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To enforce or engage: The relationship between coercion, treatment motivation and therapeutic alliance within community-based drug and alcohol clients.

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Abstract
Three fundamental clinical issues are consistently associated with treatment engagement and outcomes in substance using populations; *coercion*, *motivation* and *therapeutic alliance*. It is accepted that these factors play an integral role in the success of substance use treatment and particularly that higher motivation and therapeutic alliance are advantageous to treatment outcomes. The impact of coercion on engagement and treatment outcome, on the other hand, is less clear, and the relationship between these three issues has not been adequately explored. The current study aimed to address this gap, by examining the presenting characteristics of clients attending a community drug and alcohol counselling service in relation to coercion, motivation, therapeutic alliance and substance use, as well as the effect that these variables had on treatment outcomes 15 weeks later. A total of 77 clients recruited from the Central Coast Drug and Alcohol Service participated in the study, completing a phone assessment upon treatment entry and 15 weeks post-baseline. Results indicated that facets of motivation and therapeutic alliance played a significant role in client's substance use upon presentation for treatment, although coercion did not. Coercion was not associated with substance use outcomes at 15 week follow up. However, due to a relatively small sample completing post-baseline assessments (n=33), further research is needed to examine the predictive effects of these variables in community drug and alcohol clients.

Keywords
Coercion, substance use, treatment motivation, therapeutic alliance

Introduction

Alcohol and illicit drug (AOD) use is a significant global public health issue. In 2007, nine out of ten Australians over the age of 14 had consumed alcohol and two of five had used illicit drugs (AIHW, 2007). There is considerable and mounting evidence highlighting the deleterious impact that substance use, abuse and dependence has on physical, emotional, social and psychological functioning (Marsh & Dale, 2006). The prevalence combined with the substantial harm associated with AOD use highlights the need for effective and targeted intervention for AOD use and its associated problems.

AOD clients are heterogeneous, with a vast array of factors contributing to the complexity of addiction treatment. These include variable social supports, education, referral source, mental health co-morbidity, primary drug of choice, pattern of use and personal characteristics of the individual (Marsh & Dale, 2006). DiClemente, Nidecker and Bellack (2008) suggest that clients with AOD use problems have more severe cognitive impairment, poorer insight and decision making skills, as well as diminished ability to identify the need for treatment. These behaviours make effective treatment engagement, establishing and working toward treatment goals and facilitating positive and sustainable behaviour change in counselling, challenging.

Three fundamental clinical issues have been consistently associated with treatment engagement and outcomes for psychopathology, especially in AOD using populations. These factors are: *coercion*, *motivation* and *therapeutic alliance*. Given the link between criminal behaviour and AOD use (Wild, Roberts & Cooper, 2002), poor and inconsistent motivation (Klag, O'Callaghan & Creed, 2005) and a general distrust of perceived

authority (Shearer & Ogan, 2002), better understanding of the significance and role of motivation, therapeutic alliance and coercion in AOD clients is required.

1.1 Coercion

Marshall and Hser (2002) suggest that as many as half of all referrals to community-based AOD treatment services have some involvement with the criminal justice system. A substantial proportion of clients presenting to addiction services are thus coerced, and seeking help due to external pressure from services, such as Probation and Parole[1], Child Protection agencies and the Criminal Justice System (Ondersma, Winhusen & Lewis, 2010). The high prevalence of coercion within AOD using populations is explained partly by the illicit nature of the substance use, the impulsivity associated with intoxication and the high incidence of abuse, neglect and other child protection concerns, which leads to negative consequences and engagement in health, welfare and legal services. (Ondersma,Winhusen & Lewis, 2010). Thus there is a need to understand more about the role and impact of coercion in treatment initiation and substance use outcomes in drug and alcohol clients.

Operational definitions of coercion in the existing literature have been inconsistent and undermine the complexity of this construct in addiction populations. Traditionally, coercion was exclusively defined by referral source, that is, those required to attend and/or who are referred by the legal system (Klag, O'Callaghan & Creed, 2005). This resulted in a focus of coercion research on clients referred by the legal system only.

[1] Probation and Parole services in Australia assist courts and Parole Boards to assess whether offenders are suitable for community-based orders, to enforce any conditions of the courts and Parole Boards, and to assist offenders to successfully complete such orders, including drug rehabilitation orders (QCS, 2010).

However, there are other equally significant sources of coercion for drug and alcohol clients. Klag, O'Callaghan and Creed (2005) highlight the important difference between formal and informal forms of coercion as different from legal coercion. They define informal coercion as the pressure exerted by familial and social supports, including extrinsic identification of problematic substance use, threats and negative interpersonal consequences associated with continued drug and alcohol use. Formal non-legal coercion is generated from sources removed from the person; specifically employers, health professionals, and government agencies, who may be providing welfare and other supports to the person. Legal coercion is that imposed by the court system through legal sanctions and directives. Furthermore, definitions of coercion based on referral source such as legal mandate, infers that non-mandated clients are seeking treatment of their own volition, which is often inaccurate (Sullivan et al. 2008).

The assumption that coerced clients are automatically primed to resist treatment, and are therefore less likely to have positive treatment outcomes, is not necessarily true. Prendergast, Greenwell, Farabee and Hser (2009), for example, suggest that clients who are coerced to attend treatment are not necessarily unwilling participants in the treatment process. They investigated coercion in over 700 non-violent offenders recruited to treatment from the legal system as part of a substance use diversionary program. Their results indicated that, although all of their participants were legally coerced to attend treatment, the participants felt that they had exercised choice in entering treatment to a greater degree than they felt coerced to do so. The authors found that higher perceived coercion was associated with lower motivation, and subsequently that greater autonomy was related to higher motivation for treatment. Despite high levels of ambivalence and low problem recognition among the participants,

they rated higher than expected on measures of treatment initiative. This indicates that while clients who feel pressured to attend treatment may initially report lower motivation, there may be potential benefits of coercion in legally mandated substance using populations. This has important implications for community-based treatment, especially as community-based clients are likely exposed to a lesser degree of formal coercion and pressures to attend and maintain treatment than those in in-patient or residential settings.

The inconsistent definitions of coercion and substantially different characteristics of the participant groups examined in the available research on this issue, makes drawing conclusions regarding the impact of coercion on treatment engagement and outcomes difficult. Further, the majority of research in this area focuses on residential and in-patient treatment, and does not explore the complexities of community-based drug and alcohol treatment. It thus remains important to comprehensively understand coercion and other influences affecting treatment of clients attending out-patient, community-based drug and alcohol services, in order to maximise therapeutic benefits achieved in therapy. It is clear that assessing client's perception of coercion and accurately incorporating the vast array of formal and informal pressures that lead clients to therapy is necessary.

1.2 Motivation

Motivation is considered crucial to the therapeutic process. It is well established that motivated clients have significantly better treatment outcomes than those individuals who are not motivated to engage in therapy (Hiller, Knight, Leukefeld & Simpson, 2002; Longshore & Teruya, 2006). Motivation is an integral part of treatment initiation, help

seeking behaviour, treatment retention, positive substance use outcomes and long term maintenance of therapeutic gains (Cahill et al. 2003). Melnick et al. (2001) suggest that clients who are effectively engaged in treatment have better session attendance, report more favourable perceptions of treatment, develop better therapeutic relationships with their therapist, report more confidence in the benefits of treatment and have better therapeutic outcomes than those who are less engaged. These studies highlight the benefits of motivation in AOD clients, which extend beyond treatment outcomes, positively influencing the client's experience of treatment. This has potentially significant clinical implications for re-engaging clients in drug treatment in future, if required.

Motivation is a multidimensional construct, which encompasses the internal desires and urges felt by a client, external pressures and goals that influence the client, perceptions about the risks and benefits of behaviours to oneself, and cognitive appraisals of the client's situation (Centre for Substance Abuse Treatment, 2009). In the context of AOD use, internal motivation encapsulates emotional, cognitive and physical internal factors; including distress, desire to enact change, discontentment with current circumstances and recognition of substance use as problematic (Hiller, Knight, Leukefeld & Simpson, 2002). Conversely, external motivation relates to that which is derived from external pressures, including consideration of the consequences of continued behaviour, such as loss of family, employment or income. Internal and external motivation are conceptually linked, although high scores on one construct does not necessarily equate to low or high scores on the other (Farabee, Nelson & Spence, 1993; Farabee Predergast & Anglin, 1998). An individual may have high internal and external motivation or high internal but no external motivation. Motivation is considered to be a transient phenomenon that

is experienced on a continuum with each individual having some degree of internal and external motivation (Klag, O'Callaghan & Creed, 2005).

1.3 The impact of coercion on motivation for treatment

It is generally accepted that coercion has an influence on treatment seeking, and a high proportion of clients attending AOD services may not have done so without external pressure from friends, family, courts, to name a few (Marlowe, et al., 2001). Prendergast et al. (2009) proposed that the success of treatment is dependent on perceived coercion, how much choice and autonomy the individual feels they have in deciding to attend treatment, internal motivation, and whether the individual is committed and willing to engage in the process of change. Hovarth and Luborsky (1993) suggest that coercion is synonymous with treatment resistance and ambivalence, and that this translates into different needs and considerations for coerced clients in the design and implementation of treatment.

A rationale in favour of coercion in AOD use treatment is thought to be via motivating the client to comply with a treatment program. This is achieved through the identification and realization of consequential yet unfavourable alternatives including health, familial and legal repercussions of not making behavioural changes. This can reinforce the role and benefits of entering into treatment (Sullivan et al. 2008), and some research has found advantages of extrinsic pressure in initiating treatment engagement, improving retention rates and enhancing treatment outcomes in clients with AOD use problems (Klag, O'Callaghan & Creed, 2005; Seddon, 2007).

For example, Predergast et al. (2009) recruited over 7000 legally coerced clients participating in a court diversion scheme to explore the influence of coercion and motivation on treatment completion and arrest rates. Results indicated that the willingness of the individual to engage with the therapist and actively participate in the therapeutic process was somewhat independent of external motivation but was rather related to the level of autonomy and control over action that the individual perceived. This translates into a direct relationship between level of motivation for treatment and the level of perceived coercion.

Marshall and Hser (2002) conducted interviews on 565 participants attending a variety of AOD services including out-patient counselling, detoxification, methadone maintenance programs, residential and day treatments. Participants were categorized as those who were legally mandated, those with legal contact but no directive for treatment, and those with no legal involvement. They found that motivation varied between groups, with mandated clients reporting significantly lower motivation, desire for help, problem identification and readiness for treatment. The study also reported that mandated clients expressed less satisfaction with their treatment and had lower expectations and confidence in treatment than the other coerced and non-coerced participants. This has interesting implications for the treatment of mandated clients and the understanding of motivation and therapeutic alliance with this population; two factors widely considered fundamental for successful treatment outcomes. Specifically, these results suggest that legally mandated clients are particularly resistant to treatment, with little confidence in the helpfulness of counselling, emphasising the need for clinicians to address these perceptions before effective intervention can begin.

While it is clear that motivation has an important role in facilitating successful therapeutic outcomes, there are other factors involved in the therapeutic process that impact upon the client's experience of therapy and ultimately lead to optimal therapeutic outcomes. Therapeutic alliance is one factor consistently found to have a significant influence effectiveness of AOD interventions.

1.4 Therapeutic Alliance

Therapeutic alliance, or the safe, compassionate, genuine, empathic relationship between therapist and client who are working collaboratively toward therapeutic goals, has been repeatedly shown to be predictive of effective therapeutic intervention, particularly in the first few sessions (Norcross, 2010). Ackerman and Hilsenroth (2003) propose a number of clinician skills or qualities that help facilitate the therapeutic alliance. These include empathic engagement, clear communication, and the therapist's ability to relate to the client and project themselves as trustworthy, flexible, collaborative and competent. Norcross (2010) suggests that the therapeutic relationship is a central mechanism for change and that without a good alliance with the client, they will not, and perhaps cannot, effectively enact change.

MacNeil et al. (2009) explain that establishing and maintaining a good therapeutic alliance can be particularly difficult when working with certain clinical populations. Qualities commonly found in clients presenting for AOD treatment, such as personality disorders and histories of abuse, are associated with greater levels of distrust, poorer emotional regulation and difficulty relating socially and interpersonally with others. This may make establishing and maintaining a good therapeutic alliance with some AOD clients particularly challenging.

Therapeutic alliance is one of the most consistent predictors of treatment outcome and retention in AOD treatment (Meier et. al, 2006). Two meta analyses have found moderate effect sizes between the therapeutic alliance and positive treatment outcomes for substance abusing populations. Hovarth & Symonds (1991) demonstrated a mean effect size of 0.26 between the subjective quality of alliance and substance use outcomes, and Martin, Garske & Davis (2000) reported a moderate relationship between therapeutic alliance and treatment outcome in substance using populations with an effect size of 0.22. Interestingly, client ratings of alliance were found to be more consistent than therapist ratings over time, suggesting that clients view this relationship as stable across therapy. This has important clinical implications, as it highlights the significance of supportive, warm and therapeutic engagement with AOD using clients from initial contact.

1.5 The impact of coercion on therapeutic alliance

There are few studies exploring therapeutic alliance factors in coerced populations, despite the obvious potential for links between higher coercion and lower alliance, particularly early in therapy. The available literature, albeit published almost 20 years ago, suggests that the most common features of coerced clients, hostility and negative attitude, (Tracey & Kokotovic, 1990) leads to difficulty engaging effectively in a therapeutic relationship with a counsellor.

1.6 The relationship between coercion, motivation and therapeutic alliance

The complex interaction between motivation, alliance and coercion underlies many, if not all interactions with drug and alcohol clients. However, there is a notable lack of

research investigating both therapeutic alliance and treatment motivation collectively in coerced populations, despite the substantial body of research suggesting the significance of these variables individually in the engagement and treatment of coerced AOD using clients (Klag, O'Callaghan & Creed, 2005).

In one of the few available studies of its kind, Rosen et al. (2004) explored the relationship between motivation and engagement in a coerced, AOD using population. Their sample consisted of 220 incarcerated males referred to treatment by the Parole Board. Within this sample, compliance with the directions of parole was the most commonly reported source of extrinsic motivation, while problem recognition and desire for help were the highest reported intrinsic motivations for treatment. Rosen and colleagues (2004) found that higher internal motivation was associated with higher engagement, and greater engagement was related to stronger confidence in treatment. Additionally, those clients who identified the problematic nature of their substance use were more committed to their treatment, and higher internal motivation was associated with a higher level of cognitive engagement in the treatment process. Interestingly, no association was found between commitment to treatment and desire for help, which suggests that coerced individuals have the potential to be as motivated and engaged in the process of change regardless of their initial perceptions of their need for help with their substance use.

1.7 The Current study

The current study aims to explore the presenting characteristics of clients attending a community-based AOD counseling service in relation to coercion, motivation,

therapeutic alliance and AOD use, as well as the effect that these variables have on AOD outcomes 15 weeks later.

Firstly, we aim to take an inclusive approach to coercion in our sample, by examining motivation, therapeutic alliance and AOD use for clients who have been legally mandated into treatment and additionally who report feeling coerced into treatment by an external source, including family, friends, and other services. It is hypothesised that:

(a) Coerced clients will report significantly higher external motivation and lower therapeutic alliance than non-coerced clients;

(b) Higher external motivation will be associated with lower therapeutic alliance at entry to treatment; and

(c) Coerced clients will report significantly poorer AOD use outcomes than will non-coerced clients.

Materials and Methods

2.1. Participants

A total of 166 new and ongoing clients, referred to the Central Coast DACS (NSW health, Australia) were invited to participate in the study. Of those referred, 56 declined participation, 24 were uncontactable and a further 9 did not return their consent documentation. Clients who did consent to participate in the study (n=77) were from the three teams within the service: Drug and Alcohol Counselling (n=44), Cannabis Clinic (n=19) and MERIT (n=13). The final sample was comprised of 48 males (mean age 38.30 years, S.D. 12.343) and 29 females (mean age 40.88 years, S.D. 13.691), and no exclusion criteria were applied.

2.2 Procedures

The procedural protocol developed for the current study is detailed elsewhere (Kay-Lambkin et. al, 2012).

2.2.1 Study Design and Setting

The study was conducted using current clients of the Central Coast Drug and Alcohol Clinical Service in New South Wales, Australia. The Drug and Alcohol Clinical Service (DACS) of the Central Coast forms part of the area's general health service for a population of 306,257.

DACS provides a range of clinical interventions to Central Coast residents with AOD use problems across the spectrum of early intervention, brief and extended treatment programs. Services include community counselling, detoxification (hospital-based and outreach), needle and syringe programs, pharmacotherapy services, a diversional program for young people with AOD use problems and legal issues (MERIT), a cannabis clinic and general practitioner medical management programs. A central intake service acts as the point of initial contact for access to DACS, with subsequent referrals made to relevant services as appropriate.

In 2006-7, 2,632 calls were received by the central intake service with 64% of these being referred to Central Coast DACS. Within the service, 3,329 treatment episodes were commenced, with 73% of clients completing treatment (NSCCHS, 2008). The majority of these (61%) were for males, aged 20-39 years (51%), with alcohol being the

most common primary drug of concern (49%). On average, clients commencing treatment with the counselling service within DACS attended an average of 4.5 treatment sessions.

New and existing clients of the Central Coast DACS were referred to the research study by Clinicians from the Service, who provided contact details to the research team operating independently from the Service. The research team subsequently contacted the client for formal consent and completion of assessments. Clinicians were unaware whether or not their client was completing the study.

Following the provision of informed consent, clients completed a baseline interview via the telephone with the research team, for which they were reimbursed $20 AUD. A second phone-based assessment occurred 15-weeks post-baseline, with $20 AUD reimbursement again offered. Each assessment was approximately 30 minutes in duration, and this comprised the total participant involvement in the study.

Throughout the study period, clinicians of the Service were asked to provide treatment to their clients in the manner they felt was most clinically appropriate, and as per their usual clinical practice. There was no randomization of clients to treatment groups, nor any prescription provided by the research team as to what treatment of particular clients should constitute in this context. Consequently, the researchers had no control over the content of treatment sessions, or the duration of treatment provided.

Ethics approval was granted from the Northern Sydney Central Coast Human Research Ethics Committee (Approval Number: 08/HARBR/78/79) prior to the commencement of the study.

2.3 Measures

Clients provided demographical information about their family of origin, current living situation, education and academic qualifications, employment history, quality of their social and interpersonal relationships, income and attendance at AOD rehabilitation services at baseline. At this time, participants were also asked about the team from which they were referred (Counselling, Cannabis, MERIT), whether they had been mandated to attend treatment by other organisations (e.g. Probation and Parole, Child and Family Services), or whether (and by whom) they felt coerced or pressured to attend the current treatment episode. Participants also completed a series of questionnaires at baseline and 15 week follow up including the Opiate Treatment Index (OTI) which explored past-month drug use across 11 AOD types, including frequency and quantity used; the Agnew Relationship Measure and the Treatment Motivation Questionnaire, which examine participant's self-reported perceptions of alliance with their therapist and motivation to attend treatment respectively.

2.3.1 Treatment Motivation Questionnaire

The Treatment Motivation Questionnaire (TMQ) is a 26-item self-report measure, examining four components of motivation: internal and external motivation, help seeking and confidence in treatment. A seven-point Likert scale is used to rate statements of

motivation from "*not true at all*' to '*very true*'. The TMQ has good internal consistency with Carey, Purnine, Maisto & Carey (1999) finding alpha co-efficients for the four subscales ranging between .70 and .98. Scores on the TMQ correlate highly with clinician ratings of overall motivation, disturbance, internal and external motivation (Ryan et al. 1995) which suggests good construct validity (Cahill et al. 2003).

2.3.2 Agnew Relationship Measure (ARM)

The ARM is a 28-item questionnaire measuring five dimensions of therapeutic alliance including bond, partnership, confidence in therapist, openness and client initiative (Agnew-Davis, Stiles, Hardy, Barkham & Shapiro, 1998). Seven statements are used to measure therapeutic alliance resulting in an overall score, which is achieved by adding the scores for each construct. A seven-item Likert scale is used to record responses ranging from '*strongly disagree'* to '*strongly agree'*. Internal consistency for four of the five components, bond, partnership, openness and confidence in therapist were found to be good with alpha coefficients ranging from .77 to .87 while client initiative was lower with and alpha coefficient of .55 (Agnew-Davis, Stiles, Hardy, Barkham & Shapiro, 1998).

2.3.3 Opiate Treatment Index (OTI)

The OTI is a standardized measure widely used in drug and alcohol samples to measure patterns of drug use, not limited to opiate substances (Darke, Ward, Hall, Heather & Wodak, 1991). Overall, the OTI consists of six outcome domains assessing different areas of functioning but for the purposes of the current study only the drug use subset of alcohol, cannabis, methamphetamines and tobacco use was used to minimise assessment burden and to focus on the most prevalent substances in our sample. The

OTI asks participants about their last three occasions of substance use, the amount used and the time between each episode of use in relation to each drug type.

2.4 Statistical Analysis

2.4.1 Developing the coercion variable

The current study sought to overcome some of the past flaws in conceptualisations of coercion in considering the potentially differential impact of legal coercion, perceived coercion or the combination of these, on the relationship between AOD use, treatment motivation and therapeutic alliance.

At baseline, several definitions of coercion were generated:

(a) MERIT vs. Counseling/Cannabis: Given that MERIT is a court diversion treatment service, all MERIT clients were legally mandated to attend treatment prior to criminal sentencing. Additional analyses were conducted using clients referred to the project from the MERIT team versus the other counselling teams within the Service (MERIT vs. Counselling/Cannabis) to determine whether legal mandate has a significant impact on treatment compared with those who are not formally coerced.

(b) No Coercion vs. Perceived vs. Legal Coercion: A second coercion variable was created that summarised the participants into three groups: no coercion at all, only self-reported perceived coercion, and legal coercion (Probation and Parole, MERIT).

(c) Number of sources of coercion: This variable categorized participants into no coercion at all, coercion from one source only (perceived OR legal), or coercion from two sources (perceived AND legal).

(d) Coerced vs. Not-coerced: This variable categorized participants into two groups; those reporting no coercion at all, and those reporting any coercion (perceived and/or legal).

With the exception of therapeutic alliance and treatment motivation (Hypothesis 1), the patterns of association between each of the coercion variables and the other variables of interest were identical. Thus, for simplicity, we report the results related to the fourth coercion variable (coerced vs. not-coerced) in the examination of the relationship between coercion, therapeutic alliance and treatment motivation. Results using all four coercion variables are reported for Hypothesis 1.

2.4.2 Demographics and other presenting characteristics

Exploratory data analysis was undertaken to describe the study sample at baseline. This included frequencies and descriptive statistics for the sociodemographic variables of age, gender, cultural background, and education, and baseline AOD use. Oneway Analysis of Variance (ANOVA) and Pearson correlations were used to explore the association between these variables and coercion (coercion vs. not), therapeutic alliance (bond, partnership, client initiative, openness, and confidence in therapist), and treatment motivation (internal, external, help seeking, confidence in treatment).

2.4.3 Hypothesis 1 – At baseline, coerced clients will report significantly higher external motivation and lower therapeutic alliance than will non-coerced clients

Oneway ANOVA examined the association between coercion (MERIT vs. Counseling/Cannabis, No Coercion vs. Perceived vs. Legal, Number of sources of

coercion, and coerced vs. not) and treatment motivation (internal, external, help seeking, confidence in treatment) and therapeutic alliance (bond, partnership, openness, client initiative, confidence in therapist).

2.4.4 Hypothesis 2 – At baseline, high external treatment motivation will be associated with lower therapeutic alliance

Correlational analyses were conducted to explore the relationship between treatment motivation and therapeutic alliance.

2.4.5 Hypothesis 3 – Coerced clients will report significantly poorer AOD use outcomes than will non-coerced clients

Repeated measures analysis of covariance (ANCOVA) examined changes in AOD use (alcohol, cannabis, methamphetamine, tobacco) between baseline and 15-week post-baseline assessments, and coercion (coerced vs. not-coerced). Covariates in each model were age, therapeutic alliance (bond, partnership, openness, confidence in therapist, client initiative) and treatment motivation (internal, external, help seeking, confidence in treatment).

Results

3.1 Demographics and other presenting characteristics

A total of 77 participants completed the baseline measures with 60 people completing the 15-week follow up questionnaires (78% retention). Within our sample, 59% (n=48) of participants were male, 83% (n=67) were born in Australia with only one person identifying as Aboriginal or Torres Strait Islander. The majority of our sample were single (75%, n=71) and were aged between 19 and 68 with an average age of 39 years.

Most of our participants (66%, n=46) left school before completing Year 10, with a mean school leaving age of 16 years.

Our sample (n=77) consumed up to 30 standard drinks per day (Mean=3.463), up to 41 standard units ("cones") of cannabis daily (Mean= 3.607), up to 52 cigarettes per day (Mean=13.219 daily) and were using methamphetamines on average 2 times weekly (Maximum=3 use occasions per day, Mean=0.163). Poly-drug use was common, with participants also using an average of 2.61 substances in the month prior to baseline (Maximum=6).

3.1.2 Demographic and other presenting characteristics and coercion

The mean age was significantly higher at baseline for clients in the coerced vs. not-coerced group (Mean (coerced)=33.31 years, Mean (not coerced)=42.62, F (1,69), 9.833, p=0.003). No significant differences were found for education, employment type, current income type, relationship status or gender in coerced vs. not-coerced groups.

Coerced clients reported significantly higher cannabis at baseline than non-coerced clients (p=0.039, see Table 1). A non-significant trend was also found for tobacco use, with coerced clients smoking 16 .7 cigarettes per day compared to 11.5 per day in the not coerced population (p=0.065).

Insert Table 1 about here

3.1.3 Demographic and other presenting characteristics, treatment motivation and therapeutic alliance

Age was significantly negatively related to external motivation for treatment (r=-0.332, p=0.005) and significantly positively correlated with internal motivation for treatment (r=0.270, p=0.023), and two domains of therapeutic alliance; partnership (r=0.276, p=0.033) and confidence in therapist (r=0.306, p=0.017). No significant associations were observed for the domains of therapeutic alliance and treatment motivation and the remaining sociodemographic variables.

3.2 Hypothesis 1 – At baseline, coerced clients will report significantly higher external motivation and lower therapeutic alliance than will non-coerced clients

External motivation was significantly higher for the MERIT clients than for clients from the Counseling/Cannabis teams (Mean (MERIT)=4.330, Mean (Counselling/Cannabis)=2.509, $F(1,74)=12.604$, p=0.001, p=0.001). Clients reporting legal coercion (n=19, Mean=4.44) reported significantly higher external motivation than did clients reporting no coercion from any source (n=43, Mean=2.18) and those reporting perceived coercion only (n=5, Mean=2.36, F(2,75)=15.687, p=0.000). Clients reporting one source of coercion (perceived or legal, n=17) reported significantly higher external motivation than did those reporting no coercion at all (n=43, 3.76 vs. 2.18), as did those reporting two sources of coercion (perceived and legal, n=7, 4.61 vs. 2.18, F(2,75)=11.257, p=0.000). Those reporting one source of coercion also reported significantly lower internal motivation for treatment than did those reporting no coercion (4.83 vs. 5.61, F(2,75)=3.779, p=0.027). No significant differences were observed for therapeutic alliance or treatment motivation on any coercion variable, nor

were any differences indicated between perceived and legal sources of coercion. Therefore, as mentioned in the interest of simplicity, this paper will report the results as they pertain to the coerced and non-coerced clients.

As indicated in Table 2, coerced clients rated their external motivation significantly higher, and internal motivation significantly lower at baseline than did non-coerced clients. Coerced clients were significantly less open in therapy compared to non-coerced clients. Table 2 also highlights that coerced clients reported two-thirds of the client initiative for treatment compared to their non-coerced counterparts, but this was not statistically significant.

Insert Table 2 about here

3.3 Hypothesis 2 – At baseline, high external treatment motivation will be associated with lower therapeutic alliance

Significant negative correlations were found between external motivation and client perceptions of the therapeutic alliance subscales of bond ($r=-0.287$, $p=0.019$), openness ($r=0.293$, $p=0.017$), and client initiative ($r=0.273$, $p=0.026$).

A significant negative correlation was also found between the therapeutic alliance subscale of bond and the treatment motivation subscale of help seeking ($r=-0.473$, $p<0.001$). A significant positive relationship was found between bond and internal motivation ($r=0.290$, $p=0.018$). Higher reported partnership in therapy (a domain of therapeutic alliance) was associated with significantly higher internal motivation

(r=0.473, p<0.001) and significantly lower help seeking (r=-0.624, p<0.001), while higher confidence in therapist (subscale of therapeutic alliance) was significantly correlated to higher reported help seeking (r=0.419, p<0.001). Results also indicated that higher openness was associated with significantly lower internal motivation (r=0.283, p=0.022).

3.4 Hypothesis 3 – Coerced clients will report significantly poorer AOD use outcomes than will non-coerced clients

Table 3 displays the repeated measures ANCOVA results examining changes in alcohol, cannabis, methamphetamine and tobacco over time, according to coercion status at baseline.

Insert Table 3 about here

As indicated in Table 3, no significant differences existed between coerced and non-coerced clients in terms of changes in alcohol, cannabis, methamphetamine and tobacco use between baseline and follow-up assessment.

Discussion

This study set out to examine the role and significance of coercion on therapeutic alliance and treatment motivation on people presenting for substance use treatment. We predicted that coercion would have a significant impact on motivation for treatment and on the ability to form a therapeutic relationship with the treating clinician. We also

hypothesised that coercion would be associated with poorer AOD treatment outcomes. Our hypotheses were partially supported by our study results.

4.1 Coercion and AOD use outcomes

Contrary to our prediction, results showed that coercion, regardless of definition, did not play a significant role in presenting levels of substance use, and did not impact on changes in substance use 15 weeks following treatment entry. This suggests, as found in previous research, that coercion may play a role in treatment initiation (Wild, Newton-Taylor & Alletto, 1998) but importantly that coercion alone is not sufficient to produce positive or negative treatment outcomes in AOD clients. Given the widespread use of motivational interviewing within the clinical service targeted for the current study (NSW Health, 2008) perhaps the effects of coercion were minimised and addressed early in therapy. Further research is needed to assess if the modality of therapy and interventions used inhibits potentially negative effects of coercion. Overall, the lack of predictor relationships perhaps points to what is most important in working with complex drug and alcohol clients; thorough assessment and treatment of the individual and the specific issues that they bring to therapy. It is a reminder for clinicians to avoid generalisations and judgements about client's likelihood for positive treatment outcomes based on referral source, substance use, attitude and initial engagement in therapy.

Recent research has found that those coerced into treatment achieve similar treatment improvements as self-referred and non-coerced clients (Gregoire & Burke, 2004; Kelly, Finney & Moos, 2005), especially when client perceptions of coercion are explored. Our study supports this assertion, with our coerced clients achieving similar reductions in

AOD use as their non-coerced counterparts. While the majority of research in addiction focuses on residential substance using populations, our community-based study supports that coercion does not negatively impact on client ability to achieve positive substance use change outside of these settings. MacKain and Lecci (2010) suggest that clinicians can have negative expectations regarding coerced clients, believing that these clients are less amenable to treatment, primarily due to ambivalence and treatment resistance. This was unsupported in our study, finding no significant impact of coercion on substance use outcomes. It is important for clinicians to be aware of the potential for negative expectations in the provision of psychological treatment for AOD use, particularly to coerced clients, and to seek clinical supervision around these issues should they arise.

An interesting trend found in all coerced groups was their significantly higher use of tobacco. This raises important implications when working clinically with mandated clients and in contexts where coercion is high, to provide specific targeted intervention for tobacco use. Clients very rarely identify tobacco use as their primary substance of choice, nor do they often attend AOD treatment to address this. Coupled with the significant psychological, interpersonal, health and financial costs of tobacco use for the individual and society as a whole, the onus may fall to clinicians to be aware of the high prevalence of tobacco use in this client group and offer treatment within a harm minimisation or abstinence framework.

4.2 Motivation and coercion

As hypothesised, we found that coerced clients reported significantly higher external motivation than did their respective non-coerced counterparts. Interestingly, while

coerced clients reported significantly lower internal motivation than non-coerced, this difference was not found between clients attending MERIT and the Counseling/Cannabis teams, or among legal vs. perceived coerced clients. However, internal motivation for treatment was significantly lower for perceived coerced clients relative to non-coerced participants. These results may be explained by the internal and external reinforcing effects associated with legal coercion, as MERIT clients are given a choice as to whether they are willing to engage and participate in the treatment program. Gregoire and Burke (2004) suggest that this then may create a self-selecting bias, whereby those who are not motivated or wanting to make change with their substance use never enter treatment. Those who do choose to part take in MERIT arguably have some willingness and degree of internal motivation for change. They may also be the most motivated clients, and are rewarded with tangible incentives in the form of reduced criminal sentences for their efforts. Those self-referring to AOD treatment, while experiencing similar short term benefits of reduced or abstained substance use such as better concentration, more energy, clearer cognitive processes, improved interpersonal relationships (Marsh & Dale, 2006), do not benefit from the additional motivation attributed to short term court outcomes.

4.3 Therapeutic alliance and coercion

For the most part, our hypothesis that coerced clients will report significantly lower therapeutic alliance than non-coerced clients was not supported. Despite the Barrowclough, Meier, Beardmore and Emsley (2010) finding that attributes and characteristics generally believed to be associated with coercion, poor insight and negative attitudes toward treatment, resulted in significantly poorer alliance among people with psychosis and comorbid AOD use problems, our results were not consistent

with their findings. We found no significant relationship between measures of the therapeutic alliance (bond, partnership, confidence in therapist, openness and initiative) and clients of the MERIT and Counseling/Cannabis teams. However, it is important to note that on average, counselling/cannabis clients reported higher levels of confidence in therapist, openness and initiative, while MERIT clients reported higher bond and partnership with their therapist. It may be that the relational facets of alliance, bond and partnership, were higher in MERIT clients due to some of these clients not identifying as coerced. Alternatively, perhaps the warmth, understanding, and active listening components of counselling were a welcome change from the pressures and demands of other services such as court, or Probation and Parole. Similarly, no significant relationship was found between coerced and non-coerced clients in relation to bond, partnership, and confidence in therapist or client initiative. However, results indicated that non-coerced clients were significantly more open than their coerced counterparts, perhaps reflecting their willingness to engage in the therapy process. Poorer perceived openness in our coerced clients may be reflective of higher levels of distrust, poorer emotional regulation and difficulty relating socially and interpersonally with others as has been demonstrated in other research with coerced populations (Shearer & Ogan, 2002). This is likely to affect how coerced individuals rate and perceive the quality of their relationship with their counsellor. It may also be true that counsellors respond and treat these clients differently upon treatment entry.

4.4 Motivation and therapeutic alliance

This study, unlike many others, examined the relationship between measures of motivation and therapeutic alliance with the aim of better understanding the complex nature and dynamics of these constructs in clients attending community drug and

alcohol treatment. Our hypothesis that high external motivation would be associated with lower therapeutic alliance at treatment entry was only partially supported. A significant, negative correlation was found between external motivation and bond and openness as hypothesised. However, a significant positive relationship was found between client initiative and external motivation, and no significant associations were evident for partnership and confidence in therapist. One possible explanation for finding that high external motivation is partially related to lower therapeutic alliance at treatment entry is likely related to our more detailed examination of therapeutic alliance and motivation, looking at the various facets of these constructs rather than alliance and motivation more generally. Our results then, add an interesting insight into the interactions of components of these concepts and assist in developing a comprehensive understanding of these complex phenomena. Clients who reported high initiative in treatment also reported significantly higher external motivation and help seeking and lower intrinsic motivation than those who reported low initiative. This supports past research (Cahill et al. 2003) suggesting that external motivation has a significant role in treatment, due partly to the desire to minimise negative consequences, and thus perhaps a greater desire to receive help.

Clients reporting high therapeutic bond at baseline reported significantly higher internal motivation and significantly lower external motivation and help seeking at the same timepoint. Similarly, higher perception of partnership with the therapist was related to significantly higher reported internal motivation and lower help seeking. These results suggest that those clients who are intrinsically motivated to attend treatment are perhaps more receptive to a positive relationship with the therapist and components of alliance, whereas the development and identification of these variables

are less important in clients experiencing high levels of external pressure to attend treatment. This may relate to how actively psychologically and cognitively the individual is engaged in therapy, which plays a significant role in effective client treatment and their engagement in the therapeutic process (Rosen, 2004). Interestingly, our results also reveal a significant relationship between openness and motivation for treatment, with those reporting high internal motivation being significantly more open than clients with high extrinsic motivation. This is again supported in the literature (Norcross, 2010) and suggests that internally motivated clients are more receptive to information sharing and engaging interpersonally with their clinician. It makes sense, then, that clients motivated to engage in treatment by external influences may be more reserved and less open with the clinician as their goals, purpose and motivation for attending therapy are still developing.

4.5 Coercion and age

An important finding in participants in our study was the significant relationship between age and coercion. Results showed that younger clients were more likely to be coerced than older clients in both the MERIT and perceived coerced groups. Similarly, Goodman, Peterson-Badali and Henderson (2011) found that within their sample of emerging adults, aged 18-25, increased age was associated with reduced perceptions of coercion and external motivation, but greater intrinsic motivation and reasons for seeking and engaging in drug and alcohol treatment. Our results support these findings for internal and external motivation. Goodman et al. (2011) suggest that this is likely due to the developing introspection of these aging clients and the shifting perception of AOD use as advantageous to recognising the detrimental impact that this is having particularly on achieving their life goals. This has significant implications for

understanding the relationship between age and coercion in our study. Clients with less motivation or desire to change their substance use may be more sensitive to the input of family and friends regarding their AOD use. Younger clients, particularly those in early adulthood, typically place a great deal of significance on autonomy and independence, and therefore are likely to react differently, more negatively, to external pressures to change than older clients.

4.6 Limitations of the study

A significant limitation of the current study is the poor statistical power due to relatively small numbers of participants within each group. This is a common problem faced by researchers especially when using participants from a real-world community-based drug and alcohol sample as in this study (Simpson, Joe & Rowan-Szal, 1997). Existing research in substance abuse and coercion tends to utilise captive populations of clients such as residential treatment and prisons. As such, our retention rates are less than would be expected in inpatient settings.

Potential clients were asked for preliminary consent to pass their contact details to the research assistant by their treating clinician (see Kay-Lambkin et al. 2012, for more detail). Although clinicians did not know who was participating in the research, it is possible that a selection bias came into play, where clinicians excluded or included particular clients based on some subjective criteria that was not accounted for in this study.

Given then proportion of clients in the sample referred by DoCS and Probation and Parole, it may be that clients intentionally under-reported their AOD use for fear of negative consequences from these organisations. Clients who have a history with these agencies may be aware of the potential for clinical notes to be subpoenaed which is likely to influence their accuracy in disclosing information to their therapist and the research team. We were also unable to determine the number of treatment sessions attended by each client participating in the study. It is thus very possible that difference in treatment attendance would have had an impact on the variables measured in the study.

The NSW Central Coast is an area with significant rates of domestic violence, abuse and neglect of children, which as they age, inevitably results in a traumatised population of adults. These factors increase the likelihood of developing drug and alcohol problems later in life (Marsh & Dale, 2006). As with any study, the generabilizabilty of these results to wider populations must be done so with caution. Nonetheless this study has made important contributions to the understanding of coercion, alliance and motivation on substance use in community based drug and alcohol clients.

Conclusions

Coercion, motivation and therapeutic alliance are regarded as fundamental components in therapy and have a particularly important role in addiction populations. Despite this, our study is among the first to examine the relationship between these constructs in clients with current, problematic AOD use. We found that external motivation was significantly higher in coerced clients and therapeutic alliance was lower, however this

did not have an impact on treatment outcomes 15-weeks post-baseline. Given that we found a significant relationship between age and coercion, as did Rosen et al. (2004), it is important to recognize the difference in conceptualization of coercion and the usefulness or detrimental impact that this may have in the effectiveness of therapy with younger clients. Of particular interest may be substance using and/or offending youth, who are typically very difficult to engage and maintain in treatment.

It seems that enforcing and engaging clients in treatment (coercion and therapeutic alliance) both play a significant role in drug and alcohol treatment. With high levels of substance use in Australia and internationally, continued vigilance is necessary to understand the complex dynamics that contribute to treatment initiation and successful intervention with substance using clients.

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