adversely impact upon team functioning and clinical performance. Cooperation between managers and clinicians could also be emphasised in optimizing advantages and limitations pertaining to organizational and service structures, and inevitable change impacting on work systems. Attention may be required to influence clinician well-being connected with the provision of leadership, and promoting staff development activities beneficial for enhancing clinical performance. Supporting the notion of integrated HRM approaches utilized in high performing healthcare systems (Boselie, 2010, Scotti et al., 2007), the study's findings advocate improving clinical performance through a holistic HRM approach for healthcare services with a strong teamwork focus. Managers with HRM responsibilities could focus on mitigating the shortcomings present in public healthcare organizations by building upon determinants of good team functioning, and sources of clinician well-being and satisfaction.

### **6.6.4 Future research**

This study has built upon existing healthcare research on HRM's link with performance (e.g., West et al., 2006, Brown et al., 2003, Meyer and Collier, 2001). The study sought to explain the HRM-performance link using team characteristics as an intermediary. By

demonstrating associations between the study's variables through a cross sectional approach, this thesis provides the foundation for investigating causal relationships in a longitudinal study. Further studies could also explore the degree to which the contextual elements identified in this study impact upon the association between team characteristics, performance and HRM. The association between the variables and contextual elements could be researched in private healthcare settings for comparison with the public setting findings of this study. Taking the concept of healthcare organizations as learning environments, further work could investigate the HRM area of education, training and development which did not show significant differences in this study.

While this study focused on team characteristics to explain the link between HRM and performance in healthcare, further research might consider other organizational or clinical issues in explaining relationships. Previous studies have identified variables such as culture (Hyde, 2004), networks (Sheaff et al., 2004), turnover (North et al., 2005) and professional training (Perkins et al., 2008) to have implications for health service delivery. Future research could extend this study's focus to include variables such as these in understanding the complexity of healthcare delivery.

## **6.7 Conclusion**

This chapter concludes the thesis and meet the study's aim to investigate the associations between HRM, team characteristics and performance. The findings suggest that a contextual holistic approach to HRM in healthcare is associated with positive team characteristics which are linked with good outcomes, namely job satisfaction and clinical performance. The study indicates organizational and service contexts to influence: the way clinicians are managed, healthcare teamwork, clinician satisfaction and patient care. A holistic approach that integrates the different areas of HRM could be necessary to influence clinicians for positive teamwork and performance outcomes. The findings have implications in expanding HRM theory, influencing management policy, promoting manager clinician relationships and designing research to further investigate HRM's link to performance in healthcare organizations.

## REFERENCES

- Abernethy, M. A. & Brownell, P. 1997. Management control systems in research and development organizations: the role of accounting, behavior and personnel controls. *Accounting, Organizations and Society*, 22, 233-248.
- Abrahamson, E. 1997. The emergence and prevalence of employee management rhetorics: the effects of long waves, labor unions, and turnover, 1875 to 1992. *The Academy of Management Journal*, 40, 491-533.
- Adelman, L., Christian, M., Gualtieri, J. & Bresnick, T. A. 1998. Examining the effects of communication training and team composition on the decision making of Patriot air defense teams. *IEEE Transactions on Systems, Man and Cybernetics - Part A: Systems and Humans*, 28, 729-741.
- Adler, P. S. 2001. Market, hierarchy, and trust: the knowledge economy and the future of capitalism. *Organization Science*, 12, 215-234.
- Aiken, L. H., Clarke, S. P. & Slone, D. M. 2002. Hospital staffing, organization, and quality of care: cross-national findings. *International Journal for Quality in Health Care*, 14, 5-14.
- Albinsson, L. & Strang, P. 2002. Staff opinions about the leadership and organisation of municipal dementia care. *Health & Social Care in the Community*, 10, 313-322.
- Alexander, J. A., Lichtenstein, R., Jinnett, K., D'anno, T. A. & Ullman, E. 1996. The effects of treatment team diversity and size on assessments of team functioning. *Hospital & health services administration*, 41, 37-53.
- Alonso, A., Baker, D. P., Holtzman, A., Day, R., King, H., Toomey, L. & Salas, E. 2006. Reducing medical error in the military health system: how can team training help? *Human Resource Management Review*, 16, 396-415.
- Alspach, G. 2003. Recognizing and rewarding nurse preceptors in critical care: some answers. *Critical Care Nurse*, 23, 13-19.
- Amason, A. C., Thompson, K. R., Hochwarter, W. A. & Harrison, A. W. 1995. Conflict: an important dimension in successful management teams. *Organizational Dynamics*, 24, 20-35.
- Ancona, D. G. & Caldwell, D. F. 1992. Demography and design: predictors of new product team performance. *Organization Science*, 3, 321-341.
- Anderson, N. & West, M. A. 1996. The Team Climate Inventory: development of the TCI and its applications in teambuilding for innovativeness. *European Journal of Work and Organizational Psychology*, 5, 53-66.
- Anderson, N. & West, M. A. 1998. Measuring climate for work group innovation: development and validation of the team climate inventory. *Journal of organizational behavior*, 19, 235-258.
- Ángel, P. O. & Sánchez, L. S. 2009. R&D managers' adaptation of firms' HRM practices. *R&D Management*, 39, 271-290.
- Appelbaum, S., H. , Bethune, M. & Tannenbaum, R. 1999. Downsizing and the emergence of self-managed teams. *Participation & Empowerment*, 7, 109-109.
- Aprile, I., Piazzini, D. B., Bertolini, C., Caliendo, P., Pazzaglia, C., Tonali, P. & Padua, L. 2006. Predictive variables on disability and quality of life in stroke outpatients undergoing rehabilitation. *Neurological Sciences*, 27, 40-46.

- Armstrong, P. 1985. Changing management control strategies: The role of competition between accountancy and other organisational professions. *Accounting, Organizations and Society*, 10, 129-148.
- Armstrong, R., Jackson, N., Doyle, J., Waters, E. & Howes, F. 2005. It's in your hands: the value of handsearching in conducting systematic reviews of public health interventions. *Journal of Public Health*, 27, 388-391.
- Aronson, Z. H., Reilly, R. R. & Lynn, G. S. 2006. The impact of leader personality on new product development teamwork and performance: the moderating role of uncertainty. *Journal of Engineering and Technology Management*, 23, 221-247.
- Arthur, J. B. 1994. Effects of human resource systems on manufacturing performance and turnover. *The Academy of Management Journal*, 37, 670-687.
- Arthur, J. B. & Boyles, T. 2007. Validating the human resource system structure: a levels-based strategic HRM approach. *Human Resource Management Review*, 17, 77-92.
- Ashmos, D. P., Huonker, J. W. & McDaniel, R. R. J. 1998. Participation as a complicating mechanism: the effect of clinical professional and middle manager participation on hospital performance. *Health Care Management Review*, 23, 7-20.
- Aston, J., Shi, E., Bullôt, H., Galway, R. & Crisp, J. 2005. Qualitative evaluation of regular morning meetings aimed at improving interdisciplinary communication and patient outcomes. *International Journal of Nursing Practice*, 11, 206-213.
- Athanasaw, Y. A. 2003. Team characteristics and team member knowledge, skills, and ability relationships to the effectiveness of cross-functional teams in the public sector. *International Journal of Public Administration*, 26, 1165-1203.
- Atwal, A. & Caldwell, K. 2002. Do multidisciplinary integrated care pathways improve interprofessional collaboration? *Scandinavian Journal of Caring Sciences*, 16, 360-367.
- Atwal, A. & Caldwell, K. 2005. Do all health and social care professionals interact equally: a study of interactions in multidisciplinary teams in the United Kingdom. *Scandinavian Journal of Caring Sciences*, 19, 268-273.
- Austin, W., Park, C. & Goble, E. 2008. From interdisciplinary to transdisciplinary research: a case study. *Qualitative Health Research*, 18, 557-564.
- Australasian Rehabilitation Outcomes Centre website  
<http://ahsri.uow.edu.au/aroc/index.html> (accessed 3 December 2008)
- Australian Faculty of Rehabilitation Medicine website  
[www.racp.edu.au](http://www.racp.edu.au) (accessed 10 November 2008)
- Avolio, B. J., Zhu, W., Koh, W. & Bhatia, P. 2004. Transformational leadership and organizational commitment: mediating role of psychological empowerment and moderating role of structural distance. *Journal of organizational behavior*, 25, 951-968.
- Baggs, J. G. 1994. Development of an instrument to measure collaboration and satisfaction about care decisions. *Journal of Advanced Nursing*, 20, 176-182.
- Baggs, J. G. & Schmitt, M. H. 1997. Nurses' and resident physicians' perceptions of the process of collaboration in a MICU. *Research in Nursing & Health*, 20, 71-80.
- Baiden, B. K., Price, A. D. F. & Dainty, A. R. J. 2006. The extent of team integration within construction projects. *International Journal of Project Management*, 24, 13-23.



- Baird, J. E. & Bradley, P. H. 1978. Communication correlates of employee morale. *Journal of Business Communication*, 15, 47-56.
- Baird, L. & Meshoulam, I. 1988. Managing two fits of strategic human resource management. *The Academy of Management Review*, 13, 116-128.
- Bamford, D. & Griffin, M. 2008. A case study into operational team-working within a UK hospital. *International Journal of Operations & Production Management*, 28, 215-237.
- Barbour, R. S. 2001. Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? *British Medical Journal*, 322, 1115-1117.
- Barczak, G. & Wilemon, D. 1992. Successful new product team leaders. *Industrial Marketing Management*, 21, 61-68.
- Baron, J. N., Dobbin, F. R. & Jennings, P. D. 1986. War and peace: the evolution of modern personnel administration in U.S. industry. *American Journal of Sociology*, 92, 350-383.
- Baron, J. N., Jennings, P. D. & Dobbin, F. R. 1988. Mission control? The development of personnel systems in U.S. industry. *American Sociological Review*, 53, 497-514.
- Barreca, S. & Wilkins, S. 2008. Experiences of nurses working in a stroke rehabilitation unit. *Journal of Advanced Nursing*, 63, 36-44.
- Barrere, C. & Ellis, P. 2002. Changing attitudes among nurses and physicians: a step toward collaboration. *Journal for Healthcare Quality*, 24, 9-15.
- Barrick, M. R. & Alexander, R. A. 1987. A review of quality circle efficacy and the existence of positive-findings bias. *Personnel Psychology*, 40, 579-592.
- Bartlett, K. R. 2001. The relationship between training and organizational commitment: A study in the health care field. *Human Resource Development Quarterly*, 12, 335-352.
- Bartos, C. E., Fridsma, D. B., Butler, B. S., Penrod, L. E., Becich, M. J. & Crowley, R. S. 2008. Development of an instrument for measuring clinicians' power perceptions in the workplace. *Journal of Biomedical Informatics*, 41, 1041-1049.
- Bartram, T., Stanton, P., Leggat, S., Casimir, G. & Fraser, B. 2007. Lost in translation: exploring the link between HRM and performance in healthcare. *Human Resource Management Journal*, 17, 21-41.
- Baruch, Y. 1999. Response rate in academic studies - a comparative analysis. *Human Relations*, 52, 421-438.
- Batorowicz, B. & Shepherd, T. A. 2008. Measuring the quality of transdisciplinary teams. *Journal of Interprofessional Care*, 22, 612-620.
- Batt, R. 2002. Managing customer services: human resource practices, quit rates, and sales growth. *The Academy of Management Journal*, 45, 587-597.
- Baxter, S. K. & Brumfitt, S. M. 2008. Professional differences in interprofessional working. *Journal of Interprofessional Care*, 22, 239-251.
- Beach, M. C., Inui, T. & Network, T. R.-C. C. R. 2006. Relationship-centered care. *Journal of General Internal Medicine*, 21, S3-S8.
- Beaubien, J. M. & Baker, D. P. 2004. The use of simulation for training teamwork skills in health care: how low can you go? *Quality and Safety in Health Care*, 13, i51-i56.
- Becker, B. & Gerhart, B. 1996. The impact of Human Resource Management on organizational performance: progress and prospects. *The Academy of Management Journal*, 39, 779-801.

- Becker, B. E., Huselid, M. A., Pickus, P. S. & Spratt, M. F. 1997. HR as a source of shareholder value: research and recommendations. *Human Resource Management*, 36, 39-47.
- Becker, G. & Kaufman, S. R. 1995. Managing an uncertain illness trajectory in old age: patients' and physicians' views of stroke. *Medical Anthropology Quarterly*, 9, 165-187.
- Bell, S. T. 2007. Deep-level composition variables as predictors of team performance: a meta-analysis. *Journal of Applied Psychology*, 92, 595-615.
- Bendifallah, S. & Scacchi, W. 1989. Work structures and shifts: an empirical analysis of software specification teamwork. *Proceedings of the 11th international conference on Software engineering*. Pittsburgh, Pennsylvania, United States: ACM.
- Bennett, P., Lowe, R., Matthews, V., Dourali, M. & Tattersall, A. 2001. Stress in nurses: coping, managerial support and work demand. *Stress and Health*, 17, 55-63.
- Berchicci, L. & Tucci, C. L. 2010. There is more to market learning than gathering good information: the role of shared team values in radical product definition. *Journal of Product Innovation Management*, 27, 972-990.
- Berridge, E.-J., Kelly, D. & Gould, D. 2007. Staff appraisal and continuing professional development: exploring the relationships in acute and community health settings. *Journal of Research in Nursing*, 12, 57-70.
- Bertelsen, M., Broberg, S. & Madsen, E. 2009. Outcome of physiotherapy as part of a multidisciplinary rehabilitation in an unselected polio population with one-year follow-up: an uncontrolled study. *Journal of Rehabilitation Medicine*, 41, 85-87.
- Bessant, J. & Francis, D. 1997. Implementing the new product development process. *Technovation*, 17, 189-222.
- Bevir, M. 2004. Governance and interpretation: what are the implications of postfoundationalism? *Public Administration*, 82, 605-625.
- Beyer, M., Gerlach, F., Flies, U., Grol, R., Król, Z., Munck, A., Olesen, F., O'riordan, M., Seuntjens, L. & Szecsenyi, J. 2003. The development of quality circles/peer review groups as a method of quality improvement in Europe. *Family Practice*, 20, 443-451.
- Black, I. 2006. The presentation of interpretivist research. *Qualitative Market Research: An International Journal*, 9, 319-324.
- Black, T. M., Soltis, T. & Bartlett, C. 1999. Using the Functional Independence Measure instrument to predict stroke rehabilitation outcomes. *Rehabilitation Nursing*, 24, 109-121.
- Bland, J. M. & Altman, D. G. 1997. Cronbach's alpha. *British Medical Journal*, 314, 572.
- Blest, J. P., Hunt, R. G. & Shadle, C. C. 1992. Action teams in the total quality process: experience in a job shop. *National Productivity Review*, 11, 195-202.
- Bloor, K. & Maynard, A. 1998. Rewarding healthcare teams. *BMJ*, 316, 569-570.
- Boaden, N. & Leaviss, J. 2000. Putting teamwork in context. *Medical Education*, 34, 921-927.
- Bodinson, G. W. 2005. Change healthcare organizations from good to great. *Quality Progress*, 38, 22-29.
- Boiko, E. A., Kulishova, T. V., Shumakher, G. I. & Iusupkhodzhaev, R. V. 2008. The role of physical exercises in the improvement of cognitive functions in patients who

- survived stroke, in the early rehabilitative period. *Voprosy Kurortologii, Fizioterapii i Lechebnoi Fizicheskoi Kultury*, 9-12.
- Bonias, D., Bartram, T., Leggat, S. G. & Stanton, P. 2010. Does psychological empowerment mediate the relationship between high performance work systems and patient care quality in hospitals? *Asia Pacific Journal of Human Resources*, 48, 319-337.
- Boon, H., Verhoef, M., O'hara, D. & Findlay, B. 2004. From parallel practice to integrative health care: a conceptual framework. *BMC Health Services Research*, 4.
- Boon, H. S., Mior, S. A., Barnsley, J., Ashbury, F. D. & Haig, R. 2009. The difference between integration and collaboration in patient care: results from key informant interviews working in multiprofessional health care teams. *Journal of Manipulative and Physiological Therapeutics*, 32, 715-722.
- Boonyasai, R. T., Windish, D. M., Chakraborti, C., Feldman, L. S., Rubin, H. R. & Bass, E. B. 2007. Effectiveness of teaching quality improvement to clinicians: a systematic review. *JAMA: The Journal of the American Medical Association*, 298, 1023-1037.
- Booth, A. 2006. Counting what counts: performance measurement and evidence-based practice. *Performance Measurement and Metrics*, 7, 63-74.
- Borglund, S. T. 2008. Case management quality-of-life outcomes for adults with a disability. *Rehabilitation Nursing*, 33, 260-267.
- Borrill, C., West, M., Shapiro, D. & Rees, A. 2000. Team working and effectiveness in health care. *British Journal of Health Care Management*, 6, 364-371.
- Boselie, P. 2010. High performance work practices in the health care sector: a Dutch case study. *International Journal of Manpower*, 31, 42-58.
- Boselie, P., Dietz, G. & Boon, C. 2005. Commonalities and contradiction in HRM and performance research. *Human Resource Management Journal*, 15, 67-94.
- Bowen, D. E. & Ostroff, C. 2004. Understanding HRM-firm performance linkages: the role of the "strength" of the HRM system. *The Academy of Management Review*, 29, 203-221.
- Bower, P., Campbell, S., Bojke, C. & Sibbald, B. 2003. Team structure, team climate and the quality of care in primary care: an observational study. *Quality & Safety in Health Care*, 12, 273-279.
- Bowers, C., Salas, E., Prince, C. & Brannick, M. 1992. Games teams play: a method for investigating team coordination and performance. *Behavior Research Methods*, 24, 503-506.
- Bowers, M. R. & Taylor, J. A. 1990. Product line management in hospitals: an exploratory study of managing change. *Hospital & health services administration*, 35, 365-375.
- Boxall, P. F. 1992. Strategic Human Resource Management: beginnings of a new theoretical sophistication? *Human Resource Management Journal*, 2, 60-79.
- Bradley, E. H., Curry, L. A. & Devers, K. J. 2007. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Services Research*, 42, 1758-1772.
- Bradley, E. H., Holmboe, E. S., Mattera, J. A., Roumanis, S. A., Radford, M. J. & Krumholz, H. M. 2001. A qualitative study of increasing  $\beta$ -blocker use after myocardial infarction: why do some hospitals succeed? *JAMA: The Journal of the American Medical Association*, 285, 2604-2611.

- Bradley, P., Cooper, S. & Duncan, F. 2009. A mixed-methods study of interprofessional learning of resuscitation skills. *Medical Education*, 43, 912-922.
- Brannick, M. T., Roach, R. M. & Salas, E. 1993. Understanding team performance: a multimethod study. *Human Performance*, 6, 287-308.
- Brazier, D. K. 2005. Influence of contextual factors on health-care leadership. *Leadership and Organization Development Journal*, 26, 128-140.
- Bretthauer, K. M. 2004. Service management. *Decision Sciences*, 35, 325-332.
- Bronstein, L. R. 2003. A model for interdisciplinary collaboration. *Social Work*, 48, 297-306.
- Brown, C. A. & Richardson, C. 2006. Nurses in the multi-professional pain team: a study of attitudes, beliefs and treatment endorsements. *European Journal of Pain*, 10, 13-22.
- Brown, D. 1996. Team rewards: lessons from the coal-face. *Team Performance Management*, 2, 6-12.
- Brown, J. B., Boles, M., Mullooly, J. P. & Levinson, W. 1999. Effect of clinician communication skills training on patient satisfaction. A randomized, controlled trial. *Annals of Internal Medicine*, 131, 822-829.
- Brown, J. S. & Semradek, J. 1992. Secondary data on health-related subjects: major sources, uses, and limitations. *Public Health Nursing*, 9, 162-171.
- Brown, M. P., Sturman, M. C. & Simmering, M. J. 2003. Compensation policy and organizational performance: the efficiency, operational, and financial implications of pay levels and pay structure. *Academy of Management Journal* 46, 752-762.
- Browning, V., Edgar, F., Gray, B. & Garrett, T. 2009. Realising competitive advantage through HRM in New Zealand service industries. *The Service Industries Journal*, 29, 741-760.
- Bryan, Y. E., Hitchings, K. S., Fox, M. A., Kinneman, M. T. & Young, M. J. 1998. The evaluation of hospital restructuring efforts: satisfaction, quality, and costs. *Quality Management in Healthcare*, 6, 22-34.
- Bryman, A. 2006. Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, 6, 97-113.
- Buchan, J. 1999. Still attractive after all these years? Magnet hospitals in a changing health care environment. *Journal of Advanced Nursing*, 30, 100-108.
- Buchan, J. 2004. What difference does ("good") HRM make? *Human Resources for Health*, 2.
- Budhwar, P. S. & Sparrow, P. R. 1997. Evaluating levels of strategic integration and devolvment of human resource management in India. *The International Journal of Human Resource Management*, 8, 476-494.
- Bunting, R. W. & Shea, B. 2001. Bone metastasis and rehabilitation. *Cancer*, 92, 1020-1028.
- Burnard, P., Gill, P., Stewart, K., Treasure, E. & Chadwick, B. 2008. Analysing and presenting qualitative data. *British Dental Journal*, 204, 429-432.
- Burningham, C. & West, M. A. 1995. Individual, climate, and group interaction processes as predictors of work team innovation. *Small Group Research*, 26, 106-117.
- Burtscher, M. J. & Manser, T. 2012. Team mental models and their potential to improve teamwork and safety: a review and implications for future research in healthcare. *Safety Science*, 50, 1344-1354.

- Buston, K., Parry-Jones, W., Livingston, M., Bogan, A. & Wood, S. 1998. Qualitative research. *British Journal of Psychiatry*, 172, 197-199.
- Butler Jr, J. K., Cantrell, R. S. & Flick, R. J. 1999. Transformational leadership behaviors, upward trust, and satisfaction in self-managed work teams. *Organization Development Journal*, 17, 13-28.
- Byrne, M. 2006. Implementing performance management in the Irish health sector. *Health Care Manager*, 25, 114-121.
- Cacioppe, R. 1999. Using team - individual reward and recognition strategies to drive organizational success. *Leadership and Organizational Development Journal*, 20, 322-331.
- Capella, J., Smith, S., Philp, A., Putnam, T., Gilbert, C., Fry, W., Harvey, E., Wright, A., Henderson, K., Baker, D., Ranson, S. & Remine, S. 2010. Teamwork training improves the clinical care of trauma patients. *Journal of Surgical Education*, 67, 439-443.
- Caracelli, V. J. & Greene, J. C. 1993. Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 15, 195-207.
- Carayon, P., Schoofs Hundt, A., Karsh, B.-T., Gurses, A. P., Alvarado, C. J., Smith, M. & Flatley Brennan, P. 2006. Work system design for patient safety: the SEIPS model. *Quality and Safety in Health Care*, 15, i50-i58.
- Carayon, P. & Smith, M. J. 2000. Work organization and ergonomics. *Applied Ergonomics*, 31, 649-662.
- Cardy, R. L., Dobbins, G. H. & Carson, K. P. 1995. TQM and HRM: improving performance appraisal research, theory, and practice. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration*, 12, 106-115.
- Carlile, P. R. 2002. A pragmatic view of knowledge and boundaries: boundary objects in new product development. *Organization Science*, 13, 442-455.
- Carney, M. 2004. Middle manager involvement in strategy development in not-for profit organizations: the director of nursing perspective – how organizational structure impacts on the role. *Journal of Nursing Management*, 12, 13-21.
- Casarett, D. J., Hirschman, K. B., Coffey, J. F. & Pierre, L. 2002. Does a palliative care clinic have a role in improving end-of-life care? Results of a pilot program. *Journal of palliative medicine*, 5, 387-396.
- Casey, K., Fink, R. R., Krugman, A. M. & Propst, F. J. 2004. The graduate nurse experience. *Journal of Nursing Administration*, 34, 303-311.
- Cashman, S. B., Reidy, P., Cody, K. & Lemay, C. A. 2004. Developing and measuring progress toward collaborative, integrated, interdisciplinary health care teams. *Journal of Interprofessional Care*, 18, 183-196.
- Castka, P., Sharp, J. M. & Bamber, C. J. 2003. Assessing teamwork development to improve organizational performance. *Measuring Business Excellence*, 7, 29-36.
- Chakraborti, C., Boonyasai, R., Wright, S. & Kern, D. 2008. A systematic review of teamwork training interventions in medical student and resident education. *Journal of General Internal Medicine*, 23, 846-853.
- Chan, C., Tang, D. & Jones, A. 2008. Clinical outcomes of a cardiac rehabilitation and maintenance program for Chinese patients with congestive heart failure. *Disability & Rehabilitation*, 30, 1245-1253.

- Chandra, A. 2006. Employee evaluation strategies for healthcare organizations—a general guide. *Hospital Topics*, 84, 34-38.
- Chaston, I. 1998. Self-managed teams: assessing the benefits for small service-sector firms. *British Journal of Management*, 9, 1-12.
- Cheung, S. O., Thomas Ng, S., Lam, K. C. & Yue, W. M. 2001. A satisfying leadership behaviour model for design consultants. *International Journal of Project Management*, 19, 421-429.
- Chi, N.-W., Huang, Y.-M. & Lin, S.-C. 2009. A double-edged sword? Exploring the curvilinear relationship between organizational tenure diversity and team innovation: the moderating role of team-oriented HR practices. *Group & Organization Management*, 34, 698-726.
- Chiocchio, F., Grenier, S., O'Neill, T. A., Savaria, K. & Willms, J. D. 2012. The effects of collaboration on performance: a multilevel validation in project teams. *International Journal of Project Organisation and Management*, 4, 1-37.
- Clark, P. G. 1997. Values in health care professional socialization: implications for geriatric education in interdisciplinary teamwork. *The Gerontologist*, 37, 441-451.
- Clason, D. L. & Dormody, T. J. 1994. Analyzing data measured by individual Likert-type items. *Journal of Agricultural Education*, 35, 31-35.
- Cleary, M., Freeman, A. & Sharrock, L. 2005. The development, implementation, and evaluation of a clinical leadership program for mental health nurses. *Issues in Mental Health Nursing*, 26, 827-842.
- Cohen, S. G., Ledford, G. E. & Spreitzer, G. M. 1996. A predictive model of self-managing work team effectiveness. *Human Relations*, 49, 643-676.
- Cole, M. S., Walter, F. & Bruch, H. 2008. Affective mechanisms linking dysfunctional behavior to performance in work teams: a moderated mediation study. *Journal of Applied Psychology*, 93, 945-958.
- Collins, D. & Collins, J. 2011. Putting them together: skill packages to optimize team/group performance. *Performance Psychology*. Edinburgh: Churchill Livingstone.
- Collopy, B. T. 2000. Clinical indicators in accreditation: an effective stimulus to improve patient care. *International Journal for Quality in Health Care*, 12, 211-216.
- Conlon, M. 2003. Appraisal: the catalyst of personal development. *BMJ*, 327, 389-391.
- Connell, J., Lynch, C. & Waring, P. 2001. Constraints, compromises and choice: comparing three qualitative research studies *The Qualitative Report*, 6.
- Coomber, B. & Barriball, K. L. 2007. Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International Journal of Nursing Studies*, 44, 297-314.
- Cooper, C. L., Rout, U. & Faragher, B. 1989. Mental health, job satisfaction, and job stress among general practitioners. *BMJ (Clinical research ed.)*, 298, 366-370.
- Corrigan, K. & Ryan, R. H. 2004. New reimbursement models reward clinical excellence. *Healthcare financial management : journal of the Healthcare Financial Management Association*, 58, 88-92.
- Cortina, J. M. 1993. What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78, 98-104.
- Cott, C. 1998. Structure and meaning in multidisciplinary teamwork. *Sociology of Health & Illness*, 20, 848-873.

- Creswell, J. W., Fetters, M. D. & Ivankova, N. V. 2004. Designing a mixed methods study in primary care. *The Annals of Family Medicine*, 2, 7-12.
- Creswell, J. W., Hanson, W. E., Clark Plano, V. L. & Morales, A. 2007. Qualitative research designs: selection and implementation. *The Counseling Psychologist*, 35, 236-264.
- Creswell, J. W. & Miller, D. L. 2000. Determining validity in qualitative inquiry. *Theory Into Practice*, 39, 124-130.
- Cronbach, L. J. & Shavelson, R. J. 2004. My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement*, 64, 391-418.
- Cummings, G. G., Macgregor, T., Davey, M., Lee, H., Wong, C. A., Lo, E., Muise, M. & Stafford, E. 2010. Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review. *International Journal of Nursing Studies*, 47, 363-385.
- Currie, G. & Procter, S. 2003. The interaction of human resource policies and practices with the implementation of teamworking: evidence from the UK public sector. *The International Journal of Human Resource Management*, 14, 581-599.
- Dackert, I. 2010. The impact of team climate for innovation on well-being and stress in elderly care. *Journal of Nursing Management*, 18, 302-310.
- Dagnone, J. D., McGraw, R. C., Pulling, C. A. & Patteson, A. K. 2008. Interprofessional resuscitation rounds: a teamwork approach to ACLS education. *Medical Teacher*, 30, e49-e54.
- Dale, B. G., Elkjaer, M. B. F., Van Der Wiele, A. & Williams, A. R. T. 2001. Fad, fashion and fit: an examination of quality circles, business process re-engineering and statistical process control. *International Journal of Production Economics*, 73, 137-152.
- Dansky, K. H., Weech-Maldonado, R., De Souza, G. & Dreachslin, J. L. 2003. Organizational strategy and diversity management: diversity-sensitive orientation as a moderating influence. *Health Care Management Review*, 28, 243-253.
- Datta, L.-E. 1997. A pragmatic basis for mixed-method designs. *New Directions for Evaluation*, 1997, 33-46.
- Davenport, D. L., Henderson, W. G., Mosca, C. L., Khuri, S. F. & Mentzer Jr, R. M. 2007. Risk-adjusted morbidity in teaching hospitals correlates with reported levels of communication and collaboration on surgical teams but not with scale measures of teamwork climate, safety climate, or working conditions. *Journal of the American College of Surgeons*, 205, 778-784.
- Davies, H. T. O. & Crombie, I. K. 1997. Interpreting health outcomes. *Journal of Evaluation in Clinical Practice*, 3, 187-199.
- Dawis, R. V. 1987. Scale construction. *Journal of Counseling Psychology*, 34, 481-489.
- De Dreu, C. K. W. & Weingart, L. R. 2003. Task versus relationship conflict, team performance, and team member satisfaction: a meta-analysis. *Journal of Applied Psychology*, 88, 741-749.
- De Leede, J. & Looise, J. K. 2005. Innovation and HRM: towards an integrated framework. *Creativity and Innovation Management*, 14, 108-117.
- De Prins, P. & Henderickx, E. 2007. HRM effectiveness in older people's and nursing homes: the search for best (quality) practices. *Nonprofit and Voluntary Sector Quarterly*, 36, 549-571.

- Debettignies, C. W. 1989. Improving organization-wide teamwork through gainsharing. *National Productivity Review*, 8, 287-294.
- Deci, E. L. 1972. The effects of contingent and noncontingent rewards and controls on intrinsic motivation. *Organizational Behavior and Human Performance*, 8, 217-229.
- Degeling, P., Maxwell, S., Kennedy, J. & Coyle, B. 2003. Medicine, management, and modernisation: a "danse macabre"? *BMJ (Clinical research ed.)*, 326, 649-652.
- Delarue, A., Van Hootegem, G., Procter, S. & Burrridge, M. 2008. Teamworking and organizational performance: a review of survey-based research. *International Journal of Management Reviews*, 10, 127-148.
- Delery, J. E. & Doty, D. H. 1996. Modes of theorizing in Strategic Human Resource Management: tests of universalistic, contingency, and configurational performance predictions. *The Academy of Management Journal*, 39, 802-835.
- Della Chiesa, B., Christoph, V. & Hinton, C. 2009. How many brains does it take to build a new light: knowledge management challenges of a transdisciplinary project. *Mind, Brain, and Education*, 3, 17-26.
- Deloach, R. J. 2002. *Factors influencing job satisfaction among interdisciplinary team members working in hospice settings in Central Ohio*. 63, ProQuest Information & Learning: US.
- Deloach, R. J. & A. 2002. *Factors influencing job satisfaction among interdisciplinary team members working in hospice settings in Central Ohio*. 63, ProQuest Information & Learning: US.
- Den Hartog, D. N., Van Muijen, J. J. & Koopman, P. L. 1997. Transactional versus transformational leadership: an analysis of the MLQ. *Journal of Occupational and Organizational Psychology*, 70, 19-34.
- Denison, D. R., Hart, S. L. & Kahn, J. A. 1996. From chimneys to cross-functional teams: developing and validating a diagnostic model. *The Academy of Management Journal*, 39, 1005-1023.
- Denscombe, M. 2008. Communities of practice. *Journal of Mixed Methods Research*, 2, 270-283.
- Deo, S. D., Knottenbelt, J. D. & Peden, M. M. 1997. Evaluation of a small trauma team for major resuscitation. *Injury*, 28, 633-637.
- Devaro, J. E. D. 2006. Teams, autonomy, and the financial performance of firms. *Industrial Relations: A Journal of Economy and Society*, 45, 217-269.
- Dieleman, M., Gerretsen, B. & Van Der Wilt, G. J. 2009. Human Resource Management interventions to improve health workers' performance in low and middle income countries: a realist review. *Health research policy and systems / BioMed Central*, 7, 7.
- Dimick, J. B., Pronovost, P. J., Heitmiller, R. F. & Lipsett, P. A. 2001. Intensive care unit physician staffing is associated with decreased length of stay, hospital cost, and complications after esophageal resection. *Critical Care Medicine*, 29, 753-758.
- Dirks, K. T. 2000. Trust in leadership and team performance: evidence from NCAA basketball. *Journal of Applied Psychology*, 85, 1004-1012.
- Dixon, D. L. 1999. Achieving results through transformational leadership. *The Journal of nursing administration*, 29, 17-21.



- Donnellon, A. 1993. Crossfunctional teams in product development: accomodating the structure to the process. *Journal of Product Innovation Management*, 10, 377-392.
- Dorenbosch, L., Engen, M. L. V. & Verhagen, M. 2005. On-the-job innovation: the impact of job design and Human Resource Management through production ownership. *Creativity and Innovation Management*, 14, 129-141.
- Drach-Zahavy, A. 2004. Exploring team support: the role of team's design, values, and leader's support. *Group Dynamics: Theory, Research, and Practice*, 8, 235-252.
- Dreachslin, J. L., Hunt, P. L. & Sprainer, E. 2000. Workforce diversity: implications for the effectiveness of health care delivery teams. *Social Science & Medicine*, 50, 1403-1414.
- Dreachslin, J. L., Hunt, P. L., Sprainer, E. & Snook, I. D., Jr. 1999. Communication patterns and group composition: implications for patient-centered care team effectiveness / practitioner response. *Journal of Healthcare Management*, 44, 252-268.
- Drinka, T. J. K. 1996. Applying learning from self-directed work teams in business to curriculum development for interdisciplinary geriatric teams. *Educational Gerontology*, 22, 433-450.
- Driskell, J. E. & Salas, E. 1992. Collective behavior and team performance. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 34, 277-288.
- Duckett, S. 1996. Staff stress in head injury rehabilitation. *Brain Injury*, 10, 133-138.
- Duffy, J. R. & Lemieux, K. G. 1995. A cardiac service line approach to patient-centered care. *Nursing Administration Quarterly*, 20, 12-23.
- Duncan, O. D. & Stenbeck, M. 1987. Are Likett scales unidimensional? *Social Science Research*, 16, 245-259.
- Dunin-Keplicz, B. & Verbrugge, R. 2003. Evolution of collective commitment during teamwork. *Fundamenta Informaticae*, 56, 329-371.
- Dunnette, M. D. & Bass, B. M. 1963. Behavioral scientists and personnel management. *Industrial Relations: A Journal of Economy and Society*, 2, 115-130.
- Dunphy, D. & Bryant, B. 1996. Teams: panaceas or prescriptions for improved performance? *Human Relations*, 49, 677-699.
- Durkin, E. M., Deutsch, A. & Heinemann, A. W. 2010. Inpatient rehabilitation facilities: variation in organizational practice in response to prospective payment. *Medical Care Research and Review*, 67, 149-172.
- Dyer, L. & Reeves, T. 1995. Human resource strategies and firm performance: what do we know and where do we need to go? *The International Journal of Human Resource Management*, 6, 656-670.
- Easley, R. F., Devaraj, S. & Crant, J. M. 2003. Relating collaborative technology use to teamwork quality and performance: an empirical analysis. *Journal of Management Information Systems*, 19, 247-268.
- Easterby-Smith, M., Malina, D. & Yuan, L. 1995. How culture-sensitive is HRM? A comparative analysis of practice in Chinese and UK companies. *The International Journal of Human Resource Management*, 6, 31-59.
- Eaton, S. C. 2000. Beyond 'unloving care': linking Human Resource Management and patient care quality in nursing homes. *The International Journal of Human Resource Management*, 11, 591-616.

- Ebright, P. R., Patterson, E. S., Chalko, B. A. & Render, M. L. 2003. Understanding the complexity of registered nurse work in acute care settings. *Journal of Nursing Administration*, 33, 630-638.
- Edgar, F. & Geare, A. 2005. HRM practice and employee attitudes: different measures - different results. *Personnel Review*, 34, 534-549,622.
- Edmondson, A. 1999. Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44, 350-383.
- Edmondson, A. C. 2003. Speaking up in the operating room: how team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, 40, 1419-1452.
- Edmonstone, J. 1996. Appraising the state of performance appraisal. *Health Manpower Management*, 22, 9-13.
- Edwards, D., Burnard, P., Coyle, D., Fothergill, A. & Hannigan, B. 2000. Stress and burnout in community mental health nursing: a review of the literature. *Journal of Psychiatric and Mental Health Nursing*, 7, 7-14.
- Eisenberg, J. M., Bowman, C. C. & Foster, N. E. 2001. Does a healthy health care workplace produce higher-quality care? *Joint Commission Journal on Quality and Patient Safety*, 27, 444-457.
- Eldar, R., Marincek, C. & Kullmann, L. 2008. Need for rehabilitation teamwork training in Europe. *Croatian medical journal*, 49, 352-357.
- Elloy, D. F., Terpening, W. & Kohls, J. 2001. A causal model of burnout among self-managed work team members. *The Journal of Psychology*, 135, 321-334.
- Elo, S. & Kyngäs, H. 2008. The qualitative content analysis process. *Journal of Advanced Nursing*, 62, 107-115.
- Emilsson, U. M. 2011. The role of social work in cross-professional teamwork: examples from an older people's team in England. *British Journal of Social Work*, 1-19.
- Engel, G. V. 1970. Professional autonomy and bureaucratic organization. *Administrative Science Quarterly*, 15, 12-21.
- England, J. D., Gronseth, G. S., Franklin, G., Carter, G. T., Kinsella, L. J., Cohen, J. A., Asbury, A. K., Szigeti, K., Lupski, J. R., Latov, N., Lewis, R. A., Low, P. A., Fisher, M. A., Herrmann, D. N., Howard, J. F., Jr., Lauria, G., Miller, R. G., Polydefkis, M., Sumner, A. J. & Neurology, A. a. O. 2009. Practice parameter: evaluation of distal symmetric polyneuropathy: role of autonomic testing, nerve biopsy, and skin biopsy (an evidence-based review). Report of the American Academy of Neurology, American Association of Neuromuscular and Electrodiagnostic Medicine, and American Academy of Physical Medicine and Rehabilitation. *Neurology*, 72, 177-184.
- Eppinger, S. D., Whitney, D. E., Smith, R. P. & Gebala, D. A. 1994. A model-based method for organizing tasks in product development. *Research in Engineering Design*, 6, 1-13.
- Estryn-Behar, M., Van Der Heijden, B. I. J. M., Oginska, H., Camerino, D., Le Nezet, O., Conway, P. M., Fry, C., Hasselhorn, H.-M. & Group, N. S. 2007. The impact of social work environment, teamwork characteristics, burnout, and personal factors upon intent to leave among European nurses. *Medical Care*, 45, 939-950.

- Eve, J. D. 2004. Sustainable practice: how practice development frameworks can influence team work, team culture and philosophy of practice. *Journal of Nursing Management*, 12, 124-130.
- Ezzamel, M. & Willmott, H. 1998. Accounting for teamwork: a critical study of group-based systems of organizational control. *Administrative Science Quarterly*, 43, 358-396.
- Farrell, M. P., Schmitt, M. H. & Heinemann, G. D. 2001. Informal roles and the stages of interdisciplinary team development. *Journal of Interprofessional Care*, 15, 281-295.
- Fay, D., Borrill, C., Amir, Z., Haward, R. & West, M. A. 2006. Getting the most out of multidisciplinary teams: a multi-sample study of team innovation in health care. *Journal of Occupational and Organizational Psychology*, 79, 553-567.
- Feilzer, M. Y. 2010. Doing mixed methods research pragmatically: implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, 4, 6-16.
- Feng, Q. & Manuel, C. M. 2008. Under the knife: a national survey of six sigma programs in US healthcare organizations. *International Journal of Health Care Quality Assurance*, 21, 535-547.
- Ferris, G. R., Arthur, M. M., Berkson, H. M., Kaplan, D. M., Harrell-Cook, G. & Frink, D. D. 1998. Toward a social context theory of the Human Resource Management-organization effectiveness relationship. *Human Resource Management Review*, 8, 235-264.
- Ferris, G. R. & Wagner, J. A. 1985. Quality circles in the United States: a conceptual reevaluation. *The Journal of Applied Behavioral Science*, 21, 155-167.
- Festinger, L. 1950. Informal social communication. *Psychological Review*, 57, 271-282.
- Firth-Cozens, J. 2001. Interventions to improve physicians' well-being and patient care. *Social Science & Medicine*, 52, 215-222.
- Fischer, U., McDonnell, L. & Orasanu, J. 2007. Linguistic correlates of team performance: toward a tool for monitoring team functioning during space missions. *Aviation, Space, and Environmental Medicine*, 78, B86-B95.
- Fisher, C. D. 1989. Current and recurrent challenges in HRM. *Journal of Management*, 15, 157-180.
- Flax, H. J. 2000. The future of physical medicine and rehabilitation. *American journal of physical medicine & rehabilitation / Association of Academic Physiatrists*, 79, 79-86.
- Fleetwood, S. & Hesketh, A. 2006. HRM-performance research: under-theorized and lacking explanatory power. *The International Journal of Human Resource Management*, 17, 1977-1993.
- Fleissig, A., Jenkins, V., Catt, S. & Fallowfield, L. 2006. Multidisciplinary teams in cancer care: are they effective in the UK? *The Lancet Oncology*, 7, 935-943.
- Flood, A. B. & Fennell, M. L. 1995. Through the lenses of organizational sociology: the role of organizational theory and research in conceptualizing and examining our health care system. *Journal of Health and Social Behavior*, 35, 154-169.
- Flowers, N., Mertens, S. B. & Mulhall, P. F. 2000. Research on middle school renewal: what makes interdisciplinary teams effective? *Middle School Journal*, 31, 53-56.

- Flynn, B. B. & Saladin, B. 2006. Relevance of Baldrige constructs in an international context: a study of national culture. *Journal of Operations Management*, 24, 583-603.
- Fosbinder, D. 1994. Patient perceptions of nursing care: an emerging theory of interpersonal competence. *Journal of Advanced Nursing*, 20, 1085-1093.
- Fossey, E., Harvey, C., McDermott, F. & Davidson, L. 2002. Understanding and evaluating qualitative research. *Australian and New Zealand Journal of Psychiatry*, 36, 717-732.
- Fowlkes, J. E., Lane, N. E., Salas, E., Franz, T. & Oser, R. 1994. Improving the measurement of team performance: the TARGETs methodology. *Military Psychology*, 6, 47-61.
- Frances, M. H. 1997. En route to TQM: organizational learning through quality circles. *Training for Quality*, 5, 84-87.
- Francis, H. & Keegan, A. 2006. The changing face of HRM: in search of balance. *Human Resource Management Journal*, 16, 231-249.
- Franck, L. R. & Langenkamp, M. L. 2000. Mandatory education via the computer: cost-effective, convenient, and creative. *Journal for Nurses in Staff Development*, 16, 157-163.
- Franco, L. M., Bennett, S. & Kanfer, R. 2002. Health sector reform and public sector health worker motivation: a conceptual framework. *Social Science & Medicine*, 54, 1255-1266.
- François, C. 2006. Transdisciplinary unified theory. *Systems Research and Behavioral Science*, 23, 617-624.
- French, W. L. & Hollmann, R. W. 1975. Management by objectives - the team approach. *California Management Review*, 17, 13-22.
- Freshwater, D. 2007. Reading mixed methods research: contexts for criticism. *Journal of Mixed Methods Research*, 1, 134-146.
- Freshwater, D. & Avis, M. 2004. Analysing interpretation and reinterpreting analysis: exploring the logic of critical reflection. *Nursing Philosophy*, 5, 4-11.
- Friedman, L. H. & Bernell, S. L. 2006. The importance of team level tacit knowledge and related characteristics of high-performing health care teams. *Health Care Management Review*, 31, 223-230.
- Galang, M. C. & Ferris, G. R. 1997. Human resource department power and influence through symbolic action. *Human Relations*, 50, 1403-1426.
- Gary, K., Philip, S. & Claire, E. 2002. Teams as a learning forum for accounting professionals. *The Journal of Management Development*, 21, 427-460.
- Gekoski, N. 1952. Predicting group productivity. *Personnel Psychology*, 5, 281-292.
- Gelade, G. A. & Ivery, M. 2003. The impact of Human Resource Management and work climate on organizational performance. *Personnel Psychology*, 56, 383-404.
- Genardini, N., Wilson, S. J., Lawrence, J. A. & Hare, D. L. 2008. Patterns of psychosocial adjustment following cardiac surgery. *Journal of Cardiopulmonary Rehabilitation & Prevention*, 28, 397-401.
- Gene-Badia, J., Ascaso, C., Escaramis-Babiano, G., Catalan-Ramos, A., Pujol-Ribera, E. & Sampietro-Colom, L. 2008. Population and primary health-care team characteristics explain the quality of the service. *Health Policy*, 86, 335-344.

- Gene-Badia, J., Jodar-Sola, G., Peguero-Rodriguez, E., Contel-Segura, J. C. & Moliner-Molins, C. 2001. The EFQM excellence model is useful for primary health care teams. *Family Practice*, 18, 407-409.
- Gerhart, B., Wright, P. M. & McMahan, G. C. 2000. Measurement error in research on the human resources and firm performance relationship: further evidence and analysis. *Personnel Psychology*, 53, 855-872.
- Gibbon, B., Watkins, C., Barer, D., Waters, K., Davies, S., Lightbody, L. & Leathley, M. 2002. Can staff attitudes to team working in stroke care be improved? *Journal of Advanced Nursing*, 40, 105-111.
- Gibson, C. B. & Zellmer-Bruhn, M. E. 2001. Metaphors and meaning: an intercultural analysis of the concept of teamwork. *Administrative Science Quarterly*, 46, 274-303.
- Giddings, L. S. 2006. Mixed-methods research. *Journal of Research in Nursing*, 11, 195-203.
- Gil, F., Rico, R., Alcover, C., M. & Barrasa, Á. 2005. Change-oriented leadership, satisfaction and performance in work groups: effects of team climate and group potency. *Journal of Managerial Psychology*, 20, 312-328.
- Goetzel, R. Z., Ozminkowski, R. J., Sederer, L. I. & Mark, T. L. 2002. The business case for quality mental health services: why employers should care about the mental health and well-being of their employees. *Journal of Occupational and Environmental Medicine*, 44, 320-330.
- Goll, I., Sambharya, R. B. & Tucci, L. A. 2001. Top management team composition, corporate ideology, and firm performance. *MIR: Management International Review*, 41, 109-129.
- Goltz, S. M., Hietapelto, A. B., Reinsch, R. W. & Tyrell, S. K. 2008. Teaching Teamwork and Problem Solving Concurrently. *Journal of Management Education*, 32, 541-562.
- Goni, S. 1999. An analysis of the effectiveness of Spanish primary health care teams. *Health Policy*, 48, 107-117.
- González-Romá, V., Fortes-Ferreira, L. & Peiró, J. M. 2009. Team climate, climate strength and team performance. A longitudinal study. *Journal of Occupational and Organizational Psychology*, 82, 511-536.
- Gosling, A. S., Westbrook, J. I. & Braithwaite, J. 2003. Clinical team functioning and IT innovation: a study of the diffusion of a point-of-care online evidence system. *Journal of the American Medical Informatics Association*, 10, 244-251.
- Graber, D. R. & Kilpatrick, A. O. 2008. Establishing values-based leadership and value systems in healthcare organizations. *Journal of Health and Human Services Administration*, 31, 179-197.
- Grace, M. 2004. Cost effective teamwork. *British Dental Journal*, 197, 447.
- Graham, S. K. & Cameron, I. D. 2008. A survey of rehabilitation services in Australia. *Australian Health Review*, 32, 392-399.
- Graham, S. K., Cameron, I. D. & Dickson, H. G. 2008. Analysis of draft Australian rehabilitation service standards: comparison with international standards. *Australia and New Zealand Health Policy*, 5, 1-8.
- Gray, A. & Jenkins, B. 1995. From public administration to public management: reassessing a revolution? *Public Administration*, 73, 75-99.

- Greenberg, G. A., Rosenheck, R. A. & Charns, M. P. 2003. From profession-based leadership to service line management in the Veterans Health Administration: impact on mental health care. *Medical Care*, 41, 1013-1023
- Greene, C. N. 1989. Cohesion and productivity in work groups. *Small Group Research*, 20, 70-86.
- Greene, J. 2005. Different generations different expectations. *Hospitals & Health Networks*, 79, 34-42.
- Greene, J. C. & Caracelli, V. J. 1997. Defining and describing the paradigm issue in mixed-method evaluation. *New Directions for Evaluation*, 1997, 5-17.
- Greenhalgh, T. 2008. Role of routines in collaborative work in healthcare organisations. *British Medical Journal*, 337, 1269-1271.
- Greenhalgh, T. & Peacock, R. 2005. Effectiveness and efficiency of search methods in systematic reviews of complex evidence: audit of primary sources. *British Medical Journal* 331, 1064-1065.
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. & Kyriakidou, O. 2004. Diffusion of innovations in service organizations: systematic review and recommendations. *Milbank Quarterly*, 82, 581-629.
- Greer, C. R., Youngblood, S. A. & Gray, D. A. 1999. Human Resource Management outsourcing: the make or buy decision. *The Academy of Management Executive* (1993-2005), 13, 85-96.
- Grieves, J. & Redman, T. 1999. Living in the shadow of OD: HRD and the search for identity. *Human Resource Development International*, 2, 81-102.
- Griffin, A. & Hauser, J. R. 1992. Patterns of communication among marketing, engineering and manufacturing-a comparison between two new product teams. *Management Science*, 38, 360-373.
- Griffin, M. A., Patterson, M. G. & West, M. A. 2001. Job satisfaction and teamwork: the role of supervisor support. *Journal of organizational behavior*, 22, 537-550.
- Griffin, R. W. 1988. Consequences of quality circles in an industrial setting: a longitudinal assessment. *The Academy of Management Journal*, 31, 338-358.
- Gronning, T. 1997. The emergence and institutionalization of Toyotism: subdivision and integration of the labour force at the Toyota Motor Corporation from the 1950s to the 1970s. *Economic and Industrial Democracy*, 18, 423-455.
- Gronroos, C. 1994. From scientific management to service management: a management perspective for the age of service competition. *International Journal of Service Industry Management*, 5, 5-20.
- Grumbach, K. & Bodenheimer, T. 2004. Can health care teams improve primary care practice? *JAMA: The Journal of the American Medical Association*, 291, 1246-1251.
- Guest, D. 2002. Human Resource Management, corporate performance and employee wellbeing: building the worker into HRM. *Journal of Industrial Relations*, 44, 335-358.
- Guest, D. E. 1987. Human Resource Management and industrial relations. *Journal of Management Studies*, 24, 503-521.
- Guest, D. E. 1990. Human Resource Management and the American dream. *Journal of Management Studies*, 27, 377-397.

- Guest, D. E. 1991. Personnel management: the end of orthodoxy? *British Journal of Industrial Relations*, 29, 149-175.
- Guest, D. E. 1997. Human Resource Management and performance: a review and research agenda. *The International Journal of Human Resource Management*, 8, 263-276.
- Guest, D. E. 2001. Human resource management: when research confronts theory. *The International Journal of Human Resource Management*, 12, 1092-1106.
- Guest, D. E. & Conway, N. 2004. Employee well-being and the psychological contract. A report for the Chartered Institute of Personnel and Development, London, 1-97.
- Guest, D. E., Michie, J., Conway, N. & Sheehan, M. 2003. Human Resource Management and corporate performance in the UK. *British Journal of Industrial Relations*, 41, 291-314.
- Gunderman, R. B. & Huynh, J. 2007. Is radiology presented to medical students as a fulfilling career? *Journal of the American College of Radiology*, 4, 704-710.
- Guthrie, J. P. 2001. High-involvement work practices, turnover, and productivity: evidence from New Zealand. *The Academy of Management Journal*, 44, 180-190.
- Hall, P. 2005. Interprofessional teamwork: professional cultures as barriers. *Journal of Interprofessional Care*, 19, 188-196.
- Hall, P. & Weaver, L. 2001. Interdisciplinary education and teamwork: a long and winding road. *Medical Education*, 35, 867-875.
- Hall, T. & Cox, D. 2009. Clinical supervision: an appropriate term for physiotherapists? *Learning in Health and Social Care*, 8, 282-291.
- Ham, C., Kipping, R. & Mcleod, H. 2003. Redesigning work processes in health care: lessons from the National Health Service. *Milbank Quarterly*, 81, 415-439.
- Hammond, F. M., Grattan, K. D., Sasser, H., Corrigan, J. D., Bushnik, T. & Zafonte, R. D. 2001. Long-term recovery course after traumatic brain injury: a comparison of the Functional Independence Measure and Disability Rating Scale. *The Journal of Head Trauma Rehabilitation*, 16, 318-329.
- Handfield, R. B., Ragatz, G. L., Petersen, K. J. & Monczka, R. M. 1999. Involving suppliers in new product development. *California Management Review*, 42, 59-82.
- Hann, M., Bower, P., Campbell, S., Marshall, M. & Reeves, D. 2007. The association between culture, climate and quality of care in primary health care teams. *Family Practice*, 24, 323-329.
- Harmon, J., Scotti, D. J., Behson, S., Farias, G., Petzel, R., Neuman, J. H. & Keashly, L. 2003. Effects of high-involvement work systems on employee satisfaction and service costs in veterans healthcare. *Journal of healthcare management / American College of Healthcare Executives*, 48, 393-407.
- Harris, C., Cortvriend, P. & Hyde, P. 2007. Human Resource Management and performance in healthcare organizations. *Journal of Health Organization & Management*, 21, 448-459.
- Harrisonl, M. I. 1994. Professional control as process: beyond structural theories. *Human Relations*, 47, 1201-1231.
- Harvey, R. L., Roth, E. J., Heinemann, A. W., Lovell, L. L., Mcguire, J. R. & Diaz, S. 1998. Stroke rehabilitation: clinical predictors of resource utilization. *Archives of Physical Medicine and Rehabilitation*, 79, 1349-1355.

- Hauptman, O. & Hirji, K. K. 1999. Managing integration and coordination in cross-functional teams: an international study of concurrent engineering product development. *R&D Management*, 29, 179-192.
- Hauschildt, J. & Kirchmann, E. 2001. Teamwork for innovation – the ‘troika’ of promoters. *R&D Management*, 31, 41-49.
- Healey, A. N., Undre, S., Sevdalis, N., Koutantji, M. & Vincent, C. A. 2006. The complexity of measuring interprofessional teamwork in the operating theatre. *Journal of Interprofessional Care*, 20, 485-495.
- Healey, A. N., Undre, S. & Vincent, C. A. 2004. Developing observational measures of performance in surgical teams. *Quality and Safety in Health Care*, 13, i33-i40.
- Hearld, L. R., Alexander, J. A., Fraser, I. & Jiang, H. J. 2008. Review: how do hospital organizational structure and processes affect quality of care?: a critical review of research methods. *Medical Care Research and Review*, 65, 259-299.
- Heinemann, G. D., Schmitt, M. H., Farrell, M. P. & Brallier, S. A. 1999. Development of an attitudes toward health care teams scale. *Evaluation & the Health Professions*, 22, 123-142.
- Heinemann, G. D. & Zeiss, A. M. 2002. A model of team performance in health care. In: HEINEMANN, G. D. & ZEISS, A. M. (eds.). Springer US.
- Henderson, J. C. & Venkatraman, N. 1993. Strategic alignment: leveraging information technology for transforming organizations. *IBM Systems Journal*, 32, 472-484.
- Herrman, H., Trauer, T., Warnock, J. & Team, P. L. C. P. 2002. The roles and relationships of psychiatrists and other service providers in mental health services. *Australian and New Zealand Journal of Psychiatry*, 36, 75-80.
- Hershock, R. J., Cowman, C. D. & Peters, D. 1994. From experience: action teams that work. *Journal of Product Innovation Management*, 11, 95-104.
- Hesketh, A. & Fleetwood, S. 2006. Beyond measuring the Human Resources Management-organizational performance link: applying critical realist meta-theory. *Organization*, 13, 677-699.
- Heywood, J. S. & Jirjahn, U. 2004. Teams, teamwork and absence. *Scandinavian Journal of Economics*, 106, 765-782.
- Higgs, M., Plewnia, U. & Ploch, J. 2005. Influence of team composition and task complexity on team performance. *Team Performance Management*, 11, 227-250.
- Hill, S. 1991. Why quality circles failed but Total Quality Management might succeed. *British Journal of Industrial Relations*, 29, 541-568.
- Hilsenroth, M. J., Ackerman, S. J., Clemence, A. J., Strassle, C. G. & Handler, L. 2002. Effects of structured clinician training on patient and therapist perspectives of alliance early in psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, 39, 309-323.
- Hirschfeld, R. R., Jordan, M. H., Feild, H. S., Giles, W. F. & Armenakis, A. A. 2006. Becoming team players: team members' mastery of teamwork knowledge as a predictor of team task proficiency and observed teamwork effectiveness. *Journal of Applied Psychology*, 91, 467-474.
- Hitt, M. A., Hoskisson, R. E. & Nixon, R. D. 1993. A mid-range theory of interfunctional integration, its antecedents and outcomes. *Journal of Engineering and Technology Management*, 10, 161-185.



- Hodgson, D. E. 2004. Project work: the legacy of bureaucratic control in the post-bureaucratic organization. *Organization*, 11, 81-100.
- Hoegl, M. 2005. Smaller teams—better teamwork: how to keep project teams small. *Business Horizons*, 48, 209-214.
- Hoegl, M., Ernst, H. & Proserpio, L. 2007. How teamwork matters more as team member dispersion increases. *Journal of Product Innovation Management*, 24, 156-165.
- Hoegl, M. & Gemuenden, H. G. 2001. Teamwork quality and the success of innovative projects: a theoretical concept and empirical evidence. *Organization Science*, 12, 435-449.
- Hoegl, M. & Parboteeah, P. 2006. Autonomy and teamwork in innovative projects. *Human Resource Management*, 45, 67-79.
- Hoegl, M., Praveen Parboteeah, K. & Gemuenden, H. G. 2003. When teamwork really matters: task innovativeness as a moderator of the teamwork–performance relationship in software development projects. *Journal of Engineering and Technology Management*, 20, 281-302.
- Hoegl, M., Weinkauff, K. & Gemuenden, H. G. 2004. Interteam coordination, project commitment, and teamwork in multiteam R&D projects: a longitudinal study. *Organization Science*, 15, 38-55.
- Hoff, T. J. 2004. Early-stage success in service line implementation. *Health Care Management Review*, 29, 17-30.
- Holland, S., Gaston, K. & Gomes, J. 2000. Critical success factors for cross-functional teamwork in new product development. *International Journal of Management Reviews*, 2, 231-259.
- Hollenbeck, J. R., Derue, D. S. & Guzzo, R. 2004. Bridging the gap between I/O research and HR practice: improving team composition, team training, and team task design. *Human Resource Management*, 43, 353-366.
- Holt, L. H. & Brewster, C. 2003. Line management responsibility for HRM: what is happening in Europe? *Employee Relations*, 25, 228-244.
- Hoobler, J., M & Johnson, N., Brown 2004. An analysis of current Human Resource Management publications. *Personnel Review*, 33, 665-676.
- Hood, C. 1991. A public management for all seasons? *Public Administration*, 69, 3-19.
- Hope-Hailey, V., Gratton, L., McGovern, P., Stiles, P. & Truss, C. 1997. A chameleon function? HRM in the '90s. *Human Resource Management Journal*, 7, 5-18.
- Hope, A. C. A. 1968. A simplified Monte Carlo significance test procedure. *Journal of the Royal Statistical Society. Series B (Methodological)*, 30, 582-598.
- Hope, J. M., Lugassy, D., Meyer, R., Jeanty, F., Myers, S., Jones, S., Bradley, J., Mitchell, R. & Cramer, E. 2005. Bringing interdisciplinary and multicultural team building to health care education: the downstate team-building initiative. *Academic Medicine*, 80, 74-83.
- Hoque, K., Davis, S. & Humphreys, M. 2004. Freedom to do what you are told: senior management team autonomy in an NHS acute trust. *Public Administration*, 82, 355-375.
- Horsfall, A. & Arensberg, C. 1949. Teamwork and productivity in a shoe factory. *Human Organization*, 8, 13-25.
- Horton, B. 1999. Green chemistry puts down roots. *Nature*, 400, 797-799.

- Hsieh, H.-F. & Shannon, S. E. 2005. Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277-1288.
- Hsu, Y.-R. & Leat, M. 2000. A study of HRM and recruitment and selection policies and practices in Taiwan. *The International Journal of Human Resource Management*, 11, 413-435.
- Huang, T.-C. 2000. Are the human resource practices of effective firms distinctly different from those of poorly performing ones? Evidence from Taiwanese enterprises. *The International Journal of Human Resource Management*, 11, 436-451.
- Hughes, G. 2012. Improving communication. *Emergency Medicine Journal*, 29, 266.
- Hughes, J. M. C. 2002. HRM and universalism: is there one best way? *International Journal of Contemporary Hospitality Management*, 14, 221-228.
- Hummels, H. & De Leede, J. 2000. Teamwork and morality: comparing lean production and sociotechnology. *Journal of Business Ethics*, 26, 75-88.
- Huselid, M. A. 1995. The impact of Human Resource Management practices on turnover, productivity, and corporate financial performance. *The Academy of Management Journal*, 38, 635-672.
- Huselid, M. A., Jackson, S. E. & Schuler, R. S. 1997. Technical and Strategic Human Resource Management effectiveness as determinants of firm performance. *The Academy of Management Journal*, 40, 171-188.
- Huston, P. & Naylor, D. 1996. Health services research: reporting on studies using secondary data sources. *Canadian Medical Association Journal*, 155, 1697-1709.
- Hyde, P. 2004. Service design, culture and performance: collusion and co-production in health care. *Human Relations*, 57, 1407-1426.
- Hyde, P., Boaden, R., Cortvriend, P., Harris, C., Marchington, M., Pass, S., Sparrow, P. & Sibbald, B. 2006. Improving health through Human Resource Management. Mapping the territory. *A report for the Chartered Institute of Personnel and Development, London*, 1-98.
- Idvall, E. W. A. & Rooke, L. 1998. Important aspects of nursing care in surgical wards as expressed by nurses. *Journal of Clinical Nursing*, 7, 512-520.
- Iver, D. J. M. 1990. Meeting the needs of young adolescents: advisory groups, interdisciplinary teaching teams, and school transition programs. *The Phi Delta Kappan*, 71, 458-464.
- Iyengar, V. 1988. Biological trace element research: a multidisciplinary science. *Science of The Total Environment*, 71, 1-5.
- Jacobson, S. W. & Jacques, R. 1997. Destabilizing the field. *Journal of Management Inquiry*, 6, 42-59.
- Jain, A. K., Thompson, J. M., Kelley, S. M. & Schwartz, R. W. 2006. Fundamentals of service lines and the necessity of physician leaders. *Surgical Innovation*, 13, 136-144.
- Jansen, L. 2008. Collaborative and interdisciplinary health care teams: ready or not? *Journal of Professional Nursing*, 24, 218-227.
- Janus, K., Amelung, V. E., Baker, L. C., Gaitanides, M., Schwartz, F. W. & Rundall, T. G. 2008. Job satisfaction and motivation among physicians in academic medical centers: insights from a cross-national study. *Journal of Health Politics, Policy & Law*, 33, 1133-1167.

- Jeffcott, S. A. & Mackenzie, C. F. 2008. Measuring team performance in healthcare: review of research and implications for patient safety. *Journal of Critical Care*, 23, 188-196.
- Jehn, K. A. & Bezrukova, K. 2004. A field study of group diversity, workgroup context, and performance. *Journal of organizational behavior*, 25, 703-729.
- Jick, T. D. 1979. Mixing qualitative and quantitative methods: triangulation in action. *Administrative Science Quarterly*, 24, 602-611.
- Jinks, A. M., Lawson, V. & Daniels, R. 2003. A survey of the health needs of hospital staff: implications for health care managers. *Journal of Nursing Management*, 11, 343-350.
- Johnson, R. B. & Onwuegbuzie, A. J. 2004. Mixed methods research: a research paradigm whose time has come. *Educational Researcher*, 33, 14-26.
- Johnson, R. B., Onwuegbuzie, A. J. & Turner, L. A. 2007. Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1, 112-133.
- Johnston, M. V., Wood, K. D. & Fiedler, R. 2003. Characteristics of effective and efficient rehabilitation programs. *Archives of Physical Medicine and Rehabilitation*, 84, 410-418.
- Joyce, C. M., Mcneil, J. J. & Stoelwinder, J. U. 2004. Time for a new approach to medical workforce planning. *Medical Journal of Australia*, 180, 343-346.
- Kabene, S., Orchard, C., Howard, J., Soriano, M. & Leduc, R. 2006. The importance of human resources management in health care: a global context. *Human Resources for Health*, 4, 1478-1491.
- Kalisch, B. J., Curley, M. & Stefanov, S. 2007. An intervention to enhance nursing staff teamwork and engagement. *Journal of Nursing Administration*, 37, 77-84.
- Kanji, G. & Moura E Sá, P. 2003. Sustaining healthcare excellence through performance measurement. *Total Quality Management & Business Excellence*, 14, 269-289.
- Karagozoglu, N. & Brown, W. B. 1993. Time-based management of the new product development process. *Journal of Product Innovation Management*, 10, 204-215.
- Karsh, B.-T., Holden, R. J., Alper, S. J. & Or, C. K. L. 2006. A human factors engineering paradigm for patient safety: designing to support the performance of the healthcare professional. *Quality and Safety in Health Care*, 15, i59-i65.
- Katzenbach, J. R. & Smith, D. K. 2005. The discipline of teams. (cover story). *Harvard Business Review*, 83, 162-171.
- Kaufman, B. E. 2000. Personnel/Human Resource Management: its roots as applied economics. *History of Political Economy*, 32, 227-256.
- Kaufman, B. E. 2010. SHRM Theory in the Post-Huselid Era: Why It Is Fundamentally Misspecified. *Industrial Relations: A Journal of Economy and Society*, 49, 286-313.
- Keating, D. 2007. Improving retention with a recognition overhaul. *Strategic HR Review*, 6, 32-35.
- Keenan, J. 1999. A concept analysis of autonomy. *Journal of Advanced Nursing*, 29, 556-562.
- Keenoy, T. 1999. HRM as hologram: a polemic. *Journal of Management Studies*, 36, 1-23.
- Keeton, K. E., Schmidt, L. L., Slack, K. J. & Malka, A. A. 2012. The rocket science of teams. *Industrial and Organizational Psychology*, 5, 32-35.
- Keith, R. A. 1998. Patient satisfaction and rehabilitation services. *Archives of Physical Medicine and Rehabilitation*, 79, 1122-1128.

- Keith, R. A., Wilson, D. B. & Gutierrez, P. 1995. Acute and subacute rehabilitation for stroke: a comparison *Archives of Physical Medicine and Rehabilitation*, 76, 495-500
- Kelle, U. 2006. Combining qualitative and quantitative methods in research practice: purposes and advantages. *Qualitative Research in Psychology*, 3, 293-311.
- Keller, R. T. 2001. Cross-functional project groups in research and new product development: diversity, communications, job stress, and outcomes. *The Academy of Management Journal*, 44, 547-555.
- Kelley, K., Clark, B., Brown, V. & Sitzia, J. 2003. Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care*, 15, 261-266.
- Kellough, J. E. & Selden, S. C. 2003. The reinvention of public personnel administration: an analysis of the diffusion of personnel management reforms in the States. *Public Administration Review*, 63, 165-176.
- Kelly, M. & Dowling, M. 2008. Patient rehabilitation following lower limb amputation. *Nursing Standard*, 22, 35-40.
- Kerfoot, D. & Knights, D. 1992. Planning for personnel? Human Resource Management reconsidered. *Journal of Management Studies*, 29, 651-668.
- Keyton, J. & Beck, S. J. 2008. Team attributes, processes, and values: a pedagogical framework. *Business Communication Quarterly*, 71, 488-504.
- Khalil, S., Parry, E., Brown, N. & Oyebode, F. 2001. Individual appraisal for senior medical staff. *Psychiatric Bulletin*, 25, 166-169.
- Khatri, N., Wells, J., Mckune, J. & Brewer, M. 2006. Strategic Human Resource Management issues in hospitals: a study of a university and a community hospital. *Hospital Topics*, 84, 9-20.
- Khilji, S. E. & Wang, X. 2006. 'Intended' and 'implemented' HRM: the missing linchpin in Strategic Human Resource Management research. *The International Journal of Human Resource Management*, 17, 1171-1189.
- Khowaja, K., Merchant, R. J. & Hirani, D. 2005. Registered nurses perception of work satisfaction at a tertiary care university hospital. *Journal of Nursing Management*, 13, 32-39.
- Kidd, P. S. & Parshall, M. B. 2000. Getting the focus and the group: enhancing analytical rigor in focus group research. *Qualitative Health Research*, 10, 293-308.
- Kiessling, T. & Harvey, M. 2005. Strategic global Human Resource Management research in the twenty-first century: an endorsement of the mixed-method research methodology. *International Journal of human resource management*, 16, 22-45.
- Kim, Y. & Lee, B. 1995. R&D project team climate and team performance in Korea: a multidimensional approach. *R&D Management*, 25, 179-196.
- King, G., Strachan, D., Tucker, M., Duwyn, B., Desserud, S. & Shillington, M. 2009. The application of a transdisciplinary model for early intervention services. *Infants & Young Children*, 22, 211-223
- Kirschner, K. L., Stocking, C., Wagner, L. B., Foye, S. J. & Siegler, M. 2001. Ethical issues identified by rehabilitation clinicians. *Archives of Physical Medicine and Rehabilitation*, 82, Supplement 2, S2-S8.
- Kitzinger, J. 1994. The methodology of focus groups: the importance of interaction between research participants. *Sociology of Health & Illness*, 16, 103-121.

- Kitzinger, J. 1995. Introducing focus groups. *British Medical Journal*, 311, 299-302.
- Kivimäki, M. & Elovainio, M. 1999. A shorter version of the Team Climate Inventory: development and psychometric properties. *Journal of Occupational and Organizational Psychology*, 72, 241-246.
- Kivimäki, M., Vanhala, A., Pentti, J., Lansisalmi, H., Virtanen, M., Elovainio, M. & Vahtera, J. 2007. Team climate, intention to leave and turnover among hospital employees: prospective cohort study. *BMC Health Services Research*, 7.
- Kjeken, I., Kvien, T. K. & Dagfinrud, H. 2007. Functional assessment in rehabilitation. *Tidsskrift for Den Norske Laegeforening*, 127, 598-599.
- Klein, J. T. 2008. Evaluation of interdisciplinary and transdisciplinary research: a literature review. *American Journal of Preventive Medicine*, 35, S116-S123.
- Kleinman, C. S. 2004. Leadership and retention: research needed. *Journal of Nursing Administration*, 34, 111-113.
- Knapp, M. & Kavanagh, S. 1997. Economic outcomes and costs in the treatment of schizophrenia. *Clinical Therapeutics*, 19, 128-138.
- Kodner, D. L. & Spreeuwenberg, C. 2002. Integrated care: meaning, logic, applications, and implications-a discussion paper. *International journal of integrated care*, 2.
- Koeck, C. 1998. Time for organisational development in healthcare organisations. Improving quality for patients means changing the organisation. *BMJ (Clinical research ed.)*, 317, 1267-1268.
- Komaki, J. L., Desselles, M. L. & Bowman, E. D. 1989. Definitely not a breeze: extending an operant model of effective supervision to teams. *Journal of Applied Psychology*, 74, 522-529.
- Korsch, B. M., Gozzi, E. K. & Francis, V. 1968. Gaps in doctor-patient communications: I. doctor-patient interaction and patient satisfaction. *Pediatrics* 42, 855-871.
- Kotabe, M. & Murray, J. Y. 1990. Linking product and process innovations and modes of international sourcing in global competition: a case of foreign multinational firms. *Journal of International Business Studies*, 21, 383-408.
- Kotabe, M. & Swan, K. S. 1995. The role of strategic alliances in high-technology new product development. *Strategic Management Journal*, 16, 621-636.
- Koubek, J. & Brewster, C. 1995. Human Resource Management in turbulent times: HRM in the Czech Republic. *The International Journal of Human Resource Management*, 6, 223-247.
- Kozlowski, S. W. & Doherty, M. L. 1989. Integration of climate and leadership: examination of a neglected issue. *Journal of Applied Psychology*, 74, 546-553.
- Kratzer, J., Leenders, R. T. a. J. & Van Engelen, J. M. L. 2004. A delicate managerial challenge: how cooperation and integration affect the performance of NPD teams. *Team Performance Management*, 10, 20-25.
- Krugman, M. 2003. Evidence-based practice. The role of staff development. *Journal for nurses in staff development : JNSD : official journal of the National Nursing Staff Development Organization*, 19, 279-285.
- Kulig, K. & Burnfield, J. M. 2008. The role of biomechanics in orthopedic and neurological rehabilitation. *Acta of Bioengineering & Biomechanics*, 10, 3-14.
- Kuprenas, J. A. 2003. Implementation and performance of a matrix organization structure. *International Journal of Project Management*, 21, 51-62.

- Kuptniratsaikul, V., Kovindha, A., Dajpratham, P. & Piravej, K. 2009. Main outcomes of stroke rehabilitation: a multi-centre study in Thailand. *Journal of Rehabilitation Medicine*, 41, 54-58.
- Kvarnstrom, S. 2008. Difficulties in collaboration: a critical incident study of interprofessional healthcare teamwork. *Journal of Interprofessional Care*, 22, 191-203.
- Ladyshevsky, R. K. 2006. Building cooperation in peer coaching relationships: understanding the relationships between reward structure, learner preparedness, coaching skill and learner engagement. *Physiotherapy*, 92, 4-10.
- Lammintakanen, J., Kivinen, T. & Kinnunen, J. 2008. Human resource development in nursing: views of nurse managers and nursing staff. *Journal of Nursing Management*, 16, 556-564.
- Landsberger, H. A. 1967. The behavioral sciences in industry. *Industrial Relations: A Journal of Economy and Society*, 7, 1-19.
- Lankau, M. J. A. 1997. *An examination of mentoring, peer developmental relationships, and team participation as sources of learning in an organization*. 57, ProQuest Information & Learning: US.
- Lankshear, A. J., Sheldon, T. A. & Maynard, A. 2005. Nurse staffing and healthcare outcomes: a systematic review of the international research evidence. *Advances in Nursing Science*, 28, 163-174.
- Larson, E. 1999. The impact of physician-nurse interaction on patient care. *Holistic Nursing Practice*, 13, 38-46.
- Laursen, K. & Foss, N. J. 2003. New Human Resource Management practices, complementarities and the impact on innovation performance. *Cambridge Journal of Economics*, 27, 243-263.
- Laxmisan, A., Hakimzada, F., Sayan, O. R., Green, R. A., Zhang, J. & Patel, V. L. 2007. The multitasking clinician: decision-making and cognitive demand during and after team handoffs in emergency care. *International journal of medical informatics*, 76, 801-811.
- Lee, A. S. 1991. Integrating positivist and interpretive approaches to organizational research. *Organization Science*, 2, 342-365.
- Lee, S. M., Lee, D. & Kang, C.-Y. 2011. The impact of high-performance work systems in the health-care industry: employee reactions, service quality, customer satisfaction, and customer loyalty. *The Service Industries Journal*, 32, 17-36.
- Lee, S. Y. & Alexander, J. A. 1999. Managing hospitals in turbulent times: do organizational changes improve hospital survival? *Health Services Research*, 34, 923-946.
- Leech, N. & Onwuegbuzie, A. 2009. A typology of mixed methods research designs. *Quality & Quantity*, 43, 265-275.
- Leggat, S. 2007. Effective healthcare teams require effective team members: defining teamwork competencies. *BMC Health Services Research*, 7.
- Leggat, S. G., Bartram, T. & Stanton, P. 2011. High performance work systems: the gap between policy and practice in health care reform. *Journal of Health, Organisation and Management*, 25, 281-297.

- Leitch, C. M., Hill, F. M. & Harrison, R. T. 2010. The philosophy and practice of interpretivist research in entrepreneurship. *Organizational Research Methods*, 13, 67-84.
- Lemieux-Charles, L. & Mcguire, W. L. 2006. What do we know about health care team effectiveness? A review of the literature. *Medical Care Research and Review*, 63, 263-300.
- Leonard, M., Graham, S. & Bonacum, D. 2004. The human factor: the critical importance of effective teamwork and communication in providing safe care. *Quality and Safety in Health Care*, 13, i85-i90.
- Lepak, D. P. & Snell, S. A. 1999. The human resource architecture: toward a theory of human capital allocation and development. *The Academy of Management Review*, 24, 31-48.
- Lepine, J. A. 2003. Team adaptation and postchange performance: effects of team composition in terms of members' cognitive ability and personality. *Journal of Applied Psychology*, 88, 27-39.
- Lepine, J. A., Piccolo, R. F., Jackson, C. L., Mathieu, J. E. & Saul, J. R. 2008. A meta-analysis of teamwork processes: tests of a multidimensional model and relationships with team effectiveness criteria. *Personnel Psychology*, 61, 273-307.
- Leshabari, M. T., Muhondwa, E. P., Mwangi, M. A. & Mbembati, N. A. 2008. Motivation of health care workers in Tanzania: a case study of Muhimbili National Hospital. *East African journal of public health*, 5, 32-37.
- Levett-Jones, T. L. 2005. Continuing education for nurses: a necessity or a nicety? *Journal of continuing education in nursing*, 36, 229-233.
- Levin, K. A. 2006. Study design III: cross-sectional studies. *Evidence-Based Dentistry*, 7, 24-25.
- Lichtenstein, R., Alexander, J. A., Jinnett, K. & Ullman, E. 1997. Embedded intergroup relations in interdisciplinary teams. *The Journal of Applied Behavioral Science*, 33, 413-434.
- Lim, B. C. & Ployhart, R. E. 2004. Transformational leadership: relations to the Five-Factor Model and team performance in typical and maximum contexts. *Journal of Applied Psychology*, 89, 610-621.
- Lindy, C. & Reiter, P. 2006. The financial impact of staff development. *Journal of continuing education in nursing*, 37, 121-127.
- Lissitz, R. W. & Green, S. B. 1975. Effect of the number of scale points on reliability: a Monte Carlo approach. *Journal of Applied Psychology*, 60, 10-13.
- Liu, Y., Combs, J. G., Ketchen Jr, D. J. & Ireland, R. D. 2007. The value of Human Resource Management for organizational performance. *Business Horizons*, 50, 503-511.
- Lloréns Montes, F. J., Ruiz Moreno, A. & García Morales, V. 2005. Influence of support leadership and teamwork cohesion on organizational learning, innovation and performance: an empirical examination. *Technovation*, 25, 1159-1172.
- Lohr, K. N., Eleazer, K. & Mauskopf, J. 1998. Health policy issues and applications for evidence-based medicine and clinical practice guidelines. *Health Policy*, 46, 1-19.
- Long, A. F., Kneafsey, R. & Ryan, J. 2003. Rehabilitation practice: challenges to effective team working. *International Journal of Nursing Studies*, 40, 663-673.

- Loo, R. & Loewen, P. 2002. A confirmatory factor-analytic and psychometric examination of the Team Climate Inventory. Full and short versions. *Small Group Research*, 33, 254-265.
- Lovelace, K., Shapiro, D. L. & Weingart, L. R. 2001. Maximizing cross-functional new product teams' innovativeness and constraint adherence: a conflict communications perspective. *The Academy of Management Journal*, 44, 779-793.
- Lowe, G. S. 2002. High-quality healthcare workplaces: a vision and action plan. *Hospital quarterly*, 5, 49-56, 2.
- Lu, H., While, A. E. & Barriball, K. L. 2007. Job satisfaction and its related factors: a questionnaire survey of hospital nurses in mainland China. *International Journal of Nursing Studies*, 44, 574-588.
- Lu, K. Y., Lin, P. L., Wu, C. M., Hsieh, Y. L. & Chang, Y. Y. 2002. The relationships among turnover intentions, professional commitment, and job satisfaction of hospital nurses. *Journal of Professional Nursing*, 18, 214-219.
- Lundy, O. 1994. From personnel management to Strategic Human Resource Management. *The International Journal of Human Resource Management*, 5, 687-720.
- Lytras, M. D. & Pablos, P. O. D. 2008. The role of a "make" or internal Human Resource Management system in Spanish manufacturing companies: empirical evidence. *Human Factors and Ergonomics in Manufacturing & Service Industries*, 18, 464-479.
- Maccallum, R. C., Zhang, S., Preacher, K. J. & Rucker, D. D. 2002. On the practice of dichotomization of quantitative variables. *Psychological Methods*, 7, 19-40.
- Macduffie, J. P. 1995. Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48, 197-221.
- Mackey, K. 1999. Stages of team development. *IEEE Software*, 16, 90-91.
- Mackintosh, S. 2009. Functional independence measure. *The Australian Journal of Physiotherapy*, 55, 65.
- Mahoney, T. A. & Deckop, J. R. 1986. Evolution of concept and practice in Personnel Administration/Human Resource Management (PA/HRM). *Journal of Management*, 12, 223-241.
- Mainz, J., Hansen, A.-M., Palshof, T. & Bartels, P. D. 2009. National quality measurement using clinical indicators: the Danish national indicator project. *Journal of Surgical Oncology*, 99, 500-504.
- Malec, J. F., Torsher, L. C., Dunn, W. F., Wiegmann, D. A., Arnold, J. J., Brown, D. A. & Phatak, V. 2007. The Mayo High Performance Teamwork Scale: reliability and validity for evaluating key crew resource management skills. *Simulation in Healthcare*, 2, 4-10.
- Mallinson, T. R., Bateman, J., Tseng, H.-Y., Manheim, L., Almagor, O., Deutsch, A. & Heinemann, A. W. 2011. A comparison of discharge functional status after rehabilitation in skilled nursing, home health, and medical rehabilitation settings for patients after lower-extremity joint replacement surgery. *Archives of Physical Medicine and Rehabilitation*, 92, 712-720.
- Mann, C. J. 2003. Observational research methods. Research design II: cohort, cross sectional, and case-control studies. *Emergency Medicine Journal*, 20, 54-60.



- Manser, T. 2009. Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*, 53, 143-151.
- Mar Fuentes-Fuentes, M., Albacete-Sáez, C. A. & Lloréns-Montes, F. J. 2004. The impact of environmental characteristics on TQM principles and organizational performance. *Omega*, 32, 425-442.
- Marchington, M. & Grugulis, I. 2000. 'Best practice' Human Resource Management: perfect opportunity or dangerous illusion? *The International Journal of Human Resource Management*, 11, 1104-1124.
- Marchington, M. & Zagelmeyer, S. 2005. Foreword: linking HRM and performance - a never-ending search? *Human Resource Management Journal*, 15, 3-8.
- Marks, M. A., Zaccaro, S. J. & Mathieu, J. E. 2000. Performance implications of leader briefings and team-interaction training for team adaptation to novel environments. *Journal of Applied Psychology*, 85, 971-986.
- Marquis, M. S., Allyson Ross, D. & Ware, J. E., Jr. 1983. Patient satisfaction and change in medical care provider: a longitudinal study. *Medical Care*, 21, 821-829.
- Marshall, M. & Harrison, S. 2005. It's about more than money: financial incentives and internal motivation. *Quality and Safety in Health Care*, 14, 4-5.
- Martell, K. & Carroll, S. J. 1995. How strategic is HRM? *Human Resource Management*, 34, 253-267.
- Martín-Alcázar, F., Romero-Fernández, P. M. & Sánchez-Gardey, G. 2008. Human Resource Management as a field of research. *British Journal of Management*, 19, 103-119.
- Martin, G. 1994. Characteristics of successful health care organizations: the HR dimension. *Health Manpower Management*, 20, 35-40.
- Martin, R., Maytham, B., Case, J. & Fraser, D. 2005. Engineering graduates' perceptions of how well they were prepared for work in industry. *European Journal of Engineering Education*, 30, 167-180.
- Mathieu, J., Maynard, M. T., Rapp, T. & Gilson, L. 2008. Team effectiveness 1997-2007: a review of recent advancements and a glimpse into the future. *Journal of Management*, 34, 410-476.
- Mattick, B. & Miller, D. G. 2006. Teamwork pays. *Journal for Quality & Participation*, 29, 30-33.
- Matveev, A. V. & Nelson, P. E. 2004. Cross cultural communication competence and multicultural team performance. *International Journal of Cross Cultural Management*, 4, 253-270.
- Mayo, E. & Lombard, G. F. F. 1944. Teamwork and labor turnover in the aircraft industry of Southern California. *Harvard University Graduate School of Business Administration Publication*, 32, vii + 30.
- Mazzocco, K., Petitti, D. B., Fong, K. T., Bonacum, D., Brookey, J., Graham, S., Lasky, R. E., Sexton, J. B. & Thomas, E. J. 2009. Surgical team behaviors and patient outcomes. *The American Journal of Surgery*, 197, 678-685.
- McAdams, J. 2000. The essential role of rewarding teams and teamwork. *Compensation & Benefits Management*, 16, 15-27.
- McAlearney, A. S. 2006. Leadership development in healthcare: a qualitative study. *Journal of organizational behavior*, 27, 967-982.

- Mccallin, A. 2001. Interdisciplinary practice – a matter of teamwork: an integrated literature review. *Journal of Clinical Nursing*, 10, 419-428.
- Mcconnell, C. R. 2005. Motivating your employees and yourself: how different is the manager from the staff? *The Health Care Manager*, 24, 284-292.
- Mcconville, T. 2006. Devolved HRM responsibilities, middle-managers and role dissonance. *Personnel Review*, 35, 637-653.
- Mcconville, T. & Holden, L. 1999. The filling in the sandwich: HRM and middle managers in the health sector. *Personnel Review*, 28, 406-424.
- Mcglynn, E. A., Asch, S. M., Adams, J., Keesey, J., Hicks, J., Decristofaro, A. & Kerr, E. A. 2003. The quality of health care delivered to adults in the United States. *The New England Journal of Medicine*, 348, 2635-2645.
- Mckinney, E. H., Barker, J. R., Smith, D. R. & Davis, K. J. 2004. The role of communication values in swift starting action teams: IT insights from flight crew experience. *Information & Management*, 41, 1043-1056.
- Mcperson, K., Headrick, L. & Moss, F. 2001. Working and learning together: good quality care depends on it, but how can we achieve it? *Quality in Health Care*, 10, ii46-ii53.
- Medland, J., Howard-Ruben, J. & Whitaker, E. 2004. Fostering psychosocial wellness in oncology nurses: addressing burnout and social support in the workplace. *Oncology Nursing Forum*, 31, 47-54.
- Mehra, A., Smith, B. R., Dixon, A. L. & Robertson, B. 2006. Distributed leadership in teams: the network of leadership perceptions and team performance. *The Leadership Quarterly*, 17, 232-245.
- Mendibil, K. & Macbryde, J. 2006. Factors that affect the design and implementation of team-based performance measurement systems. *International Journal of Productivity and Performance Management*, 55, 118-142.
- Meretoja, R. & Leino-Kilpi, H. 2003. Comparison of competence assessments made by nurse managers and practising nurses. *Journal of Nursing Management*, 11, 404-409.
- Mesner Andolšek, D. & Štebe, J. 2005. Devolution or (de)centralization of HRM function in European organizations. *The International Journal of Human Resource Management*, 16, 311-329.
- Messerman, L. I. 1999. *Teamwork and diversity in a health care setting*. 60, ProQuest Information & Learning: US.
- Meyer, G. W. & Scott, R. G. 1985. Quality circles: panacea or Pandora's box? *Organizational Dynamics*, 13, 34-50.
- Meyer, J. P. & Smith, C. A. 2000. HRM practices and organizational commitment: test of a mediation model. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration*, 17, 319-331.
- Meyer, S. M. & Collier, D. A. 2001. An empirical test of the causal relationships in the Baldrige Health Care Pilot Criteria. *Journal of Operations Management*, 19, 403-425.
- Michan, S. & Rodger, S. 2000. Characteristics of effective teams:a literature review. *Australian Health Review*, 23, 201-208.

- Michie, J. & Sheehan, M. 1999. HRM practices, R&D expenditure and innovative investment: evidence from the UK's 1990 Workplace Industrial Relations Survey (WIRS). *Industrial and Corporate Change*, 8, 211-234.
- Michie, S. & West, M. A. 2004. Managing people and performance: an evidence based framework applied to health service organizations. *International Journal of Management Reviews*, 5/6, 91-111.
- Mickan, S. & Rodger, S. 2000. The organisational context for teamwork: comparing health care and business literature. *Australian Health Review*, 23, 179-192.
- Mickan, S. M. & Rodger, S. A. 2005. Effective health care teams: a model of six characteristics developed from shared perceptions. *Journal of Interprofessional Care*, 19, 358-370.
- Miller, D. L. 2003. The stages of group development: a retrospective study of dynamic team processes. *Canadian Journal of Administrative Sciences / Revue Canadienne des Sciences de l'Administration*, 20, 121-134.
- Miller, P. S. & Stayton, V. D. 1998. Blended interdisciplinary teacher preparation in early education and intervention. *Topics in Early Childhood Special Education*, 18, 49-58.
- Millward, L. J. & Bryan, K. 2005. Clinical leadership in health care: a position statement. *Leadership in Health Services*, 18, 13-25.
- Millward, L. J. & Jeffries, N. 2001. The team survey: a tool for health care team development. *Journal of Advanced Nursing*, 35, 276-287.
- Minbaeva, D., Pedersen, T., Bjorkman, I., Fey, C. F. & Park, H. J. 2003. MNC knowledge transfer, subsidiary absorptive capacity, and HRM. *Journal of International Business Studies*, 34, 586-599.
- Moffatt, S., White, M., Mackintosh, J. & Howel, D. 2006. Using quantitative and qualitative data in health services research - what happens when mixed method findings conflict? . *BMC Health Services Research*, 6.
- Mok, E. & Au-Yeung, B. 2002. Relationship between organizational climate and empowerment of nurses in Hong Kong. *Journal of Nursing Management*, 10, 129-137.
- Molyneux, J. 2001. Interprofessional teamworking: what makes teams work well? *Journal of Interprofessional Care*, 15, 29-35.
- Moore, K., Cruickshank, M. & Haas, M. 2006. Job satisfaction in occupational therapy: a qualitative investigation in urban Australia. *Australian Occupational Therapy Journal*, 53, 18-26.
- Moran-Ellis, J., Alexander, V. D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J. & Thomas, H. 2006. Triangulation and integration: processes, claims and implications. *Qualitative Research*, 6, 45-59.
- Morey, J. C., Simon, R., Jay, G. D., Wears, R. L., Salisbury, M., Dukes, K. A. & Berns, S. D. 2002. Error reduction and performance improvement in the emergency department through formal teamwork training: evaluation results of the MedTeams project. *Health Services Research*, 37, 1553-1581.
- Morgan, D. L. 1998. Practical strategies for combining qualitative and quantitative methods: applications to health research. *Qualitative Health Research*, 8, 362-376.
- Morgan, D. L. 2007. Paradigms lost and pragmatism regained. *Journal of Mixed Methods Research*, 1, 48-76.

- Morgan, D. L. & Spanish, M. T. 1984. Focus groups: a new tool for qualitative research. *Qualitative Sociology*, 7, 253-270.
- Morrison, R. L. 2008. Negative relationships in the workplace: associations with organisational commitment, cohesion, job satisfaction and intention to turnover. *Journal of Management & Organization*, 14, 330-344.
- Moses, T. P. & Stahelski, A. J. 1999. A productivity evaluation of teamwork at an aluminum manufacturing plant. *Group & Organization Management*, 24, 391-412.
- Mudambi, R., Mudambi, S. M. & Navarra, P. 2007. Global Innovation in MNCs: the effects of subsidiary self-determination and teamwork. *Journal of Product Innovation Management*, 24, 442-455.
- Mugweni, K., Kibble, S. & Conlon, M. 2011. Benefits of appraisal as perceived by general practitioners. *Education for Primary Care*, 22, 393-398.
- Mullins, L. L., Balderson, B. H. K. & Chaney, J. M. 1999. Implementing team approaches in primary and tertiary care settings: applications from the rehabilitation context. *Families, Systems, & Health*, 17, 413-426.
- Mullins, L. L., Keller, J. R. & Chaney, J. M. 1994. A systems and social cognitive approach to team functioning in physical rehabilitation settings. *Rehabilitation Psychology*, 39, 161-178.
- Munchus, G., Iii 1983. Employer-employee based quality circles in Japan: human resource policy implications for American firms. *The Academy of Management Review*, 8, 255-261.
- Murray, D. & Enarson, C. 2007. Communication and teamwork: essential to learn but difficult to measure. *Anesthesiology*, 106, 895-896
- Nagi, S. Z. 1975. Teamwork in health care in the U.S.: a sociological perspective. *The Milbank Memorial Fund Quarterly. Health and Society*, 53, 75-91.
- Nancarrow, S. A. & Borthwick, A. M. 2005. Dynamic professional boundaries in the healthcare workforce. *Sociology of Health & Illness*, 27, 897-919.
- Nelson, A., Harwood, K. J., Tracey, C. A. & Dunn, K. L. 2008. Myths and facts about safe patient handling in rehabilitation. *Rehabilitation Nursing*, 33, 10-17.
- Nelson, D. 1974. Scientific management, systematic management, and labor, 1880-1915. *The Business History Review*, 48, 479-500.
- Neuman, G. A., Wagner, S. H. & Christiansen, N. D. 1999. The relationship between work-team personality composition and the job performance of teams. *Group & Organization Management*, 24, 28-45.
- Nielsen, K., Yarker, J., Brenner, S.-O., Randall, R. & Borg, V. 2008. The importance of transformational leadership style for the well-being of employees working with older people. *Journal of Advanced Nursing*, 63, 465-475.
- Nielsen, P. E., Goldman, M. B., Mann, S., Shapiro, D. E., Marcus, R. G., Pratt, S. D., Greenberg, P., McNamee, P., Salisbury, M., Birnback, D. J., Gluck, P. A., Pearlman, M. D., King, H., Tornberg, D. N. & Sachs, B. P. 2007. Effects of teamwork training on adverse outcomes and process of care in labor and delivery: a randomized controlled trial. *Obstetrics & Gynecology*, 109, 48-55
- North, N., Rasmussen, E., Hughes, F. & Finlayson, M. 2005. Turnover amongst nurses in New Zealand's district health boards: a national survey of nursing turnover and turnover costs. *New Zealand Journal of Employment Relations*, 30, 49-49.

- Northcraft, G. B., Polzer, J. T., Neale, M. A. & Kramer, R. M. 1995. Diversity, social identity, and performance: Emergent social dynamics in cross-functional teams. In: RUDERMAN, S. E. J. M. N. (ed.) *Diversity in work teams: Research paradigms for a changing workplace*. Washington, DC, US: American Psychological Association.
- Nwabueze, U. 2001. Chief executives - hear thyself: leadership requirements for 5-S/TQM implementation in healthcare. *Managerial Auditing Journal*, 16, 406-410.
- O'cathain, A., Murphy, E. & Nicholl, J. 2007. Why, and how, mixed methods research is undertaken in health services research in England: a mixed methods study. *BMC Health Services Research*, 7.
- O'hara, J. M. & Roth, E. M. 2006. Operational concepts, teamwork, and technology in commercial nuclear power stations. In: BOWERS, C., SALAS, E. & JENTSCH, F. (eds.) *Creating high-tech teams: Practical guidance on work performance and technology*. Washington, DC, US: American Psychological Association.
- O'leary, K. J., Sehgal, N. L., Terrell, G. & Williams, M. V. 2012. Interdisciplinary teamwork in hospitals: a review and practical recommendations for improvement. *Journal of Hospital Medicine*, 7, 48-54.
- O'reilly, C. A. & Roberts, K. H. 1977. Task group structure, communication, and effectiveness in three organizations. *Journal of Applied Psychology*, 62, 674-681.
- O'rourke, M. W. & White, A. 2011. Professional role clarity and competency in health care staffing - the missing pieces. *Nursing Economics*, 29, 183-188.
- Olofsson, B., Bengtsson, C. & Brink, E. 2003. Absence of response: a study of nurses' experience of stress in the workplace. *Journal of Nursing Management*, 11, 351-358.
- Olson, E. M., Walker, O. C., Jr. & Ruekert, R. W. 1995. Organizing for effective new product development: the moderating role of product innovativeness. *Journal of Marketing*, 59, 48-62.
- Oni, O. O. 1994. Hospital management in the 1990s: fundholding consultants? *Journal of management in medicine*, 8, 64-70.
- Ouchi, W. G. 1979. A conceptual framework for the design of organizational control mechanisms. *Management Science*, 25, 833-848.
- Ouwens, M., Hulscher, M., Akkermans, R., Hermens, R., Grol, R. & Wollersheim, H. 2008. The Team Climate Inventory: application in hospital teams and methodological considerations. *Quality and Safety in Health Care*, 17, 275-280.
- Øvretveit, J. 1996. Five ways to describe a multidisciplinary team. *Journal of Interprofessional Care*, 10, 163-171.
- Paauwe, J. 2009. HRM and performance: achievements, methodological issues and prospects. *Journal of Management Studies*, 46, 129-142.
- Paauwe, J. & Boselie, P. 2005. HRM and performance: what next? *Human Resource Management Journal*, 15, 68-83.
- Pablo, A. L., Reay, T., Dewald, J. R. & Casebeer, A. L. 2007. Identifying, enabling and managing dynamic capabilities in the public sector. *Journal of Management Studies*, 44, 687-708.
- Pahl, G. & Grote, K.-H. 1996. Interdisciplinary design. Knowledge and ability needed. *Interdisciplinary Science Reviews*, 21, 292-303.
- Paliadelis, P., Cruickshank, M. & Sheridan, A. 2007. Caring for each other: how do nurse managers 'manage' their role? *Journal of Nursing Management*, 15, 830-837.

- Park, S.-J. 1991. Estimating success rates of quality circle programs: public and private experiences. *Public Administration Quarterly*, 15, 133-146.
- Parker, L. E., De Pillis, E., Altschuler, A., Rubenstein, L. V. & Meredith, L. S. 2007. Balancing participation and expertise: a comparison of locally and centrally managed health care quality improvement within primary care practices. *Qualitative Health Research*, 17, 1268-1279.
- Parry-Jones, B., Grant, G., Mcgrath, M., Caldock, K., Ramcharan, P. & Robinson, C. A. 1998. Stress and job satisfaction among social workers, community nurses and community psychiatric nurses: implications for the care management model. *Health & Social Care in the Community*, 6, 271-285.
- Patel, V. L., Cytryn, K. N., Shortliffe, E. H. & Safran, C. 2000. The collaborative health care team: the role of individual and group expertise. *Teaching and Learning in Medicine*, 12, 117-132.
- Patrashkova-Volzdoska, R. R., McComb, S. A., Green, S. G. & Compton, W. D. 2003. Examining a curvilinear relationship between communication frequency and team performance in cross-functional project teams. *IEEE Transactions on Engineering Management*, 50, 262-269.
- Patrick, L., Knoefel, F., Gaskowski, P. & Rexroth, D. 2001. Medical comorbidity and rehabilitation efficiency in geriatric inpatients. *Journal of the American Geriatrics Society*, 49, 1471-1477.
- Paul, A. K. & Anantharaman, R. N. 2004. Influence of HRM practices on organizational commitment: a study among software professionals in India. *Human Resource Development Quarterly*, 15, 77-88.
- Payne, G. T., Benson, G. S. & Finegold, D. L. 2009. Corporate board attributes, team effectiveness and financial performance. *Journal of Management Studies*, 46, 704-731.
- Perkins, R. J., Horsburgh, M. & Coyle, B. 2008. Attitudes, beliefs and values of students in undergraduate medical, nursing and pharmacy programs. *Australian Health Review*, 32, 252-255.
- Pirola-Merlo, A., Härtel, C., Mann, L. & Hirst, G. 2002. How leaders influence the impact of affective events on team climate and performance in R&D teams. *The Leadership Quarterly*, 13, 561-581.
- Plastow, N. A. & Boyes, C. 2006. Unidisciplinary continuing professional development in a multidisciplinary world: experiences from practice. *Work Based Learning in Primary Care*, 4, 322-344.
- Playle, J. F. 1995. Humanism and positivism in nursing: contradictions and conflicts. *Journal of Advanced Nursing*, 22, 979-984.
- Plsek, P. E. & Wilson, T. 2001. Complexity, leadership, and management in healthcare organisations. *BMJ (Clinical research ed.)*, 323, 746-749.
- Polkinghorne, D. E. 1995. Narrative configuration in qualitative analysis. *International Journal of Qualitative Studies in Education*, 8, 5-23.
- Pollitt, C., Harrison, S., Hunter, D. & Marnoch, G. 1988. The reluctant managers: clinicians and budgets in the NHS. *Financial Accountability & Management*, 4, 213-233.
- Polzer, J. T. 1996. Intergroup negotiations. *Journal of Conflict Resolution*, 40, 678-698.
- Ponterotto, J. G. & Grieger, I. 2007. Effectively communicating qualitative research. *The Counseling Psychologist*, 35, 404-430.

- Poole, K. & Jones, A. 1996. A re-examination of the experimental design for nursing research. *Journal of Advanced Nursing*, 24, 108-114.
- Poole, M. & Jenkins, G. 1997. Responsibilities for Human Resource Management practices in the modern enterprise: evidence from Britain. *Personnel Review*, 26, 333-356.
- Poon, E. G., Blumenthal, D., Jaggi, T., Honour, M. M., Bates, D. W. & Kaushal, R. 2004. Overcoming barriers to adopting and implementing computerized physician order entry systems in U.S. hospitals. *Health Affairs*, 23, 184-190.
- Pope, C., Van Royen, P. & Balkar, R. 2002. Qualitative methods in research on healthcare quality. *Quality & Safety in Health Care*, 11, 148-152.
- Pope, C., Ziebland, S. & Mays, N. 2000. Analysing qualitative data. *BMJ*, 320, 114-116.
- Porter, M. E. 2010. What is value in health care? *New England Journal of Medicine*, 363, 2477-2481.
- Poulton, B. C. & West, M. A. 1999. The determinants of effectiveness in primary health care teams. *Journal of Interprofessional Care*, 13, 7-18.
- Powell, S. G. 2000. Specialization, teamwork, and production efficiency. *International Journal of Production Economics*, 67, 205-218.
- Pringle, M., Wilson, T. & Grol, R. 2002. Measuring "goodness" in individuals and healthcare systems. *BMJ*, 325, 704-707.
- Proudfoot, J., Jayasinghe, U. W., Holton, C., Grimm, J., Bubner, T., Amoroso, C., Beilby, J. & Harris, M. F. 2007. Team climate for innovation: what difference does it make in general practice? *International Journal for Quality in Health Care*, 19, 164-169.
- Pucik, V. 1988. Strategic alliances, organizational learning, and competitive advantage: the HRM agenda. *Human Resource Management*, 27, 77-93.
- Purcell, J. 1999. Best practice and best fit: chimera or cul-de-sac? *Human Resource Management Journal*, 9, 26-41.
- Purcell, J. & Gray, A. 1986. Corporate personnel departments and the management of industrial relations: two case studies in ambiguity. *Journal of Management Studies*, 23, 205-223.
- Purcell, J. & Hutchinson, S. 2007. Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence. *Human Resource Management Journal*, 17, 3-20.
- Purcell, J., Kinnie, N., Hutchinson, S., Rayton, B. & Swart, J. 2003. Understanding the people and performance link: unlocking the black box. *A report for the Chartered Institute of Personnel and Development, London*, 1-88.
- Quoidbach, J. & Hansenne, M. 2009. The impact of trait emotional intelligence on nursing team performance and cohesiveness. *Journal of Professional Nursing*, 25, 23-29.
- Racine, A. D., Stein, R. E. K., Belamarich, P. F., Levine, E., Okun, A., Porder, K., Rosenfeld, J. L. & Schechter, M. 1998. Upstairs downstairs: vertical integration of a pediatric service. *Pediatrics*, 102, 91-97.
- Rafferty, A. M., Ball, J. & Aiken, L. H. 2001. Are teamwork and professional autonomy compatible, and do they result in improved hospital care? *Quality in Health Care*, 10, ii32-ii37.
- Rafferty, J. & Tapsell, J. 2001. Self-managed work teams and manufacturing strategies: cultural influences in the search for team effectiveness and competitive advantage. *Human Factors and Ergonomics in Manufacturing*, 11, 19-34.

- Rahimnia, F. & Moghadasian, M. 2010. Supply chain leagility in professional services: how to apply decoupling point concept in healthcare delivery system. *Supply Chain Management: An International Journal*, 15, 80-91.
- Ramanujam, R. & Rousseau, D. M. 2006. The challenges are organizational not just clinical. *Journal of organizational behavior*, 27, 811-827.
- Randel, A. E. & Jaussi, K. S. 2003. Functional background identity, diversity, and individual performance in cross-functional teams. *Academy of Management Journal*, 46, 763-774.
- Randell, A., Sambrook, P. N., Nguyen, T. V., Lapsley, H., Jones, G., Kelly, P. J. & Eisman, J. A. 1995. Direct clinical and welfare costs of osteoporotic fractures in elderly men and women. *Osteoporosis International*, 5, 427-432.
- Rasmussen, T. H. & Jeppesen, H. J. 2006. Teamwork and associated psychological factors: a review. *Work & Stress*, 20, 105-128.
- Ratto, M., Propper, C. & Burgess, S. 2002. Using financial incentives to promote teamwork in health care. *Journal of Health Services Research & Policy*, 7, 69-70.
- Ray, M. 1998. Shared borders: achieving the goals of interdisciplinary patient care. *American Journal of Health-System Pharmacy*, 55, 1369-1374.
- Reader, T. W., Flin, R., Mearns, K. & Cuthbertson, B. H. 2009. Developing a team performance framework for the intensive care unit *Critical Care Medicine*, 37, 1787-1793
- Reagans, R., Zuckerman, E. & Mcevily, B. 2004. How to make the team: social networks vs. demography as criteria for designing effective teams. *Administrative Science Quarterly*, 49, 101-133.
- Redman, T., Snape, E., Thompson, D. & Yan, F. K.-C. 2000. Performance appraisal in an NHS hospital. *Human Resource Management Journal*, 10, 48-62.
- Rickards, T. & Moger, S. 2000. Creative leadership processes in project team development: an alternative to Tuckman's stage model. *British Journal of Management*, 11, 273-283.
- Robertson, C. & Finlay, L. 2007. Making a difference, teamwork and coping: the meaning of practice in acute physical settings. *British Journal of Occupational Therapy*, 70, 73-80.
- Rolland, Y., Pillard, F., Lauwers-Cances, V., Busquère, F., Vellas, B. & Lafont, C. 2004. Rehabilitation outcome of elderly patients with hip fracture and cognitive impairment. *Disability and Rehabilitation*, 26, 425-431.
- Rose, J. & Schelewa-Davies, D. 1997. The relationship between staff stress and team climate in residential services. *Journal of Intellectual Disabilities*, 1, 19-24.
- Rosen, M. A., Salas, E., Wilson, K. A., King, H. B., Salisbury, M., Augenstein, J. S., Robinson, D. W. & Birnbach, D. J. 2008. Measuring team performance in simulation-based training: adopting best practices for healthcare. *Simulation in Healthcare*, 3, 33-41
- Rosenthal, M. B. & Frank, R. G. 2006. What Is the empirical basis for paying for quality in health care? *Medical Care Research and Review*, 63, 135-157.
- Rosner, B. & Grove, D. 1999. Use of the Mann–Whitney U-test for clustered data. *Statistics in Medicine*, 18, 1387-1400.
- Roth, P. L. & Bevier, C. A. 1998. Response rates in HRM/OB survey research: norms and correlates, 1990-1994. *Journal of Management*, 24, 97-117.



- Roth, W. D. & Mehta, J. D. 2002. The Rashomon effect. *Sociological Methods & Research*, 31, 131-173.
- Rothrock, L., Cohen, A., Yin, J., Thiruvengada, H. & Nahum-Shani, I. 2009. Analyses of team performance in a dynamic task environment. *Applied Ergonomics*, 40, 699-706.
- Rousseau, D. M. & Wade-Benzoni, K. A. 1994. Linking strategy and human resource practices: how employee and customer contracts are created. *Human Resource Management*, 33, 463-489.
- Rout, U. 1999. Job stress among general practitioners and nurses in primary care in England. *Psychological Reports*, 85, 981-986.
- Rudan, V. T. 2003. The best of both worlds: a consideration of gender in team building. *Journal of Nursing Administration*, 33, 179-186.
- Ruona, W. E. A. & Gibson, S. K. 2004. The making of twenty-first-century HR: an analysis of the convergence of HRM, HRD, and OD. *Human Resource Management*, 43, 49-66.
- Russ, R. & Dickinson, J. 1999. Collaborative design: "forming, storming, and norming". *Journal of Interior Design*, 25, 52-58.
- Ryan, G. W. & Bernard, H. R. 2003. Techniques to identify themes. *Field Methods*, 15, 85-109.
- Ryan, M. 2004. Discrete choice experiments in health care. *BMJ*, 328, 360-361.
- Saá-Pérez, P. D. & García-Falcón, J. M. 2002. A resource-based view of Human Resource Management and organizational capabilities development. *The International Journal of Human Resource Management*, 13, 123-140.
- Salas, E., Cooke, N. J. & Gorman, J. C. 2010. The science of team performance: progress and the need for more.... *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 52, 344-346.
- Salas, E., Cooke, N. J. & Rosen, M. A. 2008. On teams, teamwork, and team performance: discoveries and developments. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, 50, 540-547.
- Sale, J. E. M., Lohfeld, L. H. & Brazil, K. 2002. Revisiting the quantitative-qualitative debate: implications for mixed-methods research. *Quality & Quantity*, 36, 43-53.
- Saleh, M. N., Korner-Bitensky, N., Snider, L., Malouin, F., Mazer, B., Kennedy, E. & Roy, M. A. 2008. Actual vs. best practices for young children with cerebral palsy: a survey of paediatric occupational therapists and physical therapists in Quebec, Canada. *Developmental neurorehabilitation*, 11, 60-80.
- Sand, A., Karlberg, I. & Kreuter, M. 2006. Spinal cord injured persons' conceptions of hospital care, rehabilitation, and a new life situation. *Scandinavian Journal of Occupational Therapy*, 13, 183-192.
- Sandelowski, M. 1994. Focus on qualitative methods. The use of quotes in qualitative research. *Research in Nursing & Health*, 17, 479-482.
- Sandelowski, M. 2000. Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Research in Nursing & Health*, 23, 246-255.
- Saraph, J. V., Benson, P. G. & Schroeder, R. G. 1989. An instrument for measuring the critical factors of quality management. *Decision Sciences*, 20, 810-829.

- Sarrafzadegan, N., Rabiei, K., Kabir, A., Sadeghi, M., Khosravi, A., Asgari, S., Taghipour, H. R. & Roohafza, H. 2008. Gender differences in risk factors and outcomes after cardiac rehabilitation. *Acta Cardiologica*, 63, 763-770.
- Savaneviciene, A. & Stankeviciute, Z. 2010. The models exploring the “black box” between HRM and organizational performance. *Inzinerine Ekonomika-Engineering Economics*, 21, 426-434.
- Saxberg, B. O. & Slocum, J. W., Jr. 1968. The management of scientific manpower. *Management Science*, 14, B473-B489.
- Schaubroeck, J., Lam, S. S. K. & Cha, S. E. 2007. Embracing transformational leadership: team values and the impact of leader behavior on team performance. *Journal of Applied Psychology*, 92, 1020-1030.
- Scheid-Cook, T. L. 1990. Ritual conformity and organizational control: loose coupling or professionalization? *The Journal of Applied Behavioral Science*, 26, 183-199.
- Schmitt, M. H., Farrell, M. P. & Heinemann, G. D. 1988. Conceptual and methodological problems in studying the effects of interdisciplinary geriatric teams. *The Gerontologist*, 28, 753-764.
- Schmitt, N. 1996. Uses and abuses of coefficient alpha. *Psychological Assessment*, 8, 350-353.
- Schofield, R. F. & Amodeo, M. 1999. Interdisciplinary teams in health care and human services settings: are they effective? *Health & Social Work*, 24, 210-219.
- Schuler, R. S., Dowling, P. J. & De Cieri, H. 1993. An integrative framework of Strategic International Human Resource Management. *Journal of Management*, 19, 419-459.
- Scott, A., Sivey, P., Ait Ouakrim, D., Willenberg, L., Naccarella, L., Furler, J. & Young, D. 2011. The effect of financial incentives on the quality of health care provided by primary care physicians. *Cochrane database of systematic reviews* CD008451.
- Scotti, D. J., Harmon, J., Behson, S. J. & Messina, D. J. 2007. Links among high-performance work environment, service quality, and customer satisfaction: an extension to the healthcare sector. *Journal of Healthcare Management*, 52, 109-124.
- Searle, R. H. & Ball, K. S. 2003. Supporting innovation through HR policy: evidence from the UK. *Creativity and Innovation Management*, 12, 50-62.
- Seers, A. 1989. Team-member exchange quality: a new construct for role-making research. *Organizational Behavior and Human Decision Processes*, 43, 118-135.
- Sehwail, L. & Deyong, C. 2003. Six Sigma in health care. *Leadership in Health Services*, 16, 1-5.
- Sexton, J. B., Thomas, E. J. & Helmreich, R. L. 2000. Error, stress, and teamwork in medicine and aviation: cross sectional surveys. *BMJ*, 320.
- Shapiro, M. J., Morey, J. C., Small, S. D., Langford, V., Kaylor, C. J., Jagminas, L., Suner, S., Salisbury, M. L., Simon, R. & Jay, G. D. 2004. Simulation based teamwork training for emergency department staff: does it improve clinical team performance when added to an existing didactic teamwork curriculum? *Quality and Safety in Health Care*, 13, 417-421.
- Shaw, J. B. & Barrett-Power, E. 1998. The effects of diversity on small work group processes and performance. *Human Relations*, 51, 1307-1325.
- Shaw, L., Walker, R. & Hogue, A. 2008. The art and science of teamwork: enacting a transdisciplinary approach in work rehabilitation. *Work: Journal of Prevention, Assessment & Rehabilitation*, 30, 297-306.

- Sheaff, R., Marshall, M., Rogers, A., Roland, M., Sibbald, B. & Pickard, S. 2004. Governmentality by network in English primary healthcare. *Social Policy & Administration*, 38, 89-103.
- Shipton, H., West, M. A., Dawson, J., Birdi, K. & Patterson, M. 2006. HRM as a predictor of innovation. *Human Resource Management Journal*, 16, 3-27.
- Shortell, S. M., Bennett, C. L. & Byck, G. R. 1998. Assessing the impact of continuous quality improvement on clinical practice: what it will take to accelerate progress. *Milbank Quarterly*, 76, 593-624.
- Shortell, S. M., Marsteller, J. A., Lin, M., Pearson, M. L., Wu, S. Y., Mendel, P., Cretin, S. & Rosen, M. 2004. The role of perceived team effectiveness in improving chronic illness care. *Medical Care*, 42, 1040-1048.
- Siassakos, D., Fox, R., Crofts, J. F., Hunt, L. P., Winter, C. & Draycott, T. J. 2011. The management of a simulated emergency: better teamwork, better performance. *Resuscitation*, 82, 203-206.
- Sibbald, B., Shen, J. & McBride, A. 2004. Changing the skill-mix of the health care workforce. *Journal of Health Services Research & Policy*, 9, 28-38.
- Sicotte, C., D'amour, D. & Moreault, M.-P. 2002. Interdisciplinary collaboration within Quebec community health care centres. *Social Science & Medicine*, 55, 991-1003.
- Simmonds, F. & Stevermuer, T. 2007. The AROC annual report: the state of rehabilitation in Australia 2005. *Australian Health Review*, 31, 31-53.
- Singer, S. J., Gaba, D. M., Geppert, J. J., Sinaiko, A. D., Howard, S. K. & Park, K. C. 2003. The culture of safety: results of an organization-wide survey in 15 California hospitals. *Quality and Safety in Health Care*, 12, 112-118.
- Siu, O. L. 2002. Predictors of job satisfaction and absenteeism in two samples of Hong Kong nurses. *Journal of Advanced Nursing*, 40, 218-229.
- Sivasubramaniam, N., Murry, W. D., Avolio, B. J. & Jung, D. I. 2002. A longitudinal model of the effects of team leadership and group potency on group performance. *Group & Organization Management*, 27, 66-96.
- Slatin, C., Galizzi, M., Mawn, B., Melillo, K. D. & Team, P. I. H. R. 2004. Conducting interdisciplinary research to promote healthy and safe employment in health care: promises and pitfalls. *Public Health Reports*, 119, 60-72.
- Smith, A. D. & Offodile, O. F. 2008. Strategic importance of team integration issues in product development processes to improve manufacturability. *Team Performance Management*, 14, 269-292.
- Smits, S. J., Falconer, J. A., Herrin, J., Bowen, S. E. & Strasser, D. C. 2003. Patient-focused rehabilitation team cohesiveness in Veterans Administration hospitals. *Archives of Physical Medicine and Rehabilitation*, 84, 1332-1338.
- Smits, S. J., Falconer, J. A., Morland, R. & Strasser, D. C. 1997. The organizational context for medical rehabilitation services: a pre-chaos theory perspective. *Topics in stroke rehabilitation*, 4, 1-11.
- Snell, S. A. & Youndt, M. A. 1995. Human Resource Management and firm performance: testing a contingency model of executive controls. *Journal of Management*, 21, 711-737.
- Snyder, C. R., Lehman, K. A., Kluck, B. & Monsson, Y. 2006. Hope for rehabilitation and vice versa. *Rehabilitation Psychology*, 51, 89-112.

- Solansky, S. T. 2008. Leadership style and team processes in self-managed teams. *Journal of Leadership & Organizational Studies*, 14, 332-341.
- Solheim, K., Mcelmurry, B. J. & Kim, M. J. 2007. Multidisciplinary teamwork in US primary health care. *Social Science & Medicine*, 65, 622-634.
- Somech, A. 2006. The effects of leadership style and team process on performance and innovation in functionally heterogeneous teams. *Journal of Management*, 32, 132-157.
- Sonoda, S., Saitoh, E., Nagai, S., Kawakita, M. & Kanada, Y. 2004. Full-time integrated treatment program, a new system for stroke rehabilitation in Japan: comparison with conventional rehabilitation. *American journal of physical medicine & rehabilitation / Association of Academic Physiatrists*, 83, 88-93.
- Sorrells-Jones, J. 1997. The challenge of making it real: interdisciplinary practice in a "seamless" organization. *Nursing Administration Quarterly*, 21, 20-30.
- Spath, P. L. 2007. Taming the measurement monster. *Frontiers of Health Services Management*, 23, 3-14.
- Spinks, N. & Moore, C. 2007. The changing workforce, workplace and nature of work: implications for health human resource management. *Nursing leadership* 20, 26-41.
- Sprunger, J. A. 1961. The ability of the individual to contribute to his group. *Personnel Psychology*, 14, 317-330.
- Stagnitti, K., Schoo, A., Dunbar, J. & Reid, C. 2006. An exploration of issues of management and intention to stay: allied health professionals in South West Victoria, Australia. *Journal of Allied Health*, 35, 226-232.
- Stanton, P., Bartram, T. & Harbridge, R. 2004. People management practices in the public health sector: developments from Victoria, Australia. *Journal of European Industrial Training*, 28, 310-328.
- Stanton, P., Young, S., Bartram, T. & Leggat, S. G. 2010. Singing the same song: translating HRM messages across management hierarchies in Australian hospitals. *The International Journal of Human Resource Management*, 21, 567-581.
- Steel, R. P., Mento, A. J., Dilla, B. L., Ovalle, N. K. & Lloyd, R. F. 1985. Factors influencing the success and failure of two quality circle programs. *Journal of Management*, 11, 99-119.
- Steenbergen, K. & Mackenzie, L. 2004. Professional support in rural New South Wales: perceptions of new graduate occupational therapists. *Australian Journal of Rural Health*, 12, 160-165.
- Stefl, M. E. & Bontempo, C. a. F. 2008. Common competencies for all healthcare managers: the Healthcare Leadership Alliance Model. *Journal of Healthcare Management*, 53, 360-373.
- Stepans, M. B., Thompson, C. L. & Buchanan, M. L. 2002. The role of the nurse on a transdisciplinary early intervention assessment team. *Public Health Nursing*, 19, 238-245.
- Stevens, M. J. & Campion, M. A. 1994. The knowledge, skill, and ability requirements for teamwork: implications for Human Resource Management. *Journal of Management*, 20, 503-530.
- Steyaert, C. & Janssens, M. 1999. Human and inhuman resource management: saving the subject of HRM. *Organization*, 6, 181-198.

- Stock, R. 2004. Drivers of team performance: what do we know and what have we still to learn? *Schmalenbach Business Review (SBR)*, 56, 274-306.
- Stoker, J. I., Looise, J. C., Fisscher, O. a. M. & Jong, R. D. D. 2001. Leadership and innovation: relations between leadership, individual characteristics and the functioning of R&D teams. *The International Journal of Human Resource Management*, 12, 1141-1151.
- Stokes, S. L. 1995. Rewards and recognition for teams. *Information Systems Management*, 12, 61-65.
- Stoller, J. K., Rose, M., Lee, R., Dolgan, C. & Hoogwerf, B. J. 2004. Teambuilding and leadership training in an internal medicine residency training program. *Journal of General Internal Medicine*, 19, 692-697.
- Stone, A. & Shiffman, S. 2002. Capturing momentary, self-report data: a proposal for reporting guidelines. *Annals of Behavioral Medicine*, 24, 236-243.
- Stone, A. R. 1969. The interdisciplinary research team. *The Journal of Applied Behavioral Science*, 5, 351-365.
- Storey, J. 1985. The means of management control. *Sociology*, 19, 193-211.
- Storey, J. 1993. The take-up of Human Resource Management by mainstream companies: key lessons from research. *The International Journal of Human Resource Management*, 4, 529-553.
- Stout, R. J., Salas, E. & Carson, R. 1994. Individual task proficiency and team process behavior: what's important for team functioning? *Military Psychology*, 6, 177-192.
- Strasser, D. C., Falconer, J. A., Herrin, J. S., Bowen, S. E., Stevens, A. B. & Uomoto, J. M. 2005. Team functioning and patient outcomes in stroke rehabilitation. *Archives of Physical Medicine and Rehabilitation* 86, 403-409.
- Strasser, D. C., Falconer, J. A., Stevens, A. B., Uomoto, J. M., Herrin, J., Bowen, S. E. & Burridge, A. B. 2008. Team training and stroke rehabilitation outcomes: a cluster randomized trial. *Archives of Physical Medicine and Rehabilitation* 89, 10-15.
- Strating, M. & Nieboer, A. 2009. Psychometric test of the Team Climate Inventory-short version investigated in Dutch quality improvement teams. *BMC Health Services Research*, 9, 126.
- Strauss, G. 2001. HRM in the USA: correcting some British impressions. *The International Journal of Human Resource Management*, 12, 873-897.
- Suissa, S. & Shuster, J. J. 1985. Exact unconditional sample sizes for the  $2 \times 2$  binomial trial. *Journal of the Royal Statistical Society. Series A (General)*, 148, 317-327.
- Sundstrom, E., De Meuse, K. P. & Futrell, D. 1990. Work teams: applications and effectiveness. . *American Psychologist*, 45, 120-133.
- Swink, M. 1999. Threats to new product manufacturability and the effects of development team integration processes. *Journal of Operations Management*, 17, 691-709.
- Takeuchi, H. & Nonaka, I. 1986. The new new product development game. *Harvard Business Review*, 64, 137-146.
- Tannenbaum, A. S. 1962. Control in organizations: individual adjustment and organizational performance. *Administrative Science Quarterly*, 7, 236-257.
- Tannenbaum, S. I., Mathieu, J. E., Salas, E. & Cohen, D. 2012. Teams are changing: are research and practice evolving fast enough? *Industrial and Organizational Psychology*, 5, 2-24.

- Tashakkori, A. & Creswell, J. W. 2007. Editorial: exploring the nature of research questions in mixed methods research. *Journal of Mixed Methods Research*, 1, 207-211.
- Tata, J. & Prasad, S. 2004. Team self-management, organizational structure, and judgments of team effectiveness. *Journal of Managerial Issues*, 16, 248-265.
- Teddle, C. & Tashakkori, A. 2012. Common “core” characteristics of mixed methods research. *American Behavioral Scientist*, 56, 774-788.
- Temkin-Greener, H., Gross, D., Kunitz, S. J. & Mukamel, D. 2004. Measuring interdisciplinary team performance in a long-term care setting. *Medical Care*, 42, 472-481.
- Tesio, L., Franchignoni, F. P., Perucca, L. & Porta, G. L. 1996. The influence of age on length of stay, functional independence and discharge destination of rehabilitation inpatients in Italy. *Disability and Rehabilitation*, 18, 502-508.
- Theodorakioglou, Y. D. & Tsiotras, G. D. 2000. The need for the introduction of quality management into Greek health care. *Total Quality Management*, 11, 1153-1165.
- Theriou, G., N. & Chatzoglou, P., D. 2009. Exploring the best HRM practices-performance relationship: an empirical approach. *Journal of Workplace Learning*, 21, 614-646.
- Thier, S. O. & Gelijns, A. C. 1998. Perspective: improving health: the reason performance measurement matters. *Health Affairs*, 17, 26-28.
- Thomas, E. J., Sexton, J. B. & Helmreich, R. L. 2003. Discrepant attitudes about teamwork among critical care nurses and physicians. *Critical Care Medicine*, 31, 956-959.
- Thomas, E. J., Sexton, J. B., Lasky, R. E., Helmreich, R. L., Crandell, D. S. & Tyson, J. 2006. Teamwork and quality during neonatal care in the delivery room. *J Perinatol*, 26, 163-169.
- Thorne, S. 2000. Data analysis in qualitative research. *Evidence Based Nursing*, 3, 68-70.
- Thylefors, I., Persson, O. & Hellström, D. 2005. Team types, perceived efficiency and team climate in Swedish cross-professional teamwork. *Journal of Interprofessional Care*, 19, 102-114.
- Thylefors, I., Price, E., Persson, O. & Von Wendt, L. 2000. Teamwork in Swedish neuropaediatric habilitation. *Child: Care, Health and Development*, 26, 515-532.
- Tieman, J., Mitchell, G., Shelby-James, T., Currow, D., Fazekas, B., O'dougherty, L., Hegarty, M., Eriksson, L., Brown, R. & Reid-Orr, D. 2007. Integration, coordination and multidisciplinary care: what can these approaches offer to Australian primary health care? *Australian Journal of Primary Health*, 13, 56-65.
- Timmerman, T. A. 2005. Missing persons in the study of groups. *Journal of organizational behavior*, 26, 21-36.
- Tjosvold, D. & Tsao, Y. 1989. Productive organizational collaboration: the role of values and cooperation. *Journal of organizational behavior*, 10, 189-195.
- Tohidi, H. & Tarokh, M. J. 2006. Productivity outcomes of teamwork as an effect of information technology and team size. *International Journal of Production Economics*, 103, 610-615.
- Townley, B. 1993. Foucault, power/knowledge, and its relevance for Human Resource Management. *The Academy of Management Review*, 18, 518-545.
- Townley, B. 1995. Managing by numbers: accounting, personnel management and the creation of a mathesis. *Critical Perspectives on Accounting*, 6, 555-575.

- Townsend, K. & Wilkinson, A. 2010. Managing under pressure: HRM in hospitals. *Human Resource Management Journal*, 20, 332-338.
- Towry, K. L. 2003. Control in a teamwork environment: the impact of social ties on the effectiveness of mutual monitoring contracts. *The Accounting Review*, 78, 1069-1095.
- Truss, C. 2001. Complexities and controversies in linking HRM with organizational outcomes. *Journal of Management Studies*, 38, 1121-1149.
- Tsaur, S.-H. & Lin, Y.-C. 2004. Promoting service quality in tourist hotels: the role of HRM practices and service behavior. *Tourism Management*, 25, 471-481.
- Tse, H. H. M., Dasborough, M. T. & Ashkanasy, N. M. 2008. A multi-level analysis of team climate and interpersonal exchange relationships at work. *The Leadership Quarterly*, 19, 195-211.
- Tsui, A. S. 1984. Personnel department effectiveness: a tripartite approach. *Industrial Relations: A Journal of Economy and Society*, 23, 184-197.
- Tsui, A. S. 1990. A multiple-constituency model of effectiveness: an empirical examination at the human resource subunit level. *Administrative Science Quarterly*, 35, 458-483.
- Tsui, A. S. & Milkovich, G. T. 1987. Personnel department activities: constituency perspectives and preferences. *Personnel Psychology*, 40, 519-537.
- Tucker, A. L. & Edmondson, A. C. 2003. Why hospitals don't learn from failures: organizational and psychological dynamics that inhibit system change. *California Management Review*, 45, 55-72.
- Tucker, A. L., Singer, S. J., Hayes, J. E. & Falwell, A. 2008. Front-line staff perspectives on opportunities for improving the safety and efficiency of hospital work systems. *Health Services Research*, 43, 1807-1829.
- Tuckman, B. W. & Jensen, M. a. C. 1977. Stages of small-group development revisited. *Group & Organization Management*, 2, 419-427.
- Turner, B. T. 1985. Managing design in the new product development process — methods for company executives. *Design Studies*, 6, 51-56.
- Turner, R., Huemann, M. & Keegan, A. 2008. Human Resource Management in the project-oriented organization: employee well-being and ethical treatment. *International Journal of Project Management*, 26, 577-585.
- Uhl-Bien, M. & Graen, G. B. 1992. Self-management and team-making in cross-functional work teams: discovering the keys to becoming an integrated team. *The Journal of High Technology Management Research*, 3, 225-241.
- Ulmer, B. & Harris, M. 2002. Australian GPs are satisfied with their job: even more so in rural areas. *Family Practice*, 19, 300-303.
- Ummenhofer, W., Amsler, F., Sutter, P. M., Martina, B., Martin, J. & Scheidegger, D. 2001. Team performance in the emergency room: assessment of inter-disciplinary attitudes. *Resuscitation*, 49, 39-46.
- Undre, S., Sevdalis, N., Healey, A. N., Darzi, S. A. & Vincent, C. A. 2006. Teamwork in the operating theatre: cohesion or confusion? *Journal of Evaluation in Clinical Practice*, 12, 182-189.
- Upenieks, V. V., Lee, E. A., Flanagan, M. E. & Doebbeling, B. N. 2010. Healthcare Team Vitality Instrument (HTVI): developing a tool assessing healthcare team functioning. *Journal of Advanced Nursing*, 66, 168-176.

- Vallas, S. P. 2003. Why teamwork fails: obstacles to workplace change in four manufacturing plants. *American Sociological Review*, 68, 223-250.
- Van De Voorde, K., Paauwe, J. & Van Veldhoven, M. 2011. Employee well-being and the HRM–organizational performance relationship: a review of quantitative studies. *International Journal of Management Reviews*, no-no.
- Van Vegchel, N., De Jonge, J., Meijer, T. & Hamers, J. P. H. 2001. Different effort constructs and effort–reward imbalance: effects on employee well-being in ancillary health care workers. *Journal of Advanced Nursing*, 34, 128-136.
- Van Zelst, R. H. 1952. Sociometrically selected work teams increase production. *Personnel Psychology*, 5, 175-185.
- Vashdi, D. R., Bamberger, P. A., Erez, M. & Weiss-Meilik, A. 2007. Briefing-debriefing: using a reflexive organizational learning model from the military to enhance the performance of surgical teams. *Human Resource Management*, 46, 115-142.
- Verma, S., Paterson, M. & Medves, J. 2006. Core competencies for health care professionals: what medicine, nursing, occupational therapy, and physiotherapy share. *Journal of Allied Health*, 35, 109-115.
- Victor, O. 2005. Knowledge management effectiveness factors: the role of HRM. *Journal of Knowledge Management*, 9, 70-86.
- Villagra, V. 2004. Strategies to control costs and quality: a focus on outcomes research for disease management. *Medical Care*, 42, III-24-III-30.
- Visser, M. R. M., Smets, E. M. A., Oort, F. J. & De Haes, H. C. J. M. 2003. Stress, satisfaction and burnout among Dutch medical specialists. *CMAJ Canadian Medical Association Journal*, 168, 271-275.
- Voltmer, E., Rosta, J., Siegrist, J. & Aasland, O. 2012. Job stress and job satisfaction of physicians in private practice: comparison of German and Norwegian physicians. *International Archives of Occupational and Environmental Health*, 85, 819-828.
- Vuorinen, R., Tarkka, M.-T. & Meretoja, R. 2000. Peer evaluation in nurses' professional development: a pilot study to investigate the issues. *Journal of Clinical Nursing*, 9, 273-281.
- Waddell, D. L. & Dunn, N. 2005. Peer coaching: the next step in staff development. *Journal of continuing education in nursing*, 36, 84-89.
- Wade, D. T. & De Jong, B. A. 2000. Recent advances in rehabilitation. *BMJ (Clinical research ed.)*, 320, 1385-1388.
- Wall, T. D. & Wood, S. J. 2005. The romance of Human Resource Management and business performance, and the case for big science. *Human Relations*, 58, 429-462.
- Wallin, C.-J., Meurling, L., Hedman, L., Hedegård, J. & Felländer-Tsai, L. 2007. Target-focused medical emergency team training using a human patient simulator: effects on behaviour and attitude. *Medical Education*, 41, 173-180.
- Ward, J. & Wood, C. 2000. Education and training of healthcare staff: the barriers to its success. *European journal of cancer care*, 9, 80-85.
- Warr, P., Cook, J. & Wall, T. 1979. Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52, 129-148.
- Warren, N. & Manderson, L. 2008. Constructing hope: dis/continuity and the narrative construction of recovery in the rehabilitation unit. *Journal of Contemporary Ethnography*, 37, 180-201.



- Watson, P. J., Booker, C. K., Moores, L. & Main, C. J. 2004. Returning the chronically unemployed with low back pain to employment. *European Journal of Pain: Ejp*, 8, 359-369.
- Watson, T. J. 2004. HRM and critical social science analysis. *Journal of Management Studies*, 41, 447-467.
- Weaver, S. J., Rosen, M. A., Diazgranados, D., Lazzara, E. H., Lyons, R., Salas, E., Knych, S. A., McKeever, M., Adler, L., Barker, M. & King, H. B. 2010. Does teamwork improve performance in the operating room? A multilevel evaluation. *Joint Commission Journal on Quality and Patient Safety*, 36, 133-142.
- Webb, C. 1999. Analysing qualitative data: computerized and other approaches. *Journal of Advanced Nursing*, 29, 323-330.
- West, E. 2001. Management matters: the link between hospital organisation and quality of patient care. *Quality in Health Care*, 10, 40-48.
- West, M. A., Borrill, C., Dawson, J., Scully, J., Carter, M., Anelay, S., Patterson, M. & Waring, J. 2002. The link between the management of employees and patient mortality in acute hospitals. *Human Resource Management*, 13, 1299-1310.
- West, M. A., Borrill, C. S., Dawson, J. F., Brodbeck, F., Shapiro, D. A. & Haward, B. 2003. Leadership clarity and team innovation in health care. *The Leadership Quarterly*, 14, 393-410.
- West, M. A., Guthrie, J. P., Dawson, J. F., Borrill, C. S. & Carter, M. 2006. Reducing patient mortality in hospitals: the role of Human Resource Management. *Journal of Organizational Behaviour*, 27, 983-1002.
- Wheelan, S. A., Burchill, C. N. & Tilin, F. 2003. The link between teamwork and patients' outcomes in intensive care units. *American Journal of Critical Care*, 12, 527-534.
- Whiteside, M., Tsey, K. & Cadet-James, Y. 2011. A theoretical empowerment framework for transdisciplinary team building. *Australian Social Work*, 64, 228-232.
- Wilcock, P. M., Janes, G. & Chambers, A. 2009. Health care improvement and continuing interprofessional education: continuing interprofessional development to improve patient outcomes. *Journal of Continuing Education in the Health Professions*, 29, 84-90.
- Williams, G. & Laungani, P. 1999. Analysis of teamwork in an NHS community trust: an empirical study. *Journal of Interprofessional Care*, 13, 19-28.
- Wilson, J. P. & Western, S. 2001. Performance appraisal: an obstacle to training and development? *Career Development International*, 6, 93-100.
- Winslow, W. W., Honein, G. & Elzubeir, M. A. 2002. Seeking Emirati women's voices: the use of focus groups with and Arab population. *Qualitative Health Research*, 12, 566-576.
- Withanachchi, N., Handa, Y., Karandagoda, K. K. W., Pathirage, P. P., Tennakoon, N. C. K. & Pullaperuma, D. S. P. 2007. TQM emphasizing 5-S principles: a breakthrough for chronic managerial constraints at public hospitals in developing countries. *International Journal of Public Sector Management*, 20, 168-177.
- Wolf, J. A. 2008. Health care, heal thyself! An exploration of what drives (and sustains) high performance in organizations today. *Performance Improvement*, 47, 38-45.
- Woo, J., Chan, S. Y., Sum, M. W., Wong, E. & Chui, Y. P. 2008. In patient stroke rehabilitation efficiency: influence of organization of service delivery and staff numbers. *BMC Health Services Research*, 8, 86.

- Woolf, S. H., Grol, R., Hutchinson, A., Eccles, M. & Grimshaw, J. 1999. Clinical guidelines: potential benefits, limitations, and harms of clinical guidelines. *BMJ (Clinical research ed.)*, 318, 527-530.
- Woolley, A. W. 1998. Effects of intervention content and timing on group task performance. *The Journal of Applied Behavioral Science*, 34, 30-46.
- Wright, B. A. 1959. Interprofessional relations. *Psychology and rehabilitation*.: American Psychological Association: Washington.
- Wright, P. M. & Boswell, W. R. 2002. Desegregating HRM: a review and synthesis of micro and macro Human Resource Management research. *Journal of Management*, 28, 247-276.
- Wright, P. M., Dunford, B. B. & Snell, S. A. 2001. Human resources and the resource based view of the firm. *Journal of Management*, 27, 701-721.
- Wright, P. M., Gardner, T. M. & Moynihan, L. M. 2003. The impact of HR practices on the performance of business units. *Human Resource Management Journal*, 13, 21-36.
- Wright, P. M. & McMahan, G. C. 1992. Theoretical Perspectives for Strategic Human Resource Management. *Journal of Management*, 18, 295-320.
- Wright, P. M., McMahan, G. C. & McWilliams, A. 1994. Human resources and sustained competitive advantage: a resource-based perspective. *The International Journal of Human Resource Management*, 5, 301-326.
- Wright, P. M. & Nishii, L. H. 2007. Strategic HRM and organizational behavior: integrating multiple levels of analysis. *CAHRS Working Paper Series*, #07-03.
- Wright, P. M. & Snell, S. A. 1998. Toward a unifying framework for exploring fit and flexibility in Strategic Human Resource Management. *The Academy of Management Review*, 23, 756-772.
- Wright, P. M., Snell, S. A. & Dyer, L. 2005. New models of strategic HRM in a global context. *The International Journal of Human Resource Management*, 16, 875-881.
- Wright, R. E., Rao, N., Smith, R. M. & Harvey, R. F. 1996. Risk factors for death and emergency transfer in acute and subacute inpatient rehabilitation. *Archives of Physical Medicine and Rehabilitation*, 77, 1049-1055.
- Xyrichis, A. & Ream, E. 2008. Teamwork: a concept analysis. *Journal of Advanced Nursing*, 61, 232-241.
- Yang, O. 1996. Shared leadership in self-managed teams: a competing values approach. *Total Quality Management*, 7, 521-534.
- Yasunaga, H., Hashimoto, H., Horiguchi, H., Miyata, H. & Matsuda, S. 2012. Variation in cancer surgical outcomes associated with physician and nurse staffing: a retrospective observational study using the Japanese Diagnosis Procedure Combination Database. *BMC Health Services Research*, 12, 129.
- Yeatts, D. E., Cready, C., Ray, B., Dewitt, A. & Queen, C. 2004. Self-managed work teams in nursing homes: implementing and empowering nurse aide teams. *The Gerontologist*, 44, 256-261.
- Yin, R. K. 1999. Enhancing the quality of case studies in health services research. *Health Services Research*, 34, 1209-1224.
- Ylipaavalniemi, J., Kivimäki, M., Elovainio, M., Virtanen, M., Keltikangas-Järvinen, L. & Vahtera, J. 2005. Psychosocial work characteristics and incidence of newly diagnosed depression: a prospective cohort study of three different models. *Social Science & Medicine*, 61, 111-122.

- Yong, J. & Wilkinson, A. 2002. The long and winding road: the evolution of quality management. *Total Quality Management*, 13, 101-121.
- Young, S., Bartram, T., Stanton, P. & Leggat, S. G. 2010. High performance work systems and employee well-being: a two stage study of a rural Australian hospital. *Journal of Health, Organisation and Management*, 24, 182-199.
- Younies, H., Barhem, B. & Younis, M. Z. 2008. Ranking of priorities in employees' reward and recognition schemes: from the perspective of UAE health care employees. *The International Journal of Health Planning and Management*, 23, 357-371.
- Zaccaro, S. J., Rittman, A. L. & Marks, M. A. 2001. Team leadership. *The Leadership Quarterly*, 12, 451-483.
- Zairi, M. 1998. Managing human resources in healthcare: learning from world class practices-Part I. *Health Manpower Management*, 24, 48-57.
- Zammuto, R. F. 1984. A comparison of multiple constituency models of organizational effectiveness. *The Academy of Management Review*, 9, 606-616.
- Zinn, J. S. & Mor, V. 1998. Organizational structure and the delivery of primary care to older Americans. *Health Services Research*, 33, 354-380.
- Zwarenstein, M. & Bryant, W. 2000. Interventions to promote collaboration between nurses and doctors. *Cochrane Database of Systematic Reviews*, CD000072.
- Zwarenstein, M., Goldman, J. & Reeves, S. 2009. Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane database of systematic reviews* CD000072.pub2.
- Zwarenstein, M. & Reeves, S. 2002. Working together but apart: barriers and routes to nurse-physician collaboration. *Joint Commission Journal on Quality and Patient Safety*, 28, 242-247.
- Zwarenstein, M. & Reeves, S. 2006. Knowledge translation and interprofessional collaboration: where the rubber of evidence-based care hits the road of teamwork. *Journal of Continuing Education in the Health Professions*, 26, 46-54.
- Zwikael, O. & Unger-Aviram, E. 2010. HRM in project groups: the effect of project duration on team development effectiveness. *International Journal of Project Management*, 28, 413-421.
- Zyzanski, S. J., Stange, K. C., Langa, D. & Flocke, S. A. 1998. Trade-offs in high-volume primary care practice. *The Journal of family practice*, 46, 397-402.



THE UNIVERSITY OF NEW SOUTH WALES,

## **PARTICIPANT INFORMATION STATEMENT**

### ***The association between team characteristics, performance and Human Resource Management (HRM) in rehabilitation teams.***

You are invited to participate in a study that explores the association between team characteristics, performance and Human Resource Management (HRM) in rehabilitation teams. This study contributes to the PhD degree of David Pereira. Through this project we hope to determine HRM's influence on team characteristics and performance in rehabilitation teams. You were selected as a possible participant in this study because of your involvement with a public healthcare organization offering full service rehabilitation services.

If you decide to participate, we will ask that you to complete a written questionnaire survey and participate in an interview or participate in a focus group (*select one or more as appropriate*). The questionnaire survey will take no longer than 15 minutes to complete and participation in a interview or focus group will last no longer than 60 minutes. The focus group session will be recorded using a digital audio recorder.

The benefits to you are that the project will offer feedback in justifying and prioritizing managerial attention towards specific team characteristics to obtain desired levels of performance in a rehabilitation setting. We cannot and do not guarantee or promise that individually you will receive any benefits from this study. However, we look forward to the opportunity to share the findings with you. We welcome your suggestion of any ways in which the ideas from the project can be of benefit to you. We look forward to the opportunity to provide feedback to you on a later date.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or except as required by law. If you give us your permission by signing this document, the findings will contribute towards a PhD and possible publications in peer-reviewed academic journals. In any publication, information will be provided in such a way that you cannot be identified.

Complaints may be directed to the Ethics Secretariat, The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 9385 4234, fax 9385 6648, email [ethics.sec@unsw.edu.au](mailto:ethics.sec@unsw.edu.au)). Any complaint you make will be investigated promptly and you will be informed out the outcome.

Your decision whether or not to participate will not prejudice your current or future relations with your employing organisation nor the University of New South Wales. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please feel free to ask us. If you have any questions, please contact the primary research supervisor, Dr David Greenfield (9385 3071), co-supervisor Professor Jeffrey Braithwaite (9385 2590) or David Pereira (0414956831). We will be happy to answer any queries.

You can keep this form.

**Pages 1 of 3**



THE UNIVERSITY OF NEW SOUTH WALES

## PARTICIPANT CONSENT FORM

### *The association between team characteristics, performance and Human Resource Management (HRM) in rehabilitation teams.*

You are making a decision whether or not to participate in this study. Your signature indicates that, having had the project explained to you, that you agree to participate in the project and to allow us to record non-identifying information.

.....

Signature of Research Participant  
on behalf of the organisation

.....

Signature of Witness

.....

(Please PRINT name)

.....

(Please PRINT name)

.....

Date

.....

Nature of Witness



THE UNIVERSITY OF NEW SOUTH WALES

**REVOCATION OF CONSENT**

***The association between team characteristics, performance and  
Human Resource Management (HRM) in rehabilitation teams.***

I hereby wish to **WITHDRAW** my consent to participate in the project and understand that such withdrawal **WILL NOT** jeopardise my relationship with my employing organisation nor The University of New South Wales.

.....

Signature

.....

Date

.....

Please PRINT Name

The section for Revocation of Consent should be forwarded to: Dr David Greenfield, Centre for Clinical Governance Research, Australian Institute of Health Innovation, Faculty of Medicine, The University of New South Wales, SYDNEY 2052.

## Appendix 2



THE UNIVERSITY OF  
NEW SOUTH WALES

### **Teamwork and job satisfaction survey**

Thank you for taking the time to participate in this survey, which is designed to find out your team's characteristics and your overall job satisfaction. All acute rehabilitation team members are invited to participate. Participation is entirely voluntary.

No individuals will be identified in the results.

The research contributes to the PhD degree of David Pereira. Approval for the research has been given by the Human Research Ethics Committee of the University of New South Wales. If you have any questions, please contact the primary research supervisor,

Dr David Greenfield (9385 3071), co-supervisor, Professor Jeffrey Braithwaite (9385 2590) or David Pereira (0414956831).

**David Joseph Pereira**  
**PhD Candidate**  
**Centre for Clinical Governance Research in Health**  
**Australian Institute of Health Innovation**  
**Faculty of Medicine**  
**University of New South Wales**

**General instructions:** There are no right or wrong answers to the following questions. Please answer openly and honestly. Usually your first response is accurate, so please do not take too long considering each question.

**Part A:** Your details.

**Guidelines:** Please tick the appropriate option for questions 1-3 and provide written answers for questions 4 -7.

1. Gender: Male ( ) Female ( )

2. Age category:

|              |     |       |     |       |     |
|--------------|-----|-------|-----|-------|-----|
| Below 20     | ( ) | 20-30 | ( ) | 31-40 | ( ) |
| 41-50        | ( ) | 51-60 | ( ) | 61-70 | ( ) |
| 71 and above | ( ) |       |     |       |     |

3. What is your profession (Please specify specialty if applicable). (Table continued on the next page)

| PROFESSION             | TICK | SPECIALITY |
|------------------------|------|------------|
| Doctor                 |      |            |
| Nurse                  |      |            |
| Physiotherapist        |      |            |
| Occupational therapist |      |            |



|                        |  |  |
|------------------------|--|--|
| Social worker          |  |  |
| Speech pathologist     |  |  |
| Dietitian/nutritionist |  |  |
| Psychologist           |  |  |
| Pharmacist             |  |  |
| Other (please specify) |  |  |

4. In what country did you receive your undergraduate professional training? Please specify qualification/s and country or countries of training.

---

5. How long have you been working in your professional field?

---

6. How long have you been working in a rehabilitation team/service?

---

7. How long have you been working in this acute rehabilitation team/service?

---

8. How many members are there in your acute rehabilitation team?

---

**Part B:** Your team's characteristics

**Guidelines:** Six themes relating to teams with three alternative statements are listed in the table below. Please tick the statement that best describes your team for each of the six themes.

| No | Themes                         | Statements   |  |   |
|----|--------------------------------|--|--|---|
| 1  | Team member roles              | Team roles are specialized and everyone concentrates on her or his own tasks.<br>( )                               | Roles are specialized but everyone is expected to interact.<br>( ) | Although roles are specialized, everyone must also be prepared not only to complement, but to replace each other when necessary.<br>( ) |
| 2  | Tasks/duties                   | Tasks are usually performed in a determined sequence.<br>( )   | Tasks are partly interdependent and must be co-ordinated.<br>( )   | Team members as well as their tasks are interdependent.<br>( )  |
| 3  | Work management/ co-ordination | Co-ordination is based on supervision or standardization.<br>( )   | Everyone has to co-ordinate their activities.<br>( )               | Co-ordination is achieved by direct close interaction, flexibility and improvisation.<br>( )  |
| 4  | Work focus                     | Tasks are specialized and only those with a special professional education are allowed to perform the task.<br>( ) | Everyone must be prepared to adjust to the task.<br>( )            | Everyone must be prepared to adjust to the strengths and weaknesses of the others.<br>( )   |

*Continued on next page*

|   |                      |  |  |   |
|---|----------------------|--|--|---|
| 5 | Leadership behaviour | The team leader functions as a traditional manager.<br>( ) | The team leader functions as a 'coach'.<br>( ) | The team leadership varies with the situation; the team is self-regulated.<br>( ) |
| 6 | Job flexibility      | 'Do your job the best way you know'<br>( )                 | 'Do your job and co-operate'<br>( )            | 'Do your job in a interactive way and be ready for continuous adjustments'<br>( ) |

### Part C: Your views on your team

**Guidelines:** Six questions relating to teams with five possible responses are listed in the table below. Please tick the box with the most appropriate response for each of the questions to best describe your team.

| No | Items  | Responses            |                 |                                 |                  |                       |
|----|--|----------------------|-----------------|---------------------------------|------------------|-----------------------|
|    |  | To a very low degree | To a low degree | To a neither low or high degree | To a high degree | To a very high degree |
| 1  | To what extent do you consider that all team members work towards the same goal? |                      |                 |                                 |                  |                       |
| 2  | To what extent do you regard the work of the team as efficient?                  |                      |                 |                                 |                  |                       |
| 3  | To what extent do you regard your organization/unit as successful?               |                      |                 |                                 |                  |                       |

*Continued on next page*

|   |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| 4 | Do you consider your organization/unit as distinguished for high quality? |  |  |  |  |  |
| 5 | How well does your team meet the needs of the clients, patients etc?      |  |  |  |  |  |
| 6 | In total, how satisfied are you with the work of your team?               |  |  |  |  |  |

**Part D: Your team members**

**Instructions:** Fifteen statements relating to teams with five possible responses are listed in the table below. Please indicate the extent to which you agree or disagree with the follow statements regarding your team? Tick the box with the most appropriate response.

| No | Statements  | Responses        |                    |                           |                 |               |
|----|---|------------------|--------------------|---------------------------|-----------------|---------------|
|    |   | Totally disagree | Partially disagree | Neither agree or disagree | Partially agree | Totally agree |
| 1  | All members of the team have the ability to provide feedback.                                 |                  |                    |                           |                 |               |
| 2  | The members of the team show each other signs of interest and attention.                      |                  |                    |                           |                 |               |
| 3  | The members of the team have the ability to identify and feel empathy for other team members. |                  |                    |                           |                 |               |

*(continued on next page)*

| No | Statements   | Responses        |                    |                           |                 |               |
|----|--|------------------|--------------------|---------------------------|-----------------|---------------|
|    |  | Totally disagree | Partially disagree | Neither agree or disagree | Partially agree | Totally Agree |
| 4  | The members of the team have the ability to listen to the suggestions and ideas of others. |                  |                    |                           |                 |               |
| 5  | The members of the team have the ability to clearly express their opinions.                |                  |                    |                           |                 |               |
| 6  | All members of the team have the ability to both give and take (compromise).               |                  |                    |                           |                 |               |
| 7  | Work is performed and carried out in an informal and supportive atmosphere.                |                  |                    |                           |                 |               |
| 8  | All team members actively participate in team discussions.                                 |                  |                    |                           |                 |               |
| 9  | Disagreements and differences in views are respected and taken advantage of.               |                  |                    |                           |                 |               |
| 10 | The team strives for consensus in decision making.   |                  |                    |                           |                 |               |
| 11 | Criticisms are expressed in a positive and constructive manner, not as personal offences.  |                  |                    |                           |                 |               |

*(continued on next page)*

| No | Statements  | Responses        |                    |                           |                 |               |
|----|---|------------------|--------------------|---------------------------|-----------------|---------------|
|    |   | Totally disagree | Partially disagree | Neither agree or disagree | Partially agree | Totally Agree |
| 12 | The members of the team are allowed to express feelings and opinions on factual questions.  |                  |                    |                           |                 |               |
| 13 | The leader of the group does not dominate the work of the group. The leadership style is dependent on circumstances and the nature of the given task. |                  |                    |                           |                 |               |
| 14 | The team is task oriented.  |                  |                    |                           |                 |               |
| 15 | The team encourages positive individual achievements and performances.  |                  |                    |                           |                 |               |

**Part E: Job satisfaction**

**Guidelines:** Fifteen statements relating to your overall job satisfaction with five possible responses are listed in the table below. Tick the box with the most appropriate response.

| No | Statements                                  | Responses         |              |                                    |           |                |
|----|---|-------------------|--------------|------------------------------------|-----------|----------------|
|    |   | Very dissatisfied | Dissatisfied | Neither satisfied nor dissatisfied | Satisfied | Very satisfied |
| 1  | The physical conditions in which you work.  |                   |              |                                    |           |                |
| 2  | Freedom to choose your own working methods. |                   |              |                                    |           |                |
| 3  | Your fellow workers.                        |                   |              |                                    |           |                |
| 4  | The recognition you get for good work.      |                   |              |                                    |           |                |
| 5  | Your immediate manager.                     |                   |              |                                    |           |                |
| 6  | The amount of responsibility you are given. |                   |              |                                    |           |                |
| 7  | The rate of pay.                            |                   |              |                                    |           |                |

*(continued on next page)*

| No | Statements                              | Responses         |              |                                    |           |                |
|----|---|-------------------|--------------|------------------------------------|-----------|----------------|
|    |   | Very dissatisfied | Dissatisfied | Neither satisfied nor dissatisfied | Satisfied | Very satisfied |
| 8  | The opportunity to use your abilities.  |                   |              |                                    |           |                |
| 9  | Relations between management and staff. |                   |              |                                    |           |                |
| 10 | Future chance of promotion.             |                   |              |                                    |           |                |
| 11 | The way the hospital is managed.        |                   |              |                                    |           |                |
| 12 | The attention paid to your suggestions. |                   |              |                                    |           |                |
| 13 | The hours of work.                      |                   |              |                                    |           |                |
| 14 | The amount of variety in your job.      |                   |              |                                    |           |                |
| 15 | Your job security.                      |                   |              |                                    |           |                |



**Part F: Final comments**

My final comments on teamwork are:

---

---

---

---

---

---

**Thank you very much.**

**I appreciate your generous participation, time and effort in completing this survey.**

**Appendix 3                      Focus group questions for rehabilitation team members by  
Human Resource Management (HRM) areas.**

**A. Opening questions**

- (A1) How would you describe your team?
- (A2) What do you think influences teamwork?
- (A3) What do you think influences performance?

**B. Human resource planning and evaluation**

- (B1) Can you tell me how members of the acute rehabilitation team were selected and recruited?
- (B2) How are staff evaluated here?

**C. Healthcare staff work systems**

- (C1) Can you tell me about individual work and team work in your acute rehabilitation team?
- (C2) Tell me about the recognition and reward system here?  
(When are staff recognized and rewarded? How are staff recognized and rewarded?)

**D. Healthcare staff education, training and development**

- (D1) Tell me about staff development in this health organization?

**E. Healthcare staff well being and satisfaction**

- (E1) Could you tell me what it's like working here?  
(What are the positives of working here? What are the negatives of working here?)

**F. Healthcare context**

- (F1) How much influence would other staff working in this hospital have on the acute rehabilitation team?

**G. General people management**

- (G1) How would you describe healthcare staff management/people management in your health organization?
- (G2) How much influence would the Human Resource (HR) department have on your team?
- (G3) How would the team react to people management efforts from the HR department?

**H. Closing question**

- (H1) Is there anything else you'd like to add about people management?

## **Appendix 4**

### **Interview questions for human resource directors or managers by Human Resource Management (HRM) areas and coverage.**

#### **A. Opening questions**

- (A1) How would you describe this healthcare organization?
- (A2) How would you describe the rehabilitation service here?
- (A3) What do you think influences teamwork?
- (A4) What do you think influences performance?

#### **B. Human resource planning and evaluation**

- (B1) What factors shape human resource planning in this healthcare organization?
- (B2) How are staff selected and recruited here?
- (B3) What qualities/attributes would be important for staff employed here?
- (B4) How much influence do existing staff have in the selection and recruitment of new staff?
- (B5) How are staff evaluated here?
- (B6) How do staff learn their jobs?  
(Is there any passing down of knowledge from previous or existing staff?)
- (B7) What are the management staff and healthcare staff relationships like?
- (B8) How are staff motivated?
- (B9) How is leadership provided in this healthcare organization?

#### **C. Healthcare staff work systems**

- (C1) How would you describe individual work and teamwork requirements for staff employed here?
- (C2) How much decision making responsibility do staff have in their respective roles?
- (C3) When are staff recognized and rewarded?
- (C4) How are staff recognized and rewarded?
- (C5) How much support do staff have to try out new and innovative procedures?
- (C6) How would the HR department respond if staff required more support to try out new and innovative procedures?

**D. Healthcare staff education, training and development**

- (D1) Tell me about staff development in this healthcare organization.  
(What type of staff development, education or training is encouraged or provided in this organization? What staff development would be mandatory in this organization?)

**E. Health care staff well being and satisfaction**

- (E1) What are the positives for staff working here?
- (E2) What are the negatives for staff working here?
- (E3) What would improve staff well being and satisfaction in this healthcare organization?
- (E4) I'm interested in understanding if staff have left, why they did so?
- (E5) What effort does the HR department take to retain healthcare staff?

**F. Healthcare context**

- (F1) How much influence would the different departments and units in this healthcare organization have on one another?

**G. General people management**

- (G1) How would you describe healthcare staff management/people management in this healthcare organization?
- (G2) How much influence does the HR department have on staff here?
- (G3) How useful would it be for the HR department to increase its involvement in staff management?

**H. Closing questions**

- (H1) Is there anything else you'd like to add with regards to human resource management?

## Appendix 5

### Summaries of HR staff and clinical staff responses for HRM

| Table | Heading  | Location |
|-------|--|----------|
| 5.2   | Summary of HR staff responses on general site and study elements theme, by question focus and hospital   | 305      |
| 5.3   | Summary of HR staff responses on HR planning and evaluation theme, by question focus and hospital  | 306      |
| 5.4   | Summary of HR staff responses on healthcare staff work systems theme, by question focus and hospital   | 309      |
| 5.5   | Summary of HR staff responses on healthcare staff education, training and development theme, by hospital   | 310      |
| 5.6   | Summary of HR staff responses for healthcare staff well being and satisfaction theme, by question focus and hospital                                       | 311      |
| 5.7   | Summary of HR staff responses on healthcare context theme (influence of different departments and units on one another), by hospital                       | 313      |
| 5.8   | Summary of HR staff responses on general people management in the organization theme, by question focus and hospital                                       | 314      |
| 5.9   | Summary of HR staff responses on views on HRM theme (final comments on HRM), by hospital   | 315      |
| 5.10  | Summary of clinical staff responses on general site and study elements theme, by question focus and hospital   | 316      |
| 5.11  | Summary of clinical staff responses on human resource planning and evaluation theme, by question focus and hospital  | 318      |
| 5.12  | Summary of clinical staff responses on healthcare staff work systems theme, by question focus and hospital   | 319      |
| 5.13  | Summary of clinical staff responses on healthcare staff education, training and development theme, by hospital   | 320      |
| 5.14  | Summary of clinical staff responses on healthcare staff well being and satisfaction theme, by question focus and hospital                                  | 321      |
| 5.15  | Summary of clinical staff responses on healthcare context theme (influence of other staff working in the hospital on the rehabilitation team), by hospital | 322      |
| 5.16  | Summary of clinical staff responses on general people management in the organization theme, by question focus and hospital                                 | 323      |
| 5.17  | Summary of clinical staff responses on view on HRM theme (final comments on people management), by hospital  | 325      |

**Table 5.2:** Summary of HR staff responses on general site and study elements theme, by question focus and hospital

| Question focus                         | Responses                                   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Healthcare organization</i>         | Size  | Large      | Large      | Small      | Small      | Large      | Small      | Medium     |
|  | Complex                                     | ✓          | ✓          |            |            | ✓          |            |            |
|  | Diverse range of services                   | ✓          | ✓          |            |            | ✓          |            | ✓          |
|  | Values                                      | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          |
|  | Good healthcare provider                    |            | ✓          | ✓          |            |            | ✓          |            |
| <i>Rehabilitation service</i>          | Lack of knowledge                           | ✓          |            |            |            |            |            | ✓          |
|  | Positive/good                               | ✓          |            | ✓          |            |            | ✓          |            |
|  | Multidisciplinary                           |            | ✓          |            | ✓          | ✓          | ✓          |            |
|  | Team effort                                 |            | ✓          |            |            |            | ✓          |            |
| <i>Factors influencing teamwork</i>    | Leadership                                  | ✓          | ✓          |            | ✓          | ✓          | ✓          |            |
|  | Team composition                            |            |            |            | ✓          |            | ✓          |            |
|  | Communication                               | ✓          | ✓          | ✓          |            |            |            |            |
|  | Responsibility, openness and responsiveness |            |            |            |            |            |            | ✓          |
| <i>Factors influencing performance</i> | Teamwork                                    |            | ✓          |            | ✓          | ✓          | ✓          |            |
|  | Leadership                                  | ✓          | ✓          |            |            |            | ✓          |            |
|  | Individual characteristics of staff         |            | ✓          |            |            |            | ✓          | ✓          |
|  | Staff development                           | ✓          |            | ✓          |            |            | ✓          |            |
|  | Resources                                   | ✓          | ✓          |            |            | ✓          |            |            |
|  | Performance management                      |            |            |            | ✓          |            |            | ✓          |

**Table 5.3:** Summary of HR staff responses on HR planning and evaluation theme, by question focus and hospital

| Question focus   | Responses   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Factors influencing HR planning in the organization</i> | Meeting staffing requirements                       | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Funding   | ✓          | ✓          |            | ✓          |            |            |            |
|  | Patient demographics                                | ✓          |            | ✓          |            |            | ✓          | ✓          |
|  | Service requirements                                | ✓          |            |            | ✓          |            | ✓          |            |
|  | Staff surveys                                       |            |            | ✓          |            |            |            |            |
|  | Responsibility to staff                             |            |            |            |            |            | ✓          |            |
| <i>Selection and recruitment</i>                           | Rigorous process                                    | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Advertising   | ✓          | ✓          |            | ✓          |            | ✓          | ✓          |
|  | Position description                                | ✓          | ✓          |            |            | ✓          | ✓          |            |
|  | Interviews  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
|  | Merit based equal employment opportunity            | ✓          |            |            | ✓          | ✓          | ✓          | ✓          |
|  | Electronic recruitment                              |            | ✓          | ✓          |            | ✓          |            |            |
|  | Selection committee                                 |            | ✓          | ✓          | ✓          | ✓          | ✓          |            |
|  | Three member selection committee                    |            |            | ✓          |            | ✓          | ✓          |            |
|  | Selection committee convener                        |            |            | ✓          | ✓          |            |            |            |
| <i>Attributes important for staff employed</i>             | Linked to organizational policy, mission and values | ✓          | ✓          |            | ✓          | ✓          | ✓          |            |
|  | Varies according to type of professional role       | ✓          | ✓          | ✓          | ✓          |            |            |            |
|  | Ability to work in a team                           | ✓          | ✓          |            |            |            | ✓          |            |
|  | Ability to work autonomously                        |            |            |            |            |            | ✓          |            |
|  | Ability to maintain a professional approach         |            |            |            |            |            |            | ✓          |

*Continued*

| Question focus   | Responses  | General    |            |            |            |            |            | Stroke     |
|--|--|------------|------------|------------|------------|------------|------------|------------|
|  |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Influence of existing staff on selection and recruitment of new staff</i> | Direct influence if a member of the selection committee  | ✓          | ✓          | ✓          | ✓          |            | ✓          |            |
|  | Convener of selection committee is new recruit's head of department or the person to report to | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
|  | Not much influence from most work colleagues   | ✓          |            |            | ✓          |            | ✓          |            |
|  | Indirect influence   |            |            |            |            |            |            | ✓          |
| <i>Staff evaluation</i>  | Appraisals   |            | ✓          |            | ✓          | ✓          | ✓          | ✓          |
|  | The role of managers   | ✓          | ✓          |            | ✓          |            | ✓          |            |
|  | Performance management   |            | ✓          |            | ✓          |            |            |            |
|  | Performance development  | ✓          | ✓          | ✓          |            |            | ✓          |            |
|  | Informal and regular feedback  |            |            | ✓          | ✓          |            | ✓          | ✓          |
| <i>Staff learning their jobs</i>   | Colleagues or team members   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | From degrees and qualifications relevant to tasks  |            | ✓          |            | ✓          | ✓          | ✓          | ✓          |
|  | Dependant on type of job or professional group   | ✓          | ✓          | ✓          |            |            | ✓          |            |
|  | Training, education and development provided or supported by the organization                  | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
|  | Formal workplace orientation   |            | ✓          |            |            |            | ✓          | ✓          |
|  | Role of the manager  | ✓          | ✓          |            |            |            | ✓          |            |

*Continued*



| Question focus                                     | Responses  | General    |            |            |            |            |            | Stroke     |
|--|--|------------|------------|------------|------------|------------|------------|------------|
|  |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Management and clinical staff relationships</i> | Good   | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
|  | Don't know much  |            |            |            |            | ✓          |            |            |
|  | Open door policy for communication   |            |            | ✓          |            |            | ✓          |            |
|  | Giving clinical staff the opportunity to provide input for decision making |            |            |            |            |            | ✓          |            |
|  | Senior managers are visible and accessible                                 |            |            |            | ✓          |            |            |            |
| <i>Staff motivation</i>                            | Difficult due public sector constraints                                    | ✓          |            |            |            |            |            |            |
|  | Role of immediate managers   | ✓          |            | ✓          |            |            |            |            |
|  | Patient feedback and outcomes  |            |            |            | ✓          |            | ✓          |            |
|  | Monetary reward  |            |            |            |            | ✓          | ✓          |            |
|  | Organizational mission and values  |            | ✓          |            | ✓          |            |            |            |
|  | Organizational reward and recognition schemes                              | ✓          |            |            |            |            | ✓          | ✓          |
| <i>Provision of leadership</i>                     | Role of managers   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Via executive and service managers   |            |            |            |            |            |            | ✓          |
|  | Role of organizational structure   | ✓          | ✓          |            | ✓          | ✓          |            |            |
|  | Organizational policies  |            |            |            |            | ✓          | ✓          |            |
|  | General manager's approach to lead by example                              |            |            | ✓          |            |            |            |            |
|  | Leadership development efforts   |            | ✓          |            |            |            | ✓          |            |

**Table 5.4:** Summary of HR staff responses on healthcare staff work systems theme, by question focus and hospital

| Question focus                                   | Responses   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Individual work and teamwork requirements</i> | Difficult question  | ✓          |            |            |            |            | ✓          |            |
|  | Depends on the specific job, discipline or profession                         | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
|  | Substantial proportion of work is individual                                  |            | ✓          |            |            |            | ✓          | ✓          |
|  | Most healthcare jobs are part of a team                                       | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Individual and teamwork ratio   |            |            |            |            | ✓          |            |            |
|  | Teamwork is sometimes restricted by the lack of resources namely team players |            | ✓          |            |            |            |            |            |
| <i>Staff decision making responsibility</i>      | Depends on the professional discipline or seniority level                     | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | All staff have a responsibility   | ✓          |            |            |            |            |            |            |
|  | Restricted by organizational policy   |            | ✓          |            |            | ✓          |            |            |
| <i>Staff recognition and reward</i>              | Organizational reward and recognition schemes                                 | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | For performance that is above expectation                                     | ✓          |            |            | ✓          |            | ✓          | ✓          |
|  | Long service awards   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |            |
|  | The role of the manager   | ✓          | ✓          | ✓          |            |            | ✓          | ✓          |
|  | Limited flexibility in terms of salary  |            | ✓          |            |            |            |            |            |
|  | Development opportunities   | ✓          | ✓          | ✓          | ✓          |            | ✓          |            |
|  | Role of patient feedback  |            |            | ✓          |            |            |            | ✓          |

*Continued*

| Question focus  | Responses                                  | General    |            |            |            |            |            | Stroke     |
|---|--|------------|------------|------------|------------|------------|------------|------------|
|   |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Support for staff innovation</i>                         | Staff supported                            | √          | √          | √          | √          | √          | √          | √          |
|   | Significant support                        |            | √          | √          |            |            | √          |            |
|   | Depend on the feasibility and practicality | √          | √          |            | √          | √          | √          | √          |
|   | Unsure regarding clinical aspects          | √          |            |            |            |            |            |            |
| <i>HR response for staff innovation support requirement</i> | HR department not involved                 | √          |            |            |            | √          |            | √          |
|   | Consultation                               |            |            | √          |            |            |            |            |
|   | Provision of policy and procedure advice   | √          |            |            |            |            | √          | √          |
|   | Support for work procedure                 |            | √          |            |            |            | √          |            |
|   | Role of the manager                        | √          |            |            | √          |            | √          |            |

**Table 5.5:** Summary of HR staff responses on healthcare staff education, training and development theme, by hospital

| Responses                                       | General    |            |            |            |            |            | Stroke     |
|---|------------|------------|------------|------------|------------|------------|------------|
|   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Varies by type of staff and profession          | √          |            |            | √          |            | √          | √          |
| Encouraged                                      | √          | √          |            |            |            | √          | √          |
| Role of manager                                 |            | √          |            |            |            | √          |            |
| Education sponsorship                           |            | √          |            |            | √          |            | √          |
| Education allowance                             |            |            | √          |            |            | √          | √          |
| Study leave                                     |            | √          | √          |            |            | √          | √          |
| Role of the learning and development department |            | √          |            |            |            | √          |            |

**Table 5.6:** Summary of HR staff responses for healthcare staff well being and satisfaction theme, by question focus and hospital

| Question focus   | Responses   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Positives for staff working in the organization</i> | Hospital provided learning and development opportunities                  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Employment benefits   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Culture of continuous improvement   |            |            |            | ✓          |            |            |            |
|  | Support from managers is rated highly and also identified for improvement |            |            |            | ✓          |            |            |            |
|  | Good reputation of the organization                                       |            | ✓          |            |            | ✓          |            |            |
|  | Job security  | ✓          |            |            |            |            |            | ✓          |
|  | Hospital's location   | ✓          |            |            |            | ✓          |            |            |
|  | Supportive environment  |            |            |            | ✓          |            | ✓          |            |
|  | Staff enjoying their work   |            |            |            | ✓          |            |            |            |
|  | Opportunities for promotion   | ✓          |            |            |            |            |            |            |
| <i>Negatives for staff working in the organization</i> | Funding and budget issues   | ✓          | ✓          |            |            |            |            |            |
|  | Inability to provide financial incentives                                 |            | ✓          |            | ✓          |            |            |            |
|  | Lack of resources   |            |            |            |            |            |            | ✓          |
|  | Restriction on career progress and development                            |            |            |            | ✓          |            | ✓          |            |
|  | Limited clinical exposure to wider patient group                          |            |            | ✓          |            |            |            |            |
|  | Lack of parking   |            |            |            |            | ✓          |            |            |
|  | Some staff feeling unsupported  |            |            |            |            | ✓          |            |            |
|  | Uncertainty due to organization change                                    |            |            |            |            |            | ✓          |            |
|  | Staff being afraid of change  |            |            |            | ✓          |            |            |            |

*Continued*

| Question focus  | Responses  | General    |            |            |            |            |            | Stroke     |
|---|--|------------|------------|------------|------------|------------|------------|------------|
|   |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Suggestions for improving staff well being and satisfaction in the healthcare organization</i> | The ability to reward and recognize staff  | ✓          | ✓          |            | ✓          |            | ✓          |            |
|   | Currently no significant problems  |            |            | ✓          |            |            |            |            |
|   | Family friendly and flexible work practices  |            |            |            |            | ✓          |            |            |
|   | More resources   |            | ✓          |            |            |            |            | ✓          |
|   | Improving communication  |            |            |            | ✓          |            | ✓          |            |
|   | Listening to staff   |            | ✓          |            |            |            |            |            |
| <i>Reasons for staff turnover</i>   | Better opportunities   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|   | Dissatisfaction with colleagues  | ✓          | ✓          |            |            | ✓          |            |            |
|   | Dissatisfaction with boss or manager   | ✓          |            |            |            |            |            |            |
|   | Dissatisfaction with pay   | ✓          |            |            |            |            |            |            |
|   | Short term contracts   |            |            |            | ✓          |            |            |            |
|   | Not being a team player  |            | ✓          |            |            |            |            |            |
|   | Retirement   |            |            | ✓          |            |            |            | ✓          |
|   | Terminal illness   |            |            | ✓          |            |            |            |            |
|   | Not collecting exit information  | ✓          |            |            |            |            | ✓          |            |
|   | Not many staff complete exit interviews  | ✓          |            |            |            |            |            | ✓          |
| <i>HR department effort to retain healthcare staff</i>  | Providing a safe working environment   | ✓          |            |            |            | ✓          |            |            |
|   | Development and training   | ✓          | ✓          |            |            |            |            |            |
|   | Addressing staff issues  |            | ✓          | ✓          |            |            |            |            |
|   | Efforts from the HR department alone were insufficient for retaining staff                                       |            | ✓          |            |            |            | ✓          |            |
|   | The role of managers and leaders   |            | ✓          |            | ✓          |            | ✓          |            |
|   | Being proactive  |            |            |            |            |            | ✓          |            |
|   | HR department does not have the resources for retaining staff  |            |            |            |            |            |            | ✓          |
|   | HR department's main roles are ensuring staff are appropriately paid and advising staff promptly and efficiently |            |            |            |            |            |            | ✓          |

**Table 5.7:** Summary of HR staff responses on healthcare context theme (influence of different departments and units on one another), by hospital

| Responses   | General    |            |            |            |            |            | Stroke     |
|---|------------|------------|------------|------------|------------|------------|------------|
|   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Significant connection between departments  | √          | √          | √          | √          |            |            |            |
| Interaction between departments and units is essential                                  |            | √          |            | √          |            |            |            |
| All departments are interrelated in some way  |            |            |            |            |            |            | √          |
| Limited cross communication   |            |            |            |            |            | √          |            |
| Small organization contributes to interaction between the departments                   |            |            | √          | √          |            |            |            |
| Interactions between departments would depend on the care patients required             | √          | √          |            |            | √          | √          |            |
| Patients with complicated and multiple care needs would impact on different departments |            |            |            |            | √          |            |            |

**Table 5.8:** Summary of HR staff responses on general people management in the organization theme, by question focus and hospital

| Question focus  | Responses   | General    |            |            |            |            |            | Stroke     |
|---|---|------------|------------|------------|------------|------------|------------|------------|
|   |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Healthcare staff management in the organization</i>                            | Perceived positively  |            | ✓          | ✓          |            | ✓          | ✓          |            |
|   | Sometimes problems  | ✓          | ✓          |            |            |            |            |            |
|   | Important role of the manager                                   | ✓          | ✓          |            | ✓          |            | ✓          | ✓          |
|   | Problems if the senior clinician appointment not a good manager | ✓          |            |            |            |            |            |            |
|   | Influenced significantly by policies                            |            |            |            | ✓          | ✓          |            |            |
|   | Impacted by structure   |            |            |            | ✓          |            |            | ✓          |
|   | Could be better   |            |            |            |            | ✓          | ✓          |            |
|   | A lead by example approach                                      |            |            |            |            |            | ✓          |            |
| <i>HR department's influence on staff</i>   | Providing policy and procedure guidance                         | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|   | Significant influence on staff                                  |            | ✓          | ✓          |            |            |            |            |
|   | Resolving staff grievances                                      |            | ✓          |            |            |            | ✓          | ✓          |
|   | Facilitating managers   |            | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|   | Managers could be performing substantial HRM                    |            |            |            | ✓          |            |            |            |
|   | Preventing workplace bullying and harassment                    |            |            |            | ✓          |            |            |            |
|   | Dealing and negotiating with unions                             | ✓          |            |            |            |            |            |            |
|   | Protecting the organization                                     |            |            |            | ✓          |            |            |            |
| <i>Usefulness of HR department increasing its involvement in staff management</i> | Useful  | ✓          | ✓          |            |            |            | ✓          | ✓          |
|   | Depends on the availability of resources                        | ✓          | ✓          |            |            |            |            | ✓          |
|   | Discouraging work place politics                                |            |            |            |            |            | ✓          |            |
|   | Managers not having the skills                                  |            |            |            |            |            |            | ✓          |
|   | Useful to develop the skills of managers further                | ✓          |            |            |            |            |            |            |
|   | To assist managers more   |            | ✓          |            |            |            |            |            |
|   | Would require a shift in thinking                               |            |            |            |            |            |            | ✓          |
|   | Against increasing the HR department's role                     |            |            | ✓          |            | ✓          |            |            |
|   | Would make staff management too bureaucratic                    |            |            | ✓          |            |            |            |            |
|   | Decreasing HRM involvement                                      |            |            |            |            | ✓          |            |            |

**Table 5.9:** Summary of HR staff responses on views on HRM theme (final comments on HRM), by hospital

| Responses  | General    |            |            |            |            |            | Stroke     |
|--|------------|------------|------------|------------|------------|------------|------------|
|  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Importance of HRM  | √          |            |            |            |            | √          | √          |
| Limited due to the lack of resources                       | √          |            |            |            |            |            |            |
| HR department is doing a good job                          |            | √          |            |            |            |            |            |
| Important for the HR department to treat people fairly     |            |            | √          |            |            |            |            |
| Managers skilled to be confident in dealing with staff     |            |            |            | √          |            |            |            |
| The HR department provides advice and guidance to managers |            |            |            |            | √          |            |            |



**Table 5.10:** Summary of clinical staff responses on general site and study elements theme, by question focus and hospital

| Question focus                      | Responses  | General    |            |            |            |            |            | Stroke     |
|-------------------------------------|--|------------|------------|------------|------------|------------|------------|------------|
|                                     |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Description of team</i>          | Positive   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                     | Multidisciplinary  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                     | Nursing participation in multidisciplinary meetings could benefit the team | ✓          |            |            |            |            |            |            |
|                                     | Learning opportunity   |            | ✓          |            |            |            |            |            |
|                                     | Currently stable   |            |            | ✓          |            |            |            |            |
|                                     | Shortage of nursing staff  |            |            | ✓          |            |            |            |            |
|                                     | Grievances among nursing staff with fellow nurses.                         |            |            | ✓          |            |            |            |            |
|                                     | Inadequate communication between some nurses with Nurse Unit Manager (NUM) |            |            | ✓          |            |            |            |            |
|                                     | Client centered/patient focused  |            |            |            |            | ✓          | ✓          | ✓          |
| <i>Factors influencing teamwork</i> | Communication  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                     | Team members   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                     | Goals  | ✓          |            | ✓          | ✓          | ✓          |            |            |
|                                     | Respect  | ✓          | ✓          | ✓          |            |            |            | ✓          |
|                                     | Staffing   | ✓          | ✓          | ✓          |            |            | ✓          | ✓          |
|                                     | Patients   | ✓          | ✓          |            |            |            | ✓          |            |
|                                     | Leadership   |            | ✓          |            | ✓          |            | ✓          | ✓          |
|                                     | Workload   |            | ✓          | ✓          |            |            | ✓          | ✓          |
|                                     | Systems and processes  |            | ✓          |            |            |            |            |            |
|                                     | Resources  |            |            | ✓          |            |            |            |            |

*Continued*

| Question focus                         | Responses                           | General    |            |            |            |            |            | Stroke     |
|--|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|
|  |                                     | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Factors influencing performance</i> | Teamwork                            | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Education, training and development | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
|  | Patients                            | ✓          |            | ✓          |            | ✓          | ✓          |            |
|  | Job satisfaction                    | ✓          | ✓          |            |            |            |            |            |
|  | Communication                       | ✓          | ✓          |            | ✓          | ✓          |            | ✓          |
|  | Goals                               | ✓          |            |            |            | ✓          |            | ✓          |
|  | Staffing                            | ✓          |            | ✓          |            |            | ✓          | ✓          |
|  | Reward and recognition              |            | ✓          | ✓          |            |            |            |            |
|  | Resources                           |            | ✓          | ✓          | ✓          |            | ✓          |            |
|  | Workload                            |            |            | ✓          | ✓          |            |            |            |
|  | Evidence based practice             |            |            |            |            |            |            | ✓          |

**Table 5.11:** Summary of clinical staff responses on human resource planning and evaluation theme, by question focus and hospital

| Question focus                   | Responses                              | General    |            |            |            |            |            | Stroke     |
|----------------------------------|--|------------|------------|------------|------------|------------|------------|------------|
|                                  |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Selection and recruitment</i> | By professional discipline             | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Advertisements                         | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Interviews                             | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Rotations                              | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Interview panel                        | ✓          | ✓          | ✓          |            | ✓          | ✓          |            |
|                                  | Referee checks                         |            | ✓          | ✓          | ✓          |            |            |            |
|                                  | Fair process                           |            | ✓          |            | ✓          |            |            |            |
|                                  | Rigorous process                       |            | ✓          |            |            |            |            |            |
|                                  | Inefficient                            | ✓          |            |            |            |            |            |            |
|                                  | Heavily weighted towards interview     |            |            | ✓          |            |            |            |            |
| <i>Staff evaluation</i>          | Within professional discipline         | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Annual appraisals                      | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|                                  | Informally                             |            | ✓          |            |            |            |            | ✓          |
|                                  | Patient feedback                       | ✓          |            |            |            |            |            |            |
|                                  | Incidents based                        |            |            | ✓          |            |            |            |            |
|                                  | Cross discipline peer review projected |            |            | ✓          |            |            |            |            |
|                                  | No or delayed                          | ✓          | ✓          | ✓          |            |            |            |            |
|                                  | Perfunctory                            |            | ✓          |            |            |            |            |            |
|                                  | Poor monitoring of performance         | ✓          |            |            |            |            |            |            |

**Table 5.12:** Summary of clinical staff responses on healthcare staff work systems theme, by question focus and hospital

| Question focus                                   | Responses   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Individual work and teamwork requirements</i> | Mostly individual                                 | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Interdisciplinary communication and collaboration | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Team meetings                                     | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Work is team based                                |            |            |            | ✓          |            | ✓          | ✓          |
|  | Hard question to answer                           |            | ✓          |            |            | ✓          |            | ✓          |
|  | Team goals  | ✓          | ✓          | ✓          |            | ✓          |            | ✓          |
|  | Staffing  | ✓          | ✓          |            |            | ✓          |            |            |
|  | Patient need                                      | ✓          | ✓          |            |            | ✓          | ✓          | ✓          |
|  | Team members                                      | ✓          |            |            |            |            |            |            |
|  | Procedures  |            | ✓          |            |            | ✓          |            | ✓          |
|  | Day of the week                                   |            |            | ✓          |            |            |            |            |
|  | Shift   |            |            |            |            |            |            | ✓          |
|  | Professional discipline                           |            |            |            |            |            |            | ✓          |
|  | Distinct cross professional sub teams             |            |            |            | ✓          |            |            |            |
| <i>Staff recognition and reward System</i>       | Recognition from patients                         | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Informal recognition from colleagues              | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Inadequate formal organizational recognition      | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Intrinsically rewarding work                      |            | ✓          |            | ✓          |            |            |            |
|  | Celebrations and special days                     |            | ✓          | ✓          |            |            |            | ✓          |
|  | Staff recognition awards                          |            |            |            | ✓          |            | ✓          | ✓          |
|  | Massages and cheap theater tickets                |            |            |            | ✓          |            |            |            |

**Table 5.13:** Summary of clinical staff responses on healthcare staff education, training and development theme, by hospital

| Responses   | General    |            |            |            |            |            | Stroke     |
|---|------------|------------|------------|------------|------------|------------|------------|
|   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Varies according to professional discipline group | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
| Mandatory training                                | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
| Dependant on staffing levels and workload         | ✓          | ✓          | ✓          |            | ✓          | ✓          | ✓          |
| For maintaining professional registration         | ✓          | ✓          | ✓          | ✓          |            | ✓          |            |
| Encouraged  |            |            |            |            | ✓          | ✓          | ✓          |
| Not discouraged and not encouraged                |            |            | ✓          |            |            |            |            |
| Staff have to be self motivated                   |            | ✓          |            |            |            |            |            |
| Limited funding                                   | ✓          | ✓          |            |            | ✓          | ✓          |            |
| Minimum or limited support                        | ✓          |            |            |            |            |            |            |
| Dependant on manager's approval                   |            |            | ✓          |            |            | ✓          | ✓          |
| Study leave                                       | ✓          | ✓          | ✓          |            |            | ✓          | ✓          |
| Development allowance                             |            |            | ✓          |            |            |            | ✓          |
| Sponsorship                                       |            |            |            | ✓          |            |            |            |

**Table 5.14:** Summary of clinical staff responses on healthcare staff well being and satisfaction theme, by question focus and hospital

| Question focus   | Responses   | General    |            |            |            |            |            | Stroke     |
|--|---|------------|------------|------------|------------|------------|------------|------------|
|  |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Positives for staff working in the organization</i> | Enjoy work and working with colleagues                              | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Learning opportunities  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Satisfaction from good patient outcomes and improvements            | ✓          | ✓          |            | ✓          | ✓          | ✓          | ✓          |
|  | Location and convenience  | ✓          | ✓          | ✓          | ✓          |            | ✓          |            |
|  | Small hospital  |            |            | ✓          | ✓          |            | ✓          |            |
|  | Good NUM  |            | ✓          |            |            |            |            |            |
|  | Reasonable workload   |            |            |            |            |            | ✓          |            |
|  | Adequate staffing   |            |            |            |            |            | ✓          |            |
|  | Research  |            |            |            |            |            |            | ✓          |
| <i>Negatives for staff working in the organization</i> | Inadequate staffing   | ✓          | ✓          | ✓          | ✓          | ✓          |            | ✓          |
|  | Unsatisfactory resources  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
|  | Heavy workload  |            | ✓          | ✓          | ✓          | ✓          |            | ✓          |
|  | Bed pressure  |            | ✓          | ✓          |            | ✓          |            | ✓          |
|  | Non rehabilitation patients   |            | ✓          | ✓          | ✓          |            |            |            |
|  | Restricted patient admittance                                       |            |            |            | ✓          |            |            |            |
|  | Lacking acute services  |            |            |            | ✓          |            |            |            |
|  | High turnover   | ✓          |            |            |            | ✓          |            |            |
|  | Limited opportunities for professional and career development       |            |            | ✓          | ✓          |            |            |            |
|  | Insufficient recognition  | ✓          |            |            |            |            | ✓          |            |
|  | Constrained monetary and financial incentives                       |            |            |            | ✓          |            |            |            |
|  | Delayed recruitment   | ✓          |            |            |            |            |            |            |
|  | Poor rehabilitation service leadership                              |            |            |            |            | ✓          |            |            |
|  | Lack of appreciation by allied health staff towards nurses          |            |            |            |            |            |            | ✓          |
|  | Lack of communication between allied health staff and nursing staff |            |            | ✓          |            |            |            |            |
|  | Separation from the main hospital                                   |            |            | ✓          |            |            |            |            |

**Table 5.15:** Summary of clinical staff responses on healthcare context theme (influence of other staff working in the hospital on the rehabilitation team), by hospital

| Responses   | General    |            |            |            |            |            | Stroke     |
|---|------------|------------|------------|------------|------------|------------|------------|
|   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Other hospital areas referring patients   | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
| Other hospital areas supporting additional medical needs of rehabilitation patients | ✓          | ✓          |            |            |            |            | ✓          |
| Professional discipline managers  | ✓          |            | ✓          |            |            |            |            |
| Decisions made at main hospital   |            |            | ✓          |            |            |            |            |
| Non clinical support staff  |            |            | ✓          | ✓          |            |            |            |
| Bed pressure  |            | ✓          |            |            | ✓          |            |            |
| Other hospital areas accepting rehabilitation patients who are medically unwell     | ✓          |            |            |            |            |            |            |
| Recruitment and filling of vacancies  | ✓          |            |            |            |            |            |            |
| Hospital's managerial structure   |            | ✓          | ✓          |            | ✓          | ✓          |            |
| Staff from rehabilitation service being borrowed by other hospital department       |            |            |            |            |            | ✓          |            |
| Not much influence  |            |            | ✓          | ✓          | ✓          |            | ✓          |

**Table 5.16:** Summary of clinical staff responses on general people management in the organization theme, by question focus and hospital

| Question focus   | Responses  | General    |            |            |            |            |            | Stroke     |
|--|--|------------|------------|------------|------------|------------|------------|------------|
|  |  | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>Healthcare staff management/people management in the organization</i> | Affected by professional discipline department or unit                           | ✓          | ✓          | ✓          |            |            | ✓          | ✓          |
|  | Positive   |            | ✓          | ✓          | ✓          |            |            | ✓          |
|  | Negative   |            |            | ✓          |            | ✓          |            |            |
|  | Multilayered or hierarchical   |            | ✓          |            |            | ✓          |            |            |
|  | Bureaucratic   |            |            | ✓          |            |            |            |            |
|  | Understaffing  |            |            | ✓          |            | ✓          |            | ✓          |
|  | Poor communication and consultation  | ✓          | ✓          |            |            |            |            |            |
|  | Insufficient reward and recognition  | ✓          | ✓          |            |            |            |            |            |
|  | Limited accountability in managers towards performance management and evaluation | ✓          |            |            |            |            |            |            |
|  | Inefficient recruitment and replacement of staff                                 | ✓          |            |            |            |            |            |            |
|  | Upper management not approachable  |            |            |            |            |            |            | ✓          |
|  | Unsatisfactory leadership from previous NUM                                      |            |            | ✓          |            |            |            |            |
|  | Current NUM has made a great difference  |            |            | ✓          |            |            |            |            |
|  | Dissatisfaction with NUM for some staff  |            |            | ✓          |            |            |            |            |
|  | Hospital management is flexible but need to be informed of issues                |            |            | ✓          |            |            |            |            |
|  | Positions quickly filled   |            |            |            | ✓          |            |            |            |
|  | Staff know CEO   |            |            |            | ✓          |            |            |            |
|  | Improved Management  |            |            |            |            |            | ✓          |            |

*Continued*



| Question focus  | Responses   | General    |            |            |            |            |            | Stroke     |
|---|---|------------|------------|------------|------------|------------|------------|------------|
|   |   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| <i>HR department influence on the rehabilitation team</i>                               | Minimum   | ✓          | ✓          | ✓          |            | ✓          | ✓          | ✓          |
|   | For recruitment   | ✓          | ✓          | ✓          |            | ✓          | ✓          | ✓          |
|   | No HR department  |            |            |            | ✓          |            |            |            |
|   | Each discipline is responsible for their own HR           |            |            |            | ✓          |            |            | ✓          |
|   | Salary and payroll  |            | ✓          | ✓          |            |            |            |            |
|   | Resolving employee issues                                 | ✓          |            |            |            |            | ✓          |            |
|   | Supporting managers                                       | ✓          |            |            |            |            |            |            |
| <i>Rehabilitation team reaction to people management efforts from the HR department</i> | Not necessary   | ✓          | ✓          | ✓          |            | ✓          | ✓          | ✓          |
|   | Not sure  |            |            | ✓          | ✓          | ✓          | ✓          |            |
|   | Depends on reasons  | ✓          |            | ✓          | ✓          |            | ✓          |            |
|   | Depends on approach                                       | ✓          |            |            |            |            |            |            |
|   | Would be interference if telling clinicians how to do job |            |            |            | ✓          |            |            |            |
|   | For better recruitment                                    | ✓          |            |            |            |            |            |            |
|   | For promoting managerial accountability                   |            |            | ✓          |            |            |            |            |
|   | Having a public face                                      |            |            | ✓          |            |            |            |            |
|   | For learning, education and development                   |            |            | ✓          | ✓          |            |            |            |
|   | For building the team                                     |            |            |            | ✓          |            |            |            |
|   | To do administrative duties                               |            |            |            | ✓          |            |            |            |

**Table 5.17:** Summary of clinical staff responses on view on HRM theme (final comments on people management), by hospital

| Responses   | General    |            |            |            |            |            | Stroke     |
|---|------------|------------|------------|------------|------------|------------|------------|
|   | Hospital A | Hospital B | Hospital C | Hospital D | Hospital E | Hospital F | Hospital G |
| Communication and consultation  | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          | ✓          |
| Respect   | ✓          | ✓          | ✓          | ✓          |            | ✓          | ✓          |
| Recognition   | ✓          | ✓          | ✓          |            |            | ✓          |            |
| Manager's role  | ✓          |            | ✓          |            |            |            | ✓          |
| Fairness  |            |            | ✓          |            |            | ✓          | ✓          |
| Staffing  |            |            |            |            | ✓          |            | ✓          |
| Staff development   | ✓          |            |            |            |            |            |            |
| Usefulness of HR terminology and systems  |            |            |            | ✓          |            |            | ✓          |
| Management is perceived positively  |            |            |            | ✓          |            |            |            |
| Management can be improved  |            |            |            | ✓          |            |            |            |
| People management is vital for the development of the good team                           |            |            |            | ✓          |            |            |            |
| HR department required for answering questions  |            |            |            | ✓          |            |            |            |
| Rehabilitation service works well because it is responsible for its own HRM               |            |            |            | ✓          |            |            |            |
| Management should be patient oriented   |            |            |            |            | ✓          |            |            |
| Greater flexibility required within the team  |            |            |            |            | ✓          |            |            |
| Better leadership required  |            |            |            |            | ✓          |            |            |
| More autonomy   |            | ✓          |            |            |            |            |            |
| Concerns within rehabilitation that the hospital understands what it is actually managing |            |            | ✓          |            |            |            |            |
| Misalignment in rehabilitation team goals and hospital management goals                   |            |            | ✓          |            |            |            |            |
| A long way to go before clinicians are driving the delivery of healthcare                 |            |            | ✓          |            |            |            |            |

