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THE RESEARCH

The study described in this paper was part of a large and comprehensive study of 480 offenders serving community correction orders in Queensland, which was conducted by CMC in 2003–04 (*Breaking the Cycle*, 2007).

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Mandatory treatment and perceptions of treatment effectiveness

A Queensland study of non-custodial offenders with drug and/or alcohol abuse problems

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Introduction

In Australia, all states provide a range of programs, from education to treatment, for people with drug and/or alcohol abuse problems who come before the criminal justice system (Hughes et al. 2008; Pritchard et al. 2007). However, compared with countries like Sweden and the United States, mandatory treatment based on legislation for offenders with drug and alcohol abuse problems in Australia is still in its early years (Bull 2003; Klag et al. 2006; Palm et al. 2002; Pritchard et al. 2007).

Most previous studies of mandatory treatment have been conducted in the United States, although European research publications on drug treatment under legal orders are increasing. Although Queensland courts are increasingly using mandatory treatment to divert offenders with drug and/or alcohol abuse problems from the criminal justice system, research on the effectiveness of mandatory treatment and how to improve its utility is still developing (Wundersitz 2007). Overseas studies provide valuable insights into the development and experience of mandatory treatment programs of other countries: however, their applicability to Australia needs further investigation. The comparability of mandatory treatment programs between countries and even within countries is doubtful, as the program nature and content, targeted offenders and the level of legal coercion vary (Stevens 2004).

This paper examines current issues concerning mandatory treatment effectiveness by reviewing recent national and international literature and analysing data from a Queensland study: the Offending Persons Across the Lifecourse (OPAL) project.

Summary

Mandatory (i.e. legally enforced) treatment for drug and/or alcohol abuse in Queensland is relatively new compared with some overseas countries. Therefore, research about the effectiveness of mandatory treatment for offenders with drug and/or alcohol abuse problems in Queensland is limited.

An analysis of the prevailing legal orders for mandatory treatment indicates that mandatory treatment in Queensland is similar to the quasi-compulsory treatment (QCT) system in Europe, as most orders are made with the consent of the offenders.

Our review of the international literature shows that treatment status (either mandatory or voluntary), self-awareness of drug and/or alcohol abuse problems, and the severity of drug and/or alcohol addictions are all associated with the effectiveness of treatment for drug and alcohol abuse. Many researchers have found that these factors impact on the effectiveness of treatment by mediating the motivation of the participants.

The research findings are mixed, though, and often not comparable because of the diverse range of study methods applied, varying study participants and the various non-specific criteria developed to measure treatment effectiveness.

There are two prevailing theories about the factors that impact on treatment effectiveness. These are the 'hitting rock bottom' phenomenon and the 'incompatibility of legal coercion and treatment' theory.

The former assumes that people with serious addiction problems are more likely to recognise that they have drug and/or alcohol abuse problems and are, therefore, more motivated to change as they are confronted with the devastating consequences of drug and/or alcohol abuse.

The latter supposes that people are more motivated to change their drug and/or alcohol abuse behaviours if they perceive themselves as initiating the change rather than being coerced into it.

To investigate the applicability of these theories within the Queensland context, we analysed data collected for the Offending Persons Across the Lifecourse (OPAL) project — the first Queensland study to examine the population features, criminogenic risks and needs of non-custodial offenders (CMC 2007).

Our findings show that respondents with severe drug abuse problems are more likely than those with less severe drug abuse problems to recognise that they have drug abuse problems, but they are not more likely to seek treatment voluntarily or perform better in treatment.

Our findings do not support the current treatment philosophy of waiting for people with drug and/or alcohol abuse problems to get themselves psychologically motivated and prove their readiness to receive treatment. On the contrary, the findings indicate that mandatory treatment seems a promising option to help offenders with drug and alcohol abuse problems.

In our study of Queensland non-custodial offenders, we also found relatively high rates overall of self-reported satisfaction with drug and/or alcohol treatment programs. Importantly, the self-reported treatment outcomes of respondents who had undergone mandatory treatment and those who had undertaken voluntary treatment did not differ significantly.

On average, 65 per cent (range: 54%–68%) of respondents who had undergone either mandatory or voluntary treatment reported that their treatment had helped them use less drugs/alcohol, stop using drugs and/or alcohol for a while, or use drugs and alcohol safely. About 52 per cent (range: 34.7%–66.9%), on average, also reported that treatment had improved their mental and physical health as well as their relationships with family, partners and friends.

Both the literature review and the qualitative data from the OPAL study also showed that the availability of welfare and support services for offenders suffering from drug or alcohol problems may increase the accessibility of treatment to them. The quality of treatment programs and attitudes of program staff also appear to be important for the achievement of positive treatment outcomes.

We suggest that research in mandatory treatment effectiveness needs to consider offenders with drug and/or alcohol abuse problems as a heterogeneous group with diverse rehabilitation needs who will always require more than just drug and/or alcohol treatment.

The common practice of using voluntary or non-offending clients as comparison groups for assessing the effectiveness of mandatory treatment for offenders is also questionable, as offenders are more likely to be living in disadvantaged circumstances than non-offenders.

Research with clear and realistic expectations about the role of mandatory treatment in drug and alcohol rehabilitation for offenders will provide practical knowledge for the formulation of related policy and services. Increasing the accessibility of quality treatment programs and support services is also indispensable for the achievement of positive treatment outcomes.

Research about mandatory treatment for offenders with drug and/or alcohol abuse problems

A brief background of mandatory treatment research: ethical concerns and treatment effectiveness

Polarised 'for' or 'against' arguments about mandatory treatment have continued for several decades (Stevens 2005). One of the main arguments against mandatory treatment concerns the civil liberty and human rights issues involved in forcing a person into treatment. It seems that there is a fear that proof of the effectiveness of mandatory treatment in any form will lead to its extension to non-offenders in the community. Many believe that there are serious human rights and civil liberty issues involved in forcing non-offenders or offenders into treatment against their free will; some argue that denying a person's autonomy to make a decision will result in resistance to treatment (Marlowe et al. 1996; Pritchard et al. 2007; Wild et al. 2006).

Others have argued that people with chronic drug and/or alcohol abuse problems might not be able to look after their own interests (Caplan 2006; Goldsmith & Latessa 2001). Research evidence from the disciplines of neuropsychiatry and neuropharmacy shows that chronic drug misuse can cause abnormalities in the prefrontal lobes, which cause problems of impulsivity control and decision-making (Bolla et al. 1998; Morgan et al. 2006). Laboratory studies have also reported that subjects with chronic and polydrug abusing problems have problems letting go of small but immediate rewards to avoid punishment and earn substantial, but long-term gains (Grant et al. 2000).

The ethical issues associated with mandatory treatment of non-offenders with drug and/or alcohol abuse problems are different from those associated with mandatory treatment of offenders. Unlike people with drug and/or alcohol abuse problems in the community, offenders' alternative to mandatory treatment may be incarceration (Caplan 2006; Stevens 2005). Depending on the offender's perception and personal circumstances, mandatory treatment may be a better or worse option — some may prefer imprisonment rather than staying in the community to receive treatment or vice versa.

Despite the mandatory nature of the treatment, many diversion treatment programs in western countries only provide treatment to offenders who consent to enter the program and most do not require incarceration. For example, the quasi-compulsory treatment (QCT) in Europe and the United Kingdom is the 'treatment of drug-dependent offenders that is motivated, ordered, or supervised by the criminal justice system and takes place outside regular prisons' (McSweeney et al. 2006, p.1).

Some researchers have argued that mandatory treatment will not work because people in general are not motivated to do something they are forced into (Stevens 2004; Wild et al. 2006). Indeed, Stevens (2004) believed that mandatory treatment turns treatment into punishment. However, there is a distinction between people under civil commitment, who may or may not have committed an offence and are forced into treatment against their will, and those under mandatory treatment orders who are given a 'choice' and incentives.

The qualitative data from a European study supported the prospect that some offenders may prefer mandatory treatment in the community as an alternative to incarceration as they could stay in the community and enjoy more liberty than in prison (McSweeney et al. 2006). Moreover, mandatory treatment in the community is generally regarded as a better and more cost-effective form of rehabilitation than incarceration (Bhati et al. 2008; Kinlock & Hanlon 2002).

Mandatory treatment for drug and/or alcohol abuse in Queensland

Across Australian jurisdictions a range of mechanisms operates at various stages of the criminal justice system by which offenders may be directed into treatment programs for drug and/or alcohol abuse (Hughes & Ritter 2008; Pritchard et al. 2007). These programs are generally referred to as mandatory treatment programs which may involve, for example, police or courts diverting offenders from the criminal justice system into treatment programs, or they may form part of the sentencing orders aimed at rehabilitation or re-integration of offenders back into the community. Whether the consent of the offenders is required when treatment orders are made, however, depends on the nature of the orders and the kinds of legislation available in each state.

Civil commitment which commits offenders or non-offenders into treatment without their consent is the most controversial type of mandatory treatment. Queensland does not provide civil commitment for drug and alcohol treatment. Further, many legal orders for mandatory treatment are made only with the agreement of the offenders. In Queensland, mandatory treatment programs range from relatively brief education sessions through to residential treatment programs that may form part of treatment or sentencing requirements.

The level of 'choice' and 'coercion' involved in participating in mandatory treatment varies. As shown in Table 1, the criminal justice system processes that direct offenders to mandatory treatment programs often require the offender's consent, although this is not necessarily the case for bail conditions or parole orders.[1] People under these orders to receive treatment can be seen as entering into an agreement with the criminal justice system and there are rewards for completing the orders.

1 Although the *Bail Act 1980* and *Corrective Services Act 2006* do not require the offender's consent in setting mandatory treatment as a condition for bail, parole and conditional release, the offender's willingness to comply with the condition of participating in the mandatory treatment may be considered.

Table 1. Mandatory treatment in Queensland

Path to mandatory treatment	Offender's consent required?	Benefit for compliance?	Penalty for non-compliance?
Police diversion			
In certain circumstances police must offer diversion to a 'drug assessment program' when a person is arrested for a minor drugs offence. The person cannot previously have been offered the opportunity to attend a drug diversion assessment program (see s. 379 *Police Powers and Responsibilities Act 2000*).	Yes. The person must admit they have committed an offence and consent to enter the program (s. 379(6) *Police Powers and Responsibilities Act 2000*).	Charges do not proceed and the arrest is discontinued (s. 379(11) *Police Powers and Responsibilities Act 2000*).	Failure to attend or complete the program is an offence (s. 791 *Police Powers and Responsibilities Act 2000*).
Bail conditions			
In certain circumstances the police or the court may grant that an offender be released on bail pending their appearance in court. Bail conditions may include a requirement to attend a treatment program (s. 11(4) *Bail Act 1980*).	No.	The offender is not held in custody until appearing in court.	Failure to satisfy the conditions of bail is an offence (s. 29 *Bail Act 1980*).
Court diversion			
In the same circumstances as referred to in 'police diversion' above, the court may offer an offender the opportunity to attend a 'drug diversion assessment program' (s.122A *Drugs Misuse Act 1986*).	Yes. The person must admit they have committed a minor drugs offence, plead guilty (s. 122A *Drugs Misuse Act 1986*) and provide consent to enter the program (s. 122A *Drugs Misuse Act 1986* &s. 379 *Police Powers and Responsibilities Act 2000*).	The court may strike out proceedings on the charge if the offender attends and completes the drug diversion and assessment program (s.122C *Drugs Misuse Act 1986*).	Failure to attend or complete the program will result in sentencing by the court as if the diversion order had not been made (s. 122A *Drugs Misuse Act 1986*).
Court-imposed probation order			
A court may order an offender be released into the community under the supervision of Correctives Services officers. Such an order will require the offender to attend counselling and other programs as directed (ss. 92 & 93 *Penalties and Sentences Act 1992*).	Yes. The court may only make or amend the order if the offender agrees to comply with the order or the amendment (ss. 96 & 122 *Penalties and Sentences Act 1992*).	Allows the offender to be in the community under supervision.	Failure to comply with the order is an offence (s. 123 *Penalties and Sentences Act 1992*). The court may re-sentence the original offence but must take into account the extent of the offender's compliance with the order (s.121 *Penalties and Sentences Act 1992*).
Intensive correction order			
Where an offender is convicted and sentenced to a term of imprisonment of one year or less, the court may make an intensive correction order whereby the sentence is served in the community under supervision of Corrective Services (ss. 112 & 113 *Penalties and Sentences Act 1992*). The order will require the offender to take part in counselling and satisfactorily attend other programs as directed (s. 114 *Penalties and Sentences Act 1992*).	Yes. The court may only make or amend the order if the offender agrees to comply with the order or the amendment (ss. 117 & 122 *Penalties and Sentences Act 1992*).	Allows the offender to remain in the community under supervision rather than be imprisoned.	Failure to comply with the order is an offence (s. 123 *Penalties and Sentences Act 1992*). The court may re-sentence the original offence but must take into account the extent of the offender's compliance with the order (s.121 *Penalties and Sentences Act 1992*).
Parole order and conditional release order			
The Parole Board may release an offender into the community from prison on a parole order. One of the conditions of a parole order granted by the Parole Board may be a requirement to attend a treatment program (s. 200 *Corrective Services Act 2006*). In certain circumstances the Chief Executive may grant a conditional release order, which may impose any condition reasonably necessary, including a requirement to attend a treatment program (s. 98 *Corrective Services Act 2006*).	No.	Allows the offender to be released into the community to serve a period of a sentence of imprisonment.	The offender is required to serve the unexpired portion of imprisonment (s. 211 *Corrective Services Act 2006*).

According to the relevant legislation, offenders in Queensland are given information about their orders, the consequences of breaching those orders and their rights to apply for changing and terminating the orders. However, the accessibility of these legal rights to the offenders needs further examination.

For example, some offenders may feel they have been coerced into treatment, even though they have consented to treatment. It is also possible that some or many accept the order without intending to actively participate in the treatment to change their addictive behaviour. How, and to what extent, their motivation to change their addictive behaviour at that stage affects their treatment outcomes is thus one of the key questions that researchers are examining.

The role of motivation in mandatory treatment for drug and/or alcohol abuse: Theory, findings and issues

Many studies reviewed for this paper appeared to share the general theoretical framework depicted in Figure 1. In these studies, predictors of treatment effectiveness were generally located in four areas: population characteristics, source of referral, perceived coercion/pressures and motivation/readiness to change.

These four areas are interrelated and overlap to a certain extent. Treatment motivation plays a significant role in the framework as it is either the main construct or an implied supposition in almost all of these studies. The other three constructs (population characteristics, source of referral and perceived coercion/pressures) are considered to contribute to treatment outcomes through enhancing or weakening the motivation of the clients (as indicated by the solid line).

Although some studies bypass the motivation issue and explore the relationship between treatment outcome and population characteristics, the source of referral and perceived coercion/pressures (as indicated by the grey dotted-line) and the role of motivation in mediating these factors is presumed (Gregoire & Burke 2004; Klag et al. 2006).

We will briefly discuss issues concerning the definition and measurement of treatment motivation as this concept is either the core construct or theoretical backdrop of most mandatory treatment studies. Researchers have used over 100 terms related to the concept of treatment motivation and about 30 different operational definitions and measurements (Drieschner et al. 2004; Keijsers et al. 1999; Rosenbaum & Horowitz 1983). Although the construct of motivation has been used widely in drug and alcohol treatment studies, many researchers do not provide a clear definition of the construct, as if they regard it as self-explanatory (Cox & Klinger 2002; DiClemente et al. 1999).

One of the influential theories which postulates the dynamic relationship between treatment motivation and treatment behaviours is Prochaska and DiClemente's (1982) transtheoretical model. It postulates five stages of behavioural change: precontemplation, contemplation, determination, action and maintenance. The five stages start with no motivation to change (precontemplation) and end with continued commitment to maintain new behaviour (maintenance) (Carpenter et al. 2002; Prochaska & DiClemente 1982). The model describes the process of behaviour change and suggests treatment strategies to help clients move to increasingly advanced stages (DiClemente & Scott 1997).

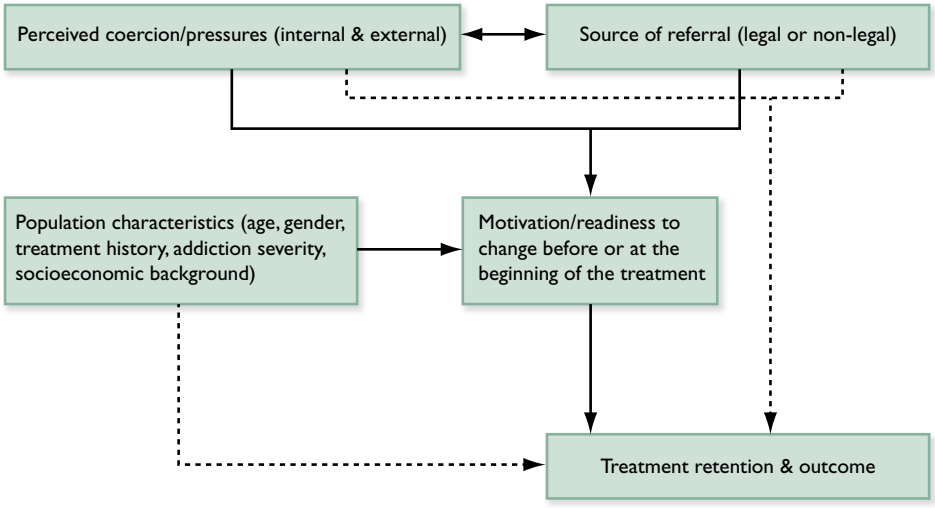
Many studies use this model not only to predict dropout and treatment outcomes but also to argue against compulsory treatment for people with drug and/or alcohol abuse problems who are not ready for the later stages of behavioural change (Carpenter et al. 2002; Ryan et al. 1995; Shen et al. 2000).

However, this model does not suggest that people in the early stages cannot benefit from treatment; rather, it suggests that this group may need different types of treatment programs to boost their motivation to change their drug- and/or alcohol-abusing behaviour.

According to Drieschner et al. (2004), the dynamic nature of motivation and the cyclical feature of the process of change suggest that individuals can progress to later stages as well as regress back to earlier ones (Prochaska et al. 1992).

Problem recognition, intention and action to change behaviour are regarded as indicators of the extent to which an individual is ready for change. Individuals start by denying their drug and/or alcohol abuse problems (precontemplation), begin to reflect on the pros and cons of the consequences of their problem (contemplation) and then plan (determination) and take action (action) to change the problematic behaviours.

Figure 1. A generic theoretical framework of mandatory treatment studies



The core of the model is about intended behavioural change, which is believed to be more likely to achieve long-term success. To achieve that, the individual has to go through a rational decision-making process before taking action. The individual's recognition of their drug and/or alcohol abuse problems is often seen as a determinant that initiates behavioural change.

Addiction severity and treatment outcomes

One of the most researched themes for mandatory treatment is the relationship between addiction severity and motivation to enter treatment.

The role of addiction severity in drug and/or alcohol treatment is expounded by the influential 'hitting rock bottom' phenomenon, which suggests that people with drug and/or alcohol abuse problems are not motivated to change until they are devastated by their loss of health, wealth, career and family (Rapp et al. 2003).

Addiction severity, which helps an individual recognise their drug abuse problems and understand that changes are needed, is seen as a source of internal motivation that inspires the person to make the decision to take action.

Marlowe et al. (2001) found a positive relationship between 'hitting rock bottom' and treatment outcomes. Respondents performing best in treatment were those with serious financial problems and under coercive social pressures.

However, Gerdner & Holmberg's (2000) study of severely dependent alcoholics found that there were different types of 'rock bottom' effects. Their findings suggested that people who were at a personal low point but still had something to lose were more motivated to seek help, whereas people who had nothing to lose were less motivated to seek help.

Although many studies have found that people's treatment motivation at or before entering treatment is related to the severity of their drug and/or alcohol abuse problems (Ryan et al. 1995; Wild et al. 2006), the relationship between motivation at this early stage and treatment outcomes has not been established (Rapp et al. 2003; Shen et al. 2000).

In Carpenter et al.'s (2002) study, severity of cocaine and alcohol dependence was positively related to motivation to change at treatment entry, but was not associated with their treatment involvement and their drug and/or alcohol use during the six-month follow-up period. The researchers suggested that the mediating effect of motivation was weakened over time and the respondents' attitude and behavioural change were confounded by many and varied factors.

Rapp et al. (2003) argued that belief in the 'hitting rock bottom' phenomenon has diverted treatment resources and efforts from treating clients to assessing their motivation to enter treatment.

McSweeney et al. (2006) reported that offenders entering QCT need to go through different processes to prove their motivation to receive treatment. Clients who are ambivalent about their treatment commitments are rejected, even though some studies found that clients' commitment changed after they entered the treatment and learned more about their problems (Stevens et al. 2006).

Prochaska and DiClemente's transtheoretical model, as discussed above, also suggested that people in the early stages of behavioural change can be helped to move to later stages of behavioural change through education and motivational enhancement training (DiClemente & Scott, 1997).

Rapp et al. (2003) argued that treatment programs and personnel should help offenders get motivated and engage them in treatment rather than wait for the clients' motivation to soar after 'hitting rock bottom'. This view has been echoed in clinical practices (Drieschner et al. 2004).

The 'hitting rock bottom' theory suggests that people with serious drug and/or alcohol addiction problems are more likely than people with less serious problems to be aware of their drug abuse problems. This recognition then motivates them to seek treatment and change their drug abuse behaviours, consequently increasing their likelihood of achieving positive treatment outcomes.

The study presented on pages 9 to 15 of this paper examines the applicability of this theory to a sample of non-custodial offenders in Queensland.

Legal coercion and treatment outcomes

Many researchers believe that when people enter treatment programs against their will, their motivation to change is low and their resistance to participate fully in the program is high (Wild et al. 2006). These factors prevent them from identifying with treatment goals and benefiting from treatment.

The relationship between mandatory treatment and treatment outcome is at the core of the mandatory treatment debate. Research into this relationship generally examines whether people under mandatory drug treatment are less likely to achieve positive treatment outcomes than people who enter treatment voluntarily.

Self-determination theory, which postulates that individuals are more motivated to change their behaviours if they perceive that they are initiating the change rather than being coerced into it, has been used as the theoretical framework for many studies (Ryan et al. 1995; Stevens et al. 2006; Wild et al. 2006).

However, the use of referral source, mandated or non-mandated, to classify clients as being coerced into treatment or voluntarily entering treatment has been widely criticised because the coercion or pressures that the offenders encounter

could be many and varied (Klag et al. 2006; Marlowe et al. 2001; Wild et al. 2006). Perceived coercion/pressure is a competing construct to source of referral. Whereas the former assesses offenders' subjective perception of being coerced, the latter measures offenders' level of pressure according to their objective legal status (Marlowe et al. 2001; Maxwell 2000). Many have argued that referral source does not reflect the level and intensity of the coercion that treatment participants perceive, as some offenders may enter their mandatory treatment willingly, while some self-referred clients are coerced into treatment by their family, employers or social services organisations. Some studies have suggested that a measure taking into account various reasons for entering treatment has more predictive value (Marlowe et al. 2001; Wild et al. 2006).

Researchers have developed instruments which categorise the source of motivation in the following categories: external/internal, formal/informal and familial/social/financial/medical/legal sources (Klag et al. 2006; Marlowe et al. 2001). These instruments also measure the strength of motivators (in itself and in combination) in terms of their correlation with perceived benefits of treatment and performance (Marlowe et al. 2001; Wild et al. 2006).

However, many of these studies did not distinguish the concepts of source of motivation and motivation generally. For example, in Wild et al.'s (2006) study, the reasons for seeking treatment were used to measure and classify respondents' level of motivation. Some studies also focused on the relationship between perceived coercion or legal coercion and treatment behaviour, although they acknowledged motivation was a significant determinant behind the relationship (Gregoire & Burke 2004; Klag et al. 2006).

Legal coercion is generally considered as a source of external motivation that works against the autonomous self. Many studies presuppose that legal coercion is part and parcel of mandatory treatment for offenders with drug and/or alcohol abuse problems and the level of legal coercion is roughly proportional to the strictness of the conditions and the consequences of breaching them (Anglin et al. 1989; Maxwell 2000). Studies have shown that offenders under mandatory treatment are very likely to report perceived pressures or coercion (Klag et al. 2006; Marlowe et al. 2001; Maxwell 2000) but that these pressures are not necessarily associated with lower motivation levels (Stevens et al. 2006). Two studies found that about one-third of respondents who are under mandatory treatment do not feel any legal pressure (Stevens et al. 2006; Wild et al. 1998).[2] Marlowe et al. (1996) also claimed that the majority of respondents in their study were subjected to informal pressures rather than legal coercion. However, none of Marlowe et al.'s 260 respondents were under mandatory treatment, though 25 per cent of them were referred by various government departments.

Although some researchers have suggested that informal coercion, by family members for example, may be a more effective motivator than legal coercion (Klag et al. 2006; Marlowe et al. 1996; Wild et al. 2006), others have reported that family is not a significant or positive source of motivation, as pressure from family fluctuates more than legal coercion (Marlowe et al. 2001; Maxwell 2000; Ryan et al. 1995; Stevens et al. 2006). In Maxwell's (2000) study, higher levels of family pressure to enter treatment were associated with a higher dropout risk.

Many studies have been conducted on the relationship between mandatory treatment and treatment motivation, based on the assumption that treatment motivation is significantly correlated with treatment outcomes. However, some studies have found that although mandatory treatment is associated with lower motivation (Gerdner & Holmberg 2000), motivation does not have a significant impact on treatment outcomes (Rapp et al. 2003). Ryan et al. (1995) found that legal coercion is positively related to external motivation but negatively linked to internal motivation. However, the best treatment outcomes are achieved by respondents who are high in both internal and external motivation. Maxwell (2000) also observed that people who are high in both perceived legal pressure and treatment needs are less likely to drop out. This study also found that offenders' treatment retention rates are related to the uncertainty and severity of the sanction. People entering treatment before sentencing or for minor offences are more likely to drop out.

Similar results have been reported in an Australian study, which found that the length of suspended sentence is a significant predictor of the participants' retention (Freeman 2002). Freeman has suggested that the prospect of having a significant custodial sentence may motivate offenders to remain in the treatment program. A recent study conducted by Perron and Bright (2007) into persons under short-term residential (n = 756), long-term residential (n = 757) and outpatient treatment (n = 1181) also showed that those under legal coercion have lower dropout rates than other treatment groups. It also found that the outpatient group demonstrated the lowest rate of treatment effects (Perron & Bright 2007).

Whether people under mandatory treatment perform well is sometimes hard to define. Studies have found that even if these people perform well in objective tests, they score very low in subjective clinical ratings (Marlowe et al. 2001; Ryan et al. 1995).

Some researchers have suggested that whether legal referral is regarded as an external or negative pressure depends on how people interpret the event (Maxwell 2000; Ryan et al. 1995). Gregoire and Burke (2004) also suggested that the

2 The finding in Wild et al.'s (1998) study that 35 per cent (n = 9) of legally mandated respondents did not perceive any pressure needs to be considered with caution, as the sample size of legally mandated respondents was only 25.

success of mandatory treatment cases might relate to the fact that there was a 'self-selection process' (p. 39) in the legal referral process. Another possible explanation of the success of mandated clients, who were coerced into treatment, is the mutable nature of treatment motivation.

According to Stevens et al. (2006), qualitative data indicates that respondents' treatment motivation is 'mixed, pliable, ambivalent, takes time to emerge' (p. 204). They found that some respondents regard their mandatory treatment as an opportunity to make a change, whilst others enter the treatment to avoid imprisonment but eventually identify themselves with treatment goals:

> At first most clients are doing it just to stay out of prison but eventually you'll find that once they start getting negative [drug test] results they start to feel more positive … actually wanting a better life.
>
> (QCT client, requoted from McSweeney et al. 2006, p. 46)

Research on the outcomes of mandatory treatment for drug and/or alcohol abuse probably provides the most direct answer to the value of mandatory treatment. Although researchers generally agree that offenders with drug and/or alcohol abuse problems are a diverse group, most studies have included diverse samples of people with drug and/or alcohol abuse problems who have different degrees of involvement with the criminal justice system (including non-offenders).

Consequently, the results have varied, and mandatory treatment has been found to be 'effective', 'ineffective' and 'inconclusive', though there is often no discussion or justification about the definition of treatment effectiveness. Very few studies reviewed for this paper explained or justified their criteria of treatment effectiveness.

All three of the recent literature reviews we reviewed on the effectiveness of mandatory treatment adopted a general narrative review approach (Klag et al. 2005; Stevens et al. 2005; Wild et al. 2002). Stevens et al.'s (2005) study on QCT of offenders with drug and alcohol abuse problems reviewed literature from 1985 to 2002 in five languages, including English, German, French, Italian and Dutch. The findings from the non-English literature were not as positive as those from the English literature. Some German studies reported negative effects of legal coercion on treatment retention, and results from Dutch research generally indicated that QCT did not significantly decrease the crime rate. However, QCT residential treatment in both Holland and Switzerland generally produced more positive results. The researchers concluded that their review of both English and non-English literature suggested that offenders under QCT did not perform worse in treatment than those under voluntary treatment.

Wild et al.'s (2002) review of the effectiveness of compulsory drug and/or alcohol abuse treatment was confined to 18 longitudinal studies from 1989 to 2001, only nine of which involved legally mandated treatment.[3] The review found that the majority of the studies showed no differences in the outcomes of the compulsory and non-compulsory treatment groups regarding recidivism rates and/or subsequent drug/alcohol abuse.

Klag et al.'s (2005) review of the effectiveness of legal coercion in drug treatment included 25 studies, 60 per cent of which were published between 1973 and 1989.[4] The researchers reported that the research results on the effectiveness of coerced treatment were mixed, inconsistent and inconclusive, and that their conclusions seem based on the fact the some of the reviewed studies indicate that voluntary clients outperform those under mandatory treatment.

The findings that people under mandatory treatment and those entering treatment voluntarily achieved similar treatment outcomes is echoed in many recent studies with sound research design. For example, using both quantitative and qualitative methodologies, McSweeney et al. (2007), in their study of QCT for offenders with drug and alcohol abuse problems in England, reported no significant differences between the QCT group and the voluntary group in retention rates, treatment outcomes and recidivism rates.

A study in Switzerland of 2793 people who received residential drug treatment also found that voluntary clients and mandated clients did not differ in terms of retention and drug and/or alcohol abuse (Grichting et al. 2002). However, the researchers suggested that the mandated clients seemed to be more likely to relapse, as they had less social support, and were more likely to be involved in legal matters at the time of discharge.

An Australian study reviewing the national and state-based evaluations of the effectiveness of different mandatory drug treatment programs reported that the results were generally promising but inconclusive due to methodological limitations of most of the evaluations (Freeman 2002). Rather than using a comparison group, these evaluations used the pre-program data of the offenders as a baseline measure of program effectiveness.

The theory of 'incompatibility between treatment and punishment' suggests that people receiving mandatory treatment are less motivated to change their drug and/or alcohol abuse behaviour and therefore less likely to achieve positive treatment outcomes as the coercive nature of mandatory treatment turns treatment into a form of punishment and decreases the motivation to treatment.

The study presented on pages 9 to 15 of this paper examines the applicability of this theory to a sample of non-custodial offenders in Queensland.

3 The sample of another 9 studies were under formal (referred by employer, physician or welfare agency), informal (referred by family or friends) or mixed mandates.

4 Klag et al.'s (2005) literature review was divided into several sections which reviewed different issues concerning mandatory treatment. In the section concerning effectiveness of mandatory treatment, they had quoted 25 studies.

A Queensland study of mandatory treatment for non-custodial offenders with drug and/or alcohol abuse problems

The following study draws upon data collected for the Offending Persons Across the Lifecourse (OPAL) research project (CMC 2007) to examine the relationship between drug and/or alcohol abuse patterns, treatment-seeking behaviours and treatment outcomes in a sample of Queensland non-custodial offenders. The applicability of the two prevailing theories discussed above — the 'hitting rock bottom' phenomenon and the theory of 'incompatibility between legal coercion and treatment' — will be examined in relation to non-custodial offenders in Queensland.

The 'hitting rock bottom' theory. We postulate that a positive relationship between drug and/or alcohol addiction severity, treatment motivation and treatment outcome will support the 'hitting rock bottom theory'. That is, people with more serious drug and alcohol abuse problems (addiction severity) are more likely to encounter problems and thus more likely to become aware of their drug and/or alcohol abuse problems (problem recognition), thus increasing their motivation to seek help and change their drug and/or alcohol abuse behaviours. If these assumptions are supported, then problem recognition will be positively related to active treatment-seeking behaviours and better treatment outcomes.

Specifically, we hypothesise that:

1A. Heavy drug users are more likely to recognise that they have drug and/or alcohol abuse problems.

1B. Heavy drug users who recognise that they have drug and/or alcohol abuse problems are more likely to seek treatment.

1C. Heavy drug users are more likely to achieve positive treatment outcomes.

The theory of incompatibility between legal coercion and treatment. We postulate that a negative relationship between mandatory treatment and treatment outcomes will support the theory that treatment and punishment are incompatible, as people entering treatment under legal coercion will have low motivation to change their drug and/or alcohol abuse behaviour.

Specifically, we hypothesise that:

2. Drug users who receive mandatory treatment are less likely to achieve positive treatment outcomes than those under voluntary treatment.

Methods

The data used in this study were drawn from the Offending Persons Across the Lifecourse (OPAL) research project undertaken by the Crime and Misconduct Commission (CMC) in cooperation with Queensland Corrective Services (QCS). This project examined the life experiences of 480 offenders serving either intensive correction orders or probation orders under QCS's 25 urban and rural area offices between 2003 and 2004.

All respondents attended an individual face-to-face structured interview which lasted, on average, 76 minutes. The response rate was 85.4 per cent. As the OPAL project aimed to conduct statistical comparisons on both Indigenous and female offenders, several sampling methods and recruitment procedures were utilised.[5]

A comprehensive questionnaire was developed to collect information about demographic characteristics, early and later life experiences, physical and mental health histories, involvement in violence, sexual experiences and treatment needs and experiences. The study conducted for this paper used data that were generated from questionnaire items concerning alcohol and drug use patterns in later life and treatment needs and experiences.

5 For details of sampling method and recruitment procedures, see CMC 2007.

Results

Addiction severity and treatment outcomes ('hitting rock bottom')

To investigate the first set of hypotheses, we drew a subset of respondents (n = 416) who had used one or more drugs weekly or more often. The selected respondents were divided into two groups: a regular user group (n = 265) and a heavy user group (n = 151) according to the frequency of their drug and alcohol use. Respondents in the regular user (RU) group took one drug or more on a weekly basis and those in the heavy user (HU) group used one drug or more daily or almost daily. Among the 151 heavy drug users, 24 had an AUDIT score[6] of 20 or above, which indicated an alcohol dependency problem. All respondents in the RU group scored lower than 20 on the AUDIT.

A comparison of the demographic features of these two groups, as shown in Table 2 (next page), indicates that they are similar in gender, age, Indigenous background and education. However, the HU group has a significantly lower proportion of respondents with an ethnic background. Members of the HU group were also more likely to be in a relationship and to be unemployed than members of the RU group.

Hypothesis 1A: Heavy drug users are more likely to recognise that they have drug and/or alcohol abuse problems.

To examine whether the HU group was more likely to perceive that they had drug and/or alcohol abuse problems than the RU group, we compared their responses to two questionnaire items asking: 'How often have you thought that your drug use was out of control?' and 'Do you think that you need help quitting alcohol or drugs?'

Table 3 (next page) shows that 22.5 per cent more people in the HU group than

6 The AUDIT (Alcohol Use Disorders Identification Test) is a screening test for excess drinking. The interpretation of the score is: 0–7, low risk; 8–15, risky and hazardous level; 16–19, high risk or harmful level; 20 or above, high risk and likely to be alcohol dependent. For more details, see Babor et al. 2001.

Table 2. Comparison of demographic features of the Regular User (RU) group and the Heavy User (HU) group

	HU group (*n* = 151)	RU group (*n* = 265)
Male (%)	56.3	60.8
Female (%)	43.7	39.2
Age (mean) (Range and SD)	27.6 18–60; 7.69	29.04 18–68; 10.2
Indigenous (%)	18.5	21.9
Ethnic group (%)	8.0*	15.3
Marital status (%) Married & de facto Divorced & separated Never married	 27.7* 12.0* 60.3	 20.2 18.0 61.8
Highest level of education (%) (Yr.10 or above)	69.2	68.1
Unemployed (%)	44.0**	26.8

*Note: All the significance levels refer to between-group comparisons. *p<.05; **p<.00*

Table 3. Drug user group by level of drug abuse problem recognition

	How often have you thought that your drug use was out of control?							
	Never or sometimes		Often		Always or nearly always		Total	
User group	No.	%	No.	%	No.	%	No.	%
Heavy User (HU)	52	34.4	44	29.1	55	36.4	151	100
Adjusted residual	-6.7		2.8		5.3			
Regular User (RU)	178	68.7	45	17.4	36	13.9	258[a]	100
Adjusted residual	6.7		-2.8		-5.3			

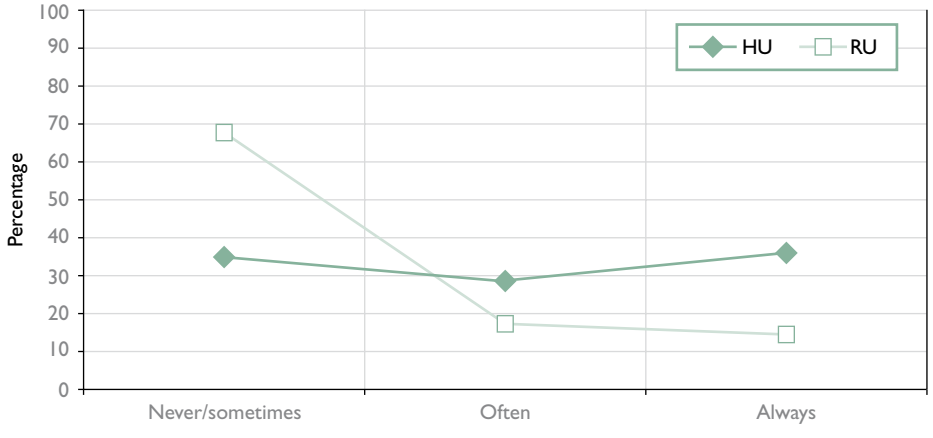
p <.00; a 7 missing cases

Table 4. Drug user group by perceived need for treatment for alcohol/drug abuse

	Do you think that you need help quitting alcohol or drugs?					
	Yes		No		Total	
User group	*n*	%	*n*	%	*n*	%
Heavy User (HU)	56	45.5	67	54.5	123[b]	100
Regular User (RU)	31	13.2	203	86.8	234[a]	100

p<.00; a 31missing cases; b 28 missing cases

Figure 2. Drug user group by level of drug abuse problem recognition



the RU group said that they 'always or nearly always' thought their drug abuse problem was out of control. Members of the RU group were also 34.3 per cent more likely than members of the HU group to say that they 'never or sometimes' thought that their drug abuse problem was out of control. This finding supports the contention that drug severity is positively related to problem recognition.[7]

The results presented in Table 3 are consistent with those in Table 4, which shows that members of the HU group were more likely than the RU group to think that they needed help with quitting alcohol or drugs. The likelihood of respondents in the HU group recognising that they needed help to stop their drug and/or alcohol abuse is 3.4 times that of the participants in the RU group, and the strength of the association is rather strong (relative risk: 3.436; 95% CI: 2.347–5.025).

However, as shown in Figure 2, the HU group and the RU group had very different patterns of frequency distribution in relation to their perceived needs for treatment. In the RU group, the majority of the responses (68.7%) were clustered in the 'never or sometimes' options. However, the HU group had a rather even spread of frequency across all the three response options, with only 2 per cent more choosing 'always or nearly always' than 'never or sometimes'. These results show that the respondents' awareness of their drug and/or alcohol abuse problems does not increase at the same rate as the level of their drug and/or alcohol addiction severity.[8]

The findings support Hypothesis 1A and suggest that though people who use drugs more often are more likely to think that their drug problem is out of control, recognition of their drug use problems does not increase proportionally with their level of drug use; only about one-third of the HU respondents 'never or only sometimes' thought that they had a drug abuse problem.

7 The major contribution to the chi-square values came from the 'never or sometimes' cells with adjusted residuals ± 6.7.
8 A Kendall's tau c value of .340 also indicated a moderate strength of association.

Hypothesis 1B: Heavy drug users who recognise that they have drug and/or alcohol abuse problems are more likely to seek treatment.

To examine whether respondents' recognition of their drug and/or alcohol abuse problem may have influenced their decision to seek treatment, we compared the participation rates of the HU and RU groups in voluntary treatment for drug and/or alcohol abuse at the time they were interviewed. We also analysed the qualitative data generated from questionnaire items concerning the efforts to seek treatment and their reasons for not seeking treatment to identify any factors that might have influenced use of treatment among the HR group only. The RU group were excluded from the qualitative analysis as the focus of this hypothesis is on heavy drug users (those 'hitting rock bottom') who believed they had a drug abuse problem and said they wanted to change.

There were only 91 respondents undertaking treatment and the majority were from the HU group. Table 5 shows that respondents in the HU group (34.9%) were more likely than respondents in the RU group (14.9%) to be undertaking treatment for drug or alcohol abuse at the time of their interview. Relatively speaking, members of the HU group were about 2.3 times more likely to be undergoing treatment at the time of interview than those in the RU group (relative risk: 2.342; 95% CI: 1.631–3.367).

As shown in Table 6, there was no significant association between respondents' level of drug and/or alcohol addiction and voluntary participation in a treatment program.

However, the voluntary treatment participation rate of the HU group might have been hampered by the unavailability or inaccessibility of treatment options. We conducted analysis of the qualitative data to find out how many HU respondents who believed they had a drug and/or alcohol abuse problem but were not under treatment at the time of the interview had actively sought treatment.

For the 97 respondents of the HU group who were not in a treatment program for drug or alcohol abuse at the time of their interview, 60 of them reported that they 'often' (n = 28, 28.9%) or 'always or nearly always' (n = 32, 33%) thought they had a drug and/or alcohol abuse problem.[9] Twelve (20%) had sought treatment in the past 12 months and 7 (11.7%) said that they had been turned away due to a lack of places. When asked about their reasons for not seeking treatment, 27 respondents did not respond, but those who did gave many and varied reasons:

Practical and financial barriers

- Concerned about the costs (12 responses)
- Didn't know where to go (7 responses)
- Didn't want to be away from wife and/or children (2 responses)
- The program or helping agency was too far away for me to get to (7 responses)
- Concerned others might find out about my problem (2 responses)
- Worried that entering treatment would upset friends who were also having drug abuse problems (1 response)

9 The remaining 37 (38.1%) said that they 'never or sometimes' thought their drug problem was out of control.

Psychological barriers

- Thought the problem would get better by itself (11 responses)
- Thought program probably wouldn't do any good (11 responses)
- Wanted to solve my problem on my own (20 responses)
- Had accepted and adjusted to the drug and/or alcohol abuse problem (1 response)
- Didn't want help (1 response)
- Didn't know (1 response)
- Couldn't cope with life at the time (1 response)
- Unsure about my ability to succeed (1 response)

The findings do not support hypothesis 1B. The association between recognising drug and/or alcohol abuse problems and the decision to enter treatment to solve the problem was not established. The qualitative information about the respondents' reasons for not entering treatment suggests that respondents with more serious drug and/or alcohol addictions had encountered various practical and psychological barriers to entering treatment. Social and welfare services to address these practical problems, and programs to soften their resistance to, and doubts about, receiving treatment might help to increase this group's propensity to enter treatment.

Table 5. Drug user group by current treatment participation

	Are you now in a drug/alcohol treatment program? n = 411					
	Yes		No		Total	
User group	n	%	n	%	n	%
Heavy User (HU)	52	34.9	97	65.1	149[b]	100
Regular User (RU)	39	14.9	223	85.1	262[a]	100

p<.00; a 3 missing cases; b 2 missing cases

Table 6. Drug user group by reasons for entering treatment program

	Did you enter this program because of ... n = 84					
	Legal referral		Voluntary participation		Total	
User group	n	%	n	%	n	%
Heavy User (HU)	19	39.6	29	60.4	48[b]	100
Regular User (RU)	19	52.8	17	47.2	36[a]	100

p>.05; a 3 missing cases; b 4 missing cases

Hypothesis 1C: Heavy drug users are more likely to achieve positive treatment outcomes.

The association between the RU and HU groups' drug and/or alcohol addiction severity and their perceptions of treatment effectiveness was examined by comparing their responses to questionnaire items asking whether the most recent treatment program they were in affected their drug or alcohol use and different parts of their life. About 43 per cent (*n* =178) of the respondents had received treatment for drug or alcohol abuse previously and/or were under treatment at the time of the interview; 49.4 per cent (*n* = 88) of them were from the RU group, and 50.6 per cent (*n* = 90) from the HU group.

As shown in Table 7, the perceptions of the two groups did not differ significantly on whether treatment for drug and alcohol abuse had helped them 'stop using drugs or alcohol altogether', 'use less drugs or alcohol', 'use drugs or alcohol safely' and/or 'cope with withdrawal/the craving'.

We found a marginally significant relationship between addiction severity and the treatment outcome 'stopped using drugs and alcohol for a while' (p = .049). The relative risk value indicated that HU respondents' likelihood of stopping using drugs or alcohol for a while after treatment was about 1.3 times that of the RU group (relative risk: 1.287; 95% CI: .997–1.661).[10]

Table 8 shows that the responses by both groups to questionnaire items concerning how treatment programs had affected the quality of their social life and general health, including 'emotional or mental health', 'physical health', 'work life' and their relationship with 'family', 'partner' and 'friends', did not differ.

Generally speaking, the findings did not support hypothesis 1C. Offenders with more serious drug and/or alcohol addictions did not perceive that they had performed better in treatment than offenders with less serious drug and/or alcohol addictions, though they did achieve a slightly higher rate of short-term improvement (i.e. many stopped using drugs/alcohol for a while).

10 This result should be viewed with caution as the strength of the association as indicated by the relative risk value was small and its statistical significance was marginal with the lower confidence limit extended beyond 1 — the value of no difference.

This result seems to relate to the findings reported above that respondents' recognition of their drug and/or alcohol abuse problems was not associated with their propensity to make decisions or take actions to solve their problem. If awareness of drug and/or alcohol abuse problems as a motivator is not strong enough to induce respondents to enter a treatment program, its motivational effects on enhancing the performance of those who enter treatment may also be weak. Another possible explanation, as suggested by Rapp et al. (2003), is that the treatment effort of people with serious drug abuse problems might be offset by the severity of their drug abuse problems and more harsh social circumstances.

Our findings do not support the 'hitting rock bottom' theory: hypotheses 1B and 1C were not sustained. We found that offenders with more serious drug and/or alcohol abuse problems were more likely to recognise their drug abuse problems but not more likely to seek treatment voluntarily or achieve better treatment outcomes than those with less addiction severity.

Table 7. Drug user group by perceptions of treatment effects

	Stop using altogether				Stop using for a while				Use less				Use safely				Coping with withdrawal/ the craving			
	Yes		No		Yes		No		Yes		No		Yes		No		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
HU	27	30.0	63	70.0	58	66.7	29	33.3	62	71.3	25	28.7	50	56.8	38	43.2	46	51.7	43	48.3
RU	30	34.1	58	65.9	43	51.8	40	48.2	57	69.5	25	30.5	51	60.7	33	39.3	48	56.5	37	43.5
	n.s				p<.05				n.s				n.s				n.s			

Table 8. Drug user group by perceived impact of treatment on life

	Relationship with family				Relationship with partner				Relationship with friends				Emotional or mental health				Physical health			
	Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
HU	49	56.3	38	33.3	26	40.6	38	59.4	28	32.9	57	67.1	51	57.3	38	42.7	57	64.0	32	36.0
RU	44	49.4	45	50.6	25	44.6	31	55.4	36	42.9	48	57.1	59	65.6	33	34.4	58	65.2	31	34.8
	n.s				n.s				n.s				n.s				n.s			

Incompatibility of legal coercion and treatment

> Hypothesis 2: Drug users who receive mandatory treatment are less likely to achieve positive treatment outcomes than those under voluntary treatment.

A subset of OPAL respondents (n = 184) who had received treatment for drug or alcohol abuse previously or at the time of interview, either through legal referral (n = 53)[11] or voluntary participation, (n = 131) was used to examine the relationship between mandatory treatment and perceptions of treatment effectiveness.[12]

Table 9 shows that the demographic composition of the mandatory treatment (MT) group was similar to the voluntary treatment (VT) group in terms of gender, ethnic background, marital status, education, unemployment rate and treatment status. However, the MT group was significantly younger and had a higher proportion of Indigenous people.

As shown in Table 10, the two groups did not differ significantly in terms of their AUDIT score and drug use frequency. The MT group had a mean AUDIT score of 11.29, while the VT group's mean score was 10.06. They also had a similar percentage of respondents scoring between 8–19: 32.7 per cent of the MT group and 32.3 per cent of the VT group. However, the MT group had a slightly higher percentage of respondents scoring 20 or above: 25 per cent compared with the VT group's 17.7 per cent.

The relationship between legal status (mandatory versus voluntary) and the respondents' perceptions of treatment effectiveness was examined by comparing their responses to questionnaire items asking whether their most recent treatment program had affected their drug or alcohol use and their quality of life.

As shown in Table 11 (next page), the two groups did not differ significantly in their perceptions of whether treatment for drug and alcohol abuse had helped them 'stop using for a while', 'use less' or 'use safely'. Sixty-five per cent of both groups (on average) reported achieving these positive outcomes (range: 54%–68%).

11 Respondents in this group include those under either court orders or other legal orders to receive treatment.

12 Twenty-six respondents who had received drug or alcohol treatment previously or at the time of interview were not included in the study. Sixteen of them did not answer the questionnaire item, 'the reason for entering the treatment program'; another 10 entered the program under informal pressure from family members or social service agencies.

Table 9. Comparison of the demographic characteristics of the Mandatory Treatment (MT) group and the Voluntary Treatment (VT) group

	MT group (n = 53)	VT group (n = 131)
Male (%)	69.8	58.8
Female (%)	30.2	41.2
Age (mean) (Range and SD)	28 18–56; 8.222	32.13* 18–60; 8.586
Indigenous (%)	34	18.3**
Ethnic group (%)	13.2	9.9
Marital status (%) Married & de facto Divorced & separated Never married	 32.1 15.0 52.8	 23.8 18.4 57.7
Highest level of education (%) (Yr.10 or above)	68.0	73.9
Unemployed (%)	37.7	36.6
Currently in drug treatment (%)	37.7	38.5

*$p<.00$; **$p<.05$

Table 10. Type and frequency of drug use by Mandatory (MT) and Voluntary (VT) Treatment status

	Frequency of use								
	Not used or not in use in past year		Monthly or less		Fortnightly or weekly		Daily or almost daily		
Drugs used	MT%	VT%	MT%	VT%	MT%	VT%	MT%	VT%	Total
Marijuana	30.2	32.3	17.0	23.0	26.5	19.2	26.4	25.4	100/100
Sedatives	86.8	64.1	5.7	21.1	1.9	7.8	5.7	7.0	100/100
Tranquilliser/ Benzodiazepine	86.6	70.9	9.6	13.8	0.0	8.4	3.8	6.9	100/100
Hallucinogens	86.8	91.5	9.4	5.3	3.8	3.1	0.0	0.0	100/100
Amphetamines	58.8	46.5	15.6	33.4	15.7	10.9	9.8	9.3	100/100
Cocaine	96.3	92.2	0.0	6.2	3.8	1.6	0.0	0.0	100/100
Ecstasy	81.2	84.0	11.4	13.0	7.6	2.3	0.0	0.8	100/100
Heroin/morphine	77.0	69.2	11.6	11.6	1.9	7.7	9.6	11.5	100/100
Buprenorphin	92.4	92.4	3.8	0.8	0.0	0.8	3.8	6.2	100/100

However, the VT group was significantly more likely than the MT group to report that treatment had helped them 'stop using drugs altogether' and 'cope with withdrawal/the craving'.

The finding that nearly 40 per cent of the VT group believed that they had stopped using drugs/alcohol altogether, however, needs to be viewed with caution. A review of these respondents' self-reported current drug use indicated that only 26 (53%) of them were not using drugs on a daily or weekly basis at the time of the interview, whereas the remaining 23 (47%) were using one or more drugs (range: 1–5) on a daily and/or weekly basis.

This group of 23 included more females and higher proportions of respondents using sedatives (12.8%), tranquillisers/benzodiazepines (14.3%) and buprenorphin (10.4%) on a daily basis than the mandatory treatment group.

As many of these drugs are used to relieve mental health problems such as depression, anxiety and panic attacks, it is possible that some of these respondents regarded their drug use as self-medication for mental health problems, rather than drug abuse and that treatment had, indeed, assisted them to be 'illicit' drug free.[13]

13 We ruled out the possibility that these drugs were prescribed medication as the questionnaire had a separation question for prescribed drugs.

The other significant finding was the positive but weak association between group membership and the perceived outcome of treatment of 'coping with withdrawal/the craving'. The MT group was less likely to achieve this outcome than the VT group, with a relative risk of .700 (95% CI: .494–991).

As shown in Table 12, 52 per cent (range: 34.7%–66.9%) of both the MT and VT groups reported positive treatment outcomes. The most outstanding outcomes reported by both groups were for 'improved physical health' and 'improved emotional or mental health', with an average 63 per cent of respondents in both groups (range: 59.6%–66.9%) reporting these outcomes. The MT and VT groups did not differ significantly on any of these outcomes.

Generally speaking, the findings did not support the hypothesis that respondents under mandatory treatment are less likely to achieve positive treatment outcomes than those undergoing voluntary treatment.

The only true difference detected was the impact of treatment on coping with withdrawal symptoms and/or cravings, whereby significantly fewer respondents from the mandatory group achieved positive outcomes than those from the voluntary group. Improvements in social relationships and on health were perceived to be similar by both groups.

In addition to legal status (voluntary versus mandatory treatment), we identified other factors that may contribute to the success of treatment.

The qualitative data for the questionnaire item 'suggestions for treatment program' provided very valuable information about the reasons respondents may have been prevented from achieving positive outcomes. Of the 214 respondents who had attended treatment either at the time of interview or beforehand, 134 (62.2%) responded to this question.

The majority of the criticisms and suggestions for improvement were targeted at four areas:

Program content and philosophy (27 responses)

- Coercive and controlling
- Outdated materials
- Labelling and stereotyping of people using drugs and alcohol
- Focusing on self-understanding and no practical help to quit drugs
- Too many rules
- Repetitious
- Not enough mutual support and team activity
- Too clinical

Table 11. Reasons for entering treatment by perceived effectiveness of treatment

	Stop using altogether				Stop using for a while				Use less				Use safely				Coping with withdrawal/ the craving			
	Yes		No		Yes		No		Yes		No		Yes		No		Yes		No	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
MT	7	13.7	44	86.3	27	54.0	23	46.0	34	68.0	16	32.0	33	66.0	17	34.0	21	43.8	27	56.3
VT	49	38.3	79	61.7	82	67.2	40	32.8	82	66.7	41	33.3	68	55.3	55	44.7	80	62.5	48	37.5
	p < .00				n.s				n.s				n.s				p <.05			

Program structure (25 responses)

- Mixing different types of participants with drug abuse problems
- Disruptive mandatory clients
- Too short
- No regular sessions
- Mixing participants with alcohol abuse problems with participants with drug abuse problems
- Need more counselling elements
- Need 'female only' program
- Need more group elements

Quality of the staff (22 responses)

- Lack of trust and respect
- Judgmental
- Lack of knowledge and experience of working with people with drug abuse problems
- Insensitive to clients' needs
- Understaffed
- Unable to deal with the hostility and dynamics among participants
- Untrained staff
- Too much lecturing

Follow-up services (13 responses)

- Needing supervision and support services
- Having problems coping with drug-free life
- Having problems re-engaging with the community

The above comments indicate that the accessibility and quality of some training programs may be compromised by a lack of funding and resources.

Our findings do not sustain hypothesis 2 and the theory of incompatibility between treatment and punishment. The performance of offenders who had undergone mandatory treatment and those who had undertaken voluntary treatment did not differ significantly in most of the self-reported treatment outcomes, including helping them stop using drugs and alcohol for a while, using less drugs and alcohol, using drugs and alcohol safely, improving mental and physical health as well as their relationships with family, partners and friends.

Summary of the findings

The results of our study are similar to the general research outcomes found by many other studies in the field.

Our findings do not support the 'hitting rock bottom' phenomenon. Though respondents with more serious drug or alcohol abuse problems showed more recognition of their problem and were more likely to acknowledge that they needed help to change, they did not outperform respondents who used drugs or alcohol less frequently and were more ambivalent about their treatment needs.

We also did not find a significant relationship between respondents' legal status (mandatory versus voluntary) and their treatment outcomes.

The qualitative data suggest that apart from severity of drug addiction and legal status, there are many other factors that may prevent respondents from entering into treatment and achieving positive outcomes.

These factors are largely related to the availability of welfare and support services and the quality of treatment programs and program staff.

Table 12. Reasons for entering treatment by perceived impact of treatment on life

	Relationship with family				**Relationship with partner**				**Relationship with friends**				**Emotional or mental health**				**Physical health**			
	Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve		Improved		Didn't improve	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
MT	26	50.0	26	50.0	13	40.6	19	59.4	19	38.8	30	61.2	32	61.5	20	38.5	31	59.6	21	40.4
VT	72	56.3	56	43.8	41	46.1	48	53.9	43	34.7	81	65.3	83	63.8	47	36.2	87	66.9	43	33.1
	n.s				n.s				n.s				n.s				n.s			

Future research directions

Providing a conclusive answer about the effectiveness of mandatory treatment is very difficult, if not impossible. The research studies reviewed in our literature review were conducted in different cultural and political contexts with differing program content and offenders and varying levels of coercion. There was also no consensus between these studies on how treatment effectiveness for mandatory treatment was measured.

Researchers' attempts to seek conclusive answers for the broad question 'Does mandatory treatment work?' have failed to provide much in the way of practical knowledge about mandatory treatment. We need more information about the kinds of mandatory treatment that will work for particular groups of offenders and how they will work.

Stevens (2004) questioned the viability of mixing treatment and punishment, and doubted that the positive findings of treatment outcomes from the United States could be generalised to European countries as he believed that American drug courts were generally dealing with less serious offenders than those under QCT orders in European countries.

If Stevens' interpretation of the American findings was correct, then it probably suggests that mandatory treatment seemed effective for at least some groups of offenders with drug and alcohol abuse problems.

So it seems that studies which examine the effectiveness of different mandatory treatment programs and their compatibility with different groups of offenders have more practical value in terms of the improvement of treatment services for offenders (Anglin et al. 1999; Krebs et al. 2007; Marlowe et al. 2007; Payne, 2008; Young et al. 2004).

The prevailing research design of the majority of studies is to use voluntary clients as a comparison group to assess the effectiveness of mandatory treatment. These so-called voluntary clients could be offenders, people with or without criminal justice histories, or people from socioeconomic classes similar to or different from, the mandatory group. For example, the sample of one of the widely quoted studies had 35.9 per cent of participants working in professional, business/managerial and white collar occupations (Wild et al. 1998).

However, people in the mandatory treatment group may encounter psychological, social and financial constraints in making decisions to receive treatment very differently to those in voluntary treatment groups (Marshall & Hser 2002).

Researchers seldom explain or discuss in what way the voluntary clients they recruit are comparable to their mandatory groups and under what criteria treatment can be regarded as successful. Moreover, it may not be realistic to expect offenders under mandatory treatment to perform better than those under voluntary treatment, because unless it is mandatory many offenders will not enter treatment.

The common practice of using voluntary clients as a comparison group needs to be reconsidered. More appropriate comparison groups for non-custodial offenders under mandatory treatment are offenders in prison and non-custodial offenders with drug abuse problems, but not under treatment. This is because if offenders under mandatory treatment do not enter mandatory treatment, they will be serving either custodial sentences or non-custodial sentences without treatment.

The focus should be shifted to whether mandatory treatment will have any negative impacts on offenders. We have to consider the fact that there are very few studies which have examined the negative effects of mandatory treatment, and probably none on the potentially negative effects of receiving voluntary treatment, especially if the treatment experience is disappointing. It is possible that some offenders under mandatory treatment may feel that they have been trapped or oppressed. On the other hand, enthusiastic voluntary clients who invest their money and time to participate in treatment may be more demanding and have unrealistic expectations about treatment. This group may be more likely to be disappointed and develop resistance to treatment in the future. Research in this area would certainly provide useful information about the value of mandatory treatment to offenders.

The belief that we should wait for offenders with drug and alcohol abuse problems to get themselves psychologically ready and motivated to undertake treatment and prove themselves to the criminal justice system and the treatment institute is not well supported by research.

In our study, we found that the majority of the regular drug and/or alcohol abuse offenders did not consider they had a problem and only about one-third of the respondents with heavy drug and/or alcohol abuse problems recognised they had a problem. Furthermore, only a small percentage of those who recognised they had drug and/or alcohol abuse problems had sought treatment. This result indicates that people with serious drug and/or alcohol abuse problems need support and encouragement to get access to treatment. Mandatory treatment in its quasi-compulsory form may be considered an acceptable option.

The general research finding that the outcomes of mandatory treatment are comparable to voluntary treatment is consistent with the outcome of a

meta-analysis which compared the magnitude of treatment effect (effect size) of 78 studies on drug treatment between 1965 and 1996 and found that people who had received drug treatment were better off than those who had not (Prendergast et al. 2002). Many researchers have argued that the focus of drug treatment should be shifted from treatment effectiveness to improving treatment programs so that they match the needs of the clients (Millar et al. 2004; Prendergast et al. 2002).

People under mandatory treatment are not necessarily forced into treatment, especially if they have the right to refuse and if treatment is perceived as a positive alternative to prison.

Research into QCT in England established that many offenders were willing clients. The fact that QCT participants had to go through complex processes to get access to the treatment might have screened out offenders who were not keen to participate in the treatment program.

However, the weak relationship reported by many studies between low motivation before or at the beginning of the treatment and treatment outcomes indicates that mandatory treatment is a promising solution to help offenders who are ambivalent about their treatment needs.

Treatment professionals and program providers should take a more active role in motivating their clients to use their services. We believe that more research resources should be invested in the effectiveness of programs designed to increase the motivation of participants to enter treatment.

Moreover, mandatory treatment other than drug and/or alcohol abuse that helps offenders to cope with their psychological and social problems may also motivate reluctant people to enter drug treatment programs.

A preliminary analysis of the OPAL data revealed that offenders who participated in anger management or cognitive skills programs on a voluntary basis and those under court orders or other legal orders did not have significantly different outcomes.[14]

As discussed before, both the qualitative data of our study and other overseas studies indicate that people with drug and/or alcohol abuse problems encounter many psychological and social barriers that prevent them from accessing help.

Research to investigate the effectiveness of programs delivered on a mandatory basis and their role in facilitating drug treatment participation needs to be conducted.

Many researchers have suggested that reasons for the success or failure of treatment are more likely to be found in the dynamic process between offenders, their social circumstances and the quality of program and program staff (Gossop 2005; Klag et al. 2005; McSweeney et al. 2006; Wild et al. 2002).

A more comprehensive understanding of the relationship between mandatory treatment, as depicted in Figure 3 (a refined diagram of Figure 1), should include offenders' motivation variation during the treatment process and the content, nature and quality of the treatment program (as indicated by the boxes with the bold outlines below).

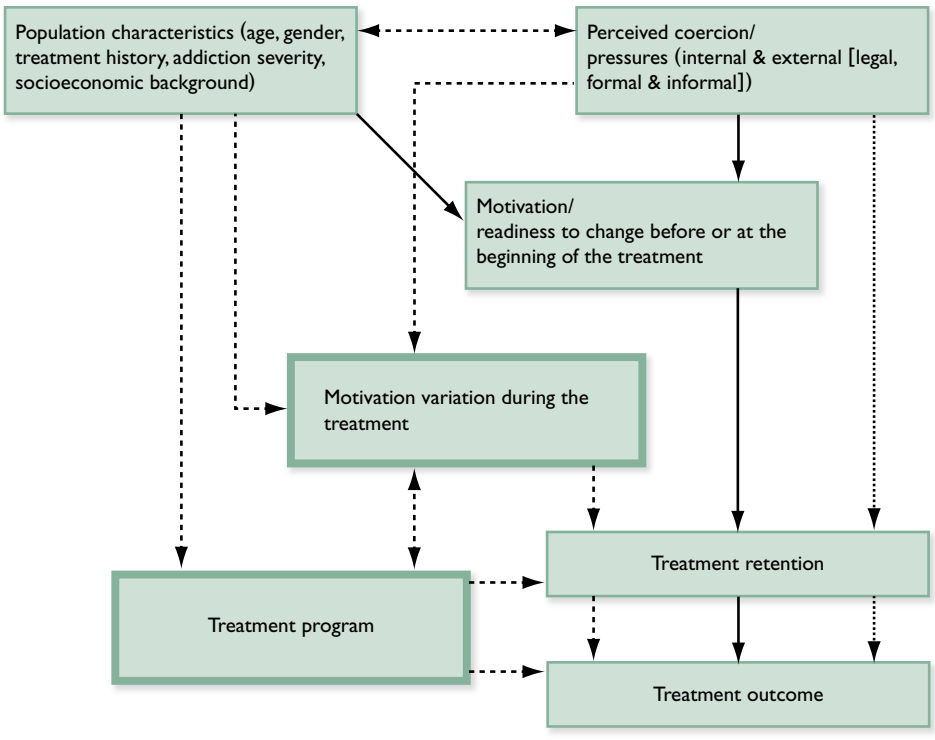
A British study found that the most significant predictor of treatment outcome was the quality of the treatment program (Gossop 2005). The qualitative data from McSweeney et al.'s study and the OPAL project also point in the same direction.

We need to incorporate qualitative methodologies, such as in-depth interviews, and ethnographic methodologies into drug and alcohol treatment studies to broaden our understanding of the dynamic interactions between offenders, their social circumstances and welfare and treatment institutes (Stahler & Cohen 2000).

These data will help to establish how the individual and interactive impacts of these factors work to modify offenders' motivation to change their drug and/or alcohol using behaviours.

14 For details, see Appendix 1.

Figure 3. A refined generic theoretical framework of mandatory treatment studies



Conclusion

The overemphasis on dichotomous analysis between treatment status (coerced/non-coerced, legal/non-legal) and treatment outcomes obscures many significant issues which are crucial to treatment effectiveness.

For offenders who have drug and/or alcohol abuse problems, their rehabilitation always requires more than treatment.

Many need extra support and encouragement to take their first step into the treatment, stay in the program and maintain their new lifestyle after completing the programs.

Their rehabilitation process is always long and cyclical so the value and utility of mandatory treatment for drug and/or alcohol abuse should be assessed in a realistic and practicable manner.

Clear expectations about the role of mandatory treatment in drug and alcohol rehabilitation for offenders will provide a realistic direction for the formulation of treatment policy and the planning of related services.

However, sufficient investment in the quantity and quality of treatment programs and support services is also indispensable for achieving the targeted treatment goals.

Appendix

Perceived impact on life of other treatment programs

Anger management program (*n* = 138)

Outcome of training: Percentage of respondents agreeing (% yes)	Court requirement + Other legal order *n* = 71	Voluntary *n* = 51	Other* *n* = 16	p value
Have more control over emotions/feelings	75.7	80.4	56.3	n.s.
Have more control over behaviour	80.0	78.4	43.8	.005
Understand consequences of behaviour	84.3	90.2	62.5	.015
Do less crime	75.4	68.6	43.8	n.s.
Stop doing crime altogether	55.7	56.0	37.5	n.s.
Improved relationship with family (among those with family)	58.8	57.1	50.0	n.s.
Improved relationship with partner (among those with partners)	54.7	37.8	40.0	n.s.
Improved relationship with friends (among those with friends)	48.5	55.1	42.9	n.s.
Improved emotional or mental health	59.4	70	43.8	n.s.
Improved work life (among those working)	46.3	64	60	n.s.

Outcome of training Percentage of respondents agreeing (% yes)	Relative risk (court requirement + legal order/ voluntary participation)	Confidence interval	p value
Have more control over emotions/feelings	0.94	0.78–1.14	n.s.
Have more control over behaviour	1.02	0.85–1.23	n.s.
Understand consequences of behaviour	0.93	0.82–1.07	n.s.
Do less crime	1.11	0.89–1.40	n.s.
Stop doing crime altogether	1.16	0.85–1.57	n.s.
Improved relationship with family (among those with family)	1.03	0.75–1.41	n.s.
Improved relationship with partner (among those with partners)	1.13	0.74–1.71	n.s.
Improved relationship with friends (among those with friends)	0.88	0.62–1.25	n.s.
Improved emotional or mental health	0.86	0.66–1.12	n.s.
Improved work life (among those working)	.072	0.50–10.5	n.s.

Cognitive Skills Program (*n* = 102)

Outcome of training: Per cent of respondents agreeing (% yes)	Court requirement + Other legal order *n* = 51	Voluntary *n* = 43	Other* *n* = 8	p value
Have more control over emotions/feelings	62.8	81.4	37.5	.044
Have more control over behaviour	—	—	—	—
Understand consequences of behaviour	83.7	90.7	62.5	n.s.
Do less crime	79.1	76.2	25.0	.013
Stop doing crime altogether	62.8	54.8	25.0	n.s.
Improved relationship with family (among those with family)	55.0	53.5	12.5	n.s.
Improved relationship with partner (among those with partners)	62.9	55.2	0.0	n.s.
Improved relationship with friends (among those with friends)	41.0	58.1	12.5	n.s.
Improved emotional or mental health	54.8	74.4	37.5	n.s.
Improved work life (among those working)	40.6	55.9	33.3	n.s.

** Respondents under this category entered treatment for various reasons, such as informal or formal requirement of a rehabilitation program, parole board and pressures from family members.*

Outcome of training Per cent of respondents agreeing (% yes)	Relative risk (court requirement + legal order/ voluntary participation)	Confidence interval	p value
Have more control over emotions/feelings	0.77	0.59–1.14	n.s.
Have more control over behaviour	—	—	-
Understand consequences of behaviour	0.92	0.78–1.09	n.s.
Do less crime	1.04	0.83–1.30	n.s.
Stop doing crime altogether	1.12	0.78–1.60	n.s
Improved relationship with family (among those with family)	1.03	0.69–1.53	n.s.
Improved relationship with partner (among those with partners)	1.14	.074–1.77	n.s.
Improved relationship with friends (among those with friends)	0.71	0.45–1.11	n.s.
Improved emotional or mental health	0.72 (court requirement about 30% less likely than voluntary participation to lead to this outcome)	0.52–0.99	.038
Improved work life (among those working)	.073	0.43–1.22	n.s.

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