Why it is important to look at long-term abstinence from heroin use: A review Life Beyond Heroin: An exploration of the motivations for long-term heroin abstinence

Lucy Dann
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Why it is important to look at long-term abstinence from heroin use: A review
Life Beyond Heroin: An Exploration of the Motivations for
Long-term Heroin Abstinence
Lucy Dann

A report submitted in Partial Fulfilment of the Requirement for the Award of Bachelor of Arts (Psychology) Honours, Faculty of Computing, Health and Science, Edith Cowan University.
October, 2007

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I certify that this literature review and research project does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

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Why it is important to look at long-term abstinence from heroin use: A review.

Lucy Dann

Edith Cowan University
Why it is important to look at long-term abstinence from heroin use: A review.

Abstract

The phenomenon of achieving long-term abstinence from drug use remains to be thoroughly understood in the alcohol and other drug (AOD) community, particularly in the area of heroin use. This review assesses research in the field of long-term abstinence from drug use and highlights the need to examine long-term abstinence from heroin use. Prochaska and DiClemente’s (1986) Stages of Change model of behaviour change is examined as well as literature examining its importance in the AOD field. Studies examining long-term abstinence from alcohol, tobacco, cocaine and heroin use are reviewed from a psychological perspective, focusing on cognitive-behavioural constructs. Findings revealed a number of similarities in the mechanisms or factors associated with achieving long-term abstinence. High self-efficacy, developing sober or abstinent social networks, having support structures in one’s life and utilising cognitive and behavioural coping strategies were factors found to be common across a number of drugs. In comparison to alcohol, tobacco and cocaine use, limited research exists on long-term abstinence from heroin use. In studies that are available, a majority focus on describing the demographic and treatment characteristics of this population. It is concluded that future research needs to explore individuals’ subjective reasons or motivations for long-term abstinence from heroin use.

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Why it is important to look at long-term abstinence from heroin use: A review.

"Giving up smoking is the easiest thing in the world. I know because I've done it a thousand times" (Mark Twain, 2007, version).

Introduction

Long-term abstinence from drug use can be defined as remaining abstinent (free from a particular drug) for a sustained period after a defined quit date (Hughes, Keely, & Naud, 2004). Although the alcohol and other drug (AOD) field has had some difference of opinion on the defined time period of long-term abstinence, it is generally agreed that 12 to 18 months abstinence from drug use is necessary for it to be considered long-term (Gossop, Stewart, Browne, & Marsden, 2002; Siegal, Li, & Rapp, 2002). However, more recent literature has considered 6 months to be long-term (Hughes et al., 2004). This differs from short-term abstinence which is defined as remaining abstinent from a drug for a period of 1-4 weeks (Hughes et al., 2004).

Long-term abstinence continues to be a fundamental goal for the treatment of alcohol and other drug use (Siegal et al., 2002). Effective treatment for alcohol and other drug use has been measured by individuals’ achievements of long-term abstinence and improved quality of life (Siegal et al., 2002). This improved quality of life has been seen in areas such as employment, health, legal and psychological functioning (Siegal et al., 2002). Consequently, long-term abstinence from drug use has been deemed by some as the “success of a given quit attempt” (Hughes et al., 2004, p. 29). In spite of the emphasis on abstinence-based goals in treatment, long-term abstinence remains to be thoroughly examined and understood, particularly in the area of heroin use.

The purpose of this review is to assess research in the field of long-term abstinence from drug use and argue why it is important to examine long-term abstinence
from heroin use. The first section provides a brief examination of the harms of heroin use. This will be followed by a description of Prochaska and DiClemente’s transtheoretical model of behaviour change, commonly referred to as the Stages of Change Model (1986). The second section examines the AOD literature on long-term abstinence, with a particular focus on the research carried out on long-term abstinence from heroin use. This literature will be reviewed from a psychological perspective drawing on constructs from a range of cognitive-behavioural approaches. Finally, limitations of current research will be discussed as well as directions for future research in the area of long-term abstinence.

Harms of Heroin Use

According to the 2004 National Drug Strategy Household Survey, 1.4 percent (1.8 percent of males and 1.0 percent of females) of people in Australia report having ever used heroin at some point in their life (Australian Institute of Health and Welfare [AIHW], 2005). In addition, 0.2 percent reported having used heroin in the last year (AIHW, 2005). While this indicates only a small proportion of the Australian population use heroin, the harms associated with heroin use are considerable.

Many of the harms associated with heroin use arise from individuals having developed a dependence on heroin. The percentage of those who have ever used and become dependent on heroin has been estimated to be 23.1 percent (Anthony, Warner, & Kessler, 1994). This is higher than rates for cocaine, alcohol and stimulants such as methamphetamines (Anthony et al., 1994). Dependency on heroin is characterised by the individual experiencing increasing tolerance, requiring more of the drug to achieve the same effect (Ryder, Walker, & Salmon, 2006). It is also marked by the individual experiencing withdrawal symptoms when they stop using. Such symptoms include
muscle aches, diarrhea, nausea, vomiting and insomnia (Ryder et al., 2006). Whilst heroin withdrawal is not usually life threatening it has been described as particularly unpleasant, resembling a bad dose of influenza (Avis, 1999).

Research has shown that over a 20-year period, one of three outcomes is likely to occur for a heroin-dependent person (Hall, Lynskey, & Degenhardt, 1999). One-third will alternate between periods of using heroin and periods of abstinence, with such abstinence usually occurring when the individual is in treatment or in prison. One-third will become abstinent, meaning they will have ceased all use of heroin, leaving that part of their life behind (Hall et al., 1999). And one-third will die. Research conducted on these three groups has primarily focused on those who die, and those who cycle between periods of using and periods of abstinence, with little research on those who achieve long term abstinence.

One of the most severe consequences of being dependent on heroin is the increased risk of mortality, thus much research has focused on this area. Studies have found that those who are dependent upon heroin have an increased risk of mortality 13 times greater than that of an individual who does not use heroin and who is the same age (Hall et al., 1999). It has been estimated that between 1-4 percent of heroin users die each year (Darke & Zador, 1996; Davoli et al., 1997; Haastrup, 1999; Sporer, 1999). Research has shown that deaths associated with heroin use primarily result from contracting blood-borne viruses (BBV's), overdose, violence and alcohol-related causes (Hall et al., 1999).

Much research conducted in this area has investigated deaths related to overdose from heroin use. Studies have estimated that annual mortality rates due to heroin overdose are approximately 0.8 percent in Australia and this is mirrored in other
countries (Degenhardt, 2002; Hall, Ross, Lynskey, Law, & Degenhardt, 2000). In an attempt to reduce the high rates of overdose, research has examined the factors most commonly associated with fatal heroin overdoses. Such factors include injecting heroin intravenously (into the veins) (Darke & Zador, 1996; Darke, Ross, Zador, & Sunjic, 2000; Darke & Ross, 2000; Gossop, Griffiths, Powis, Williamson, & Strang, 1996), using heroin after a period of abstinence (including due to incarceration or treatment) and using heroin in conjunction with other central nervous system depressants, including alcohol or minor tranquillisers (Darke & Zador, 1996; Darke & Ross, 2000; Sporer, 1999).

A further cause of mortality from heroin use is the contribution of blood-borne viruses (BBV’s). One harm of using heroin by intravenous injection is the likelihood of contracting BBV’s through the sharing of injecting equipment. Such BBV’s include the hepatitis C virus and the human immunodeficiency virus (HIV). Studies have found that approximately 80 percent of all hepatitis C cases in Australia are from the sharing of injecting equipment (Commonwealth Department of Health and Ageing [CDHA], 2005). Whilst hepatitis C is not necessarily fatal like HIV, it is a disease that can still cause considerable harm, particularly to the body’s liver functioning (CDHA, 2000).

Research into this area has predominantly focused on the risk factors or predictors of injecting drug users with hepatitis C and HIV. Such risk factors include the sharing of injecting equipment in small groups and in those recently beginning injecting, time since onset of injecting behaviour and time spent in prison (Cook, Mcveigh, Syed, Mutton, & Bellis, 2001; Lopez-Zetina, Kerndt, Ford, Woerhle, & Weber, 2001). The literature on this group can be considered substantial. However, research has also been
conducted on another population of heroin users in an attempt to prevent these harms from heroin use.

An abundance of research has focused on the one third of heroin dependent individuals who frequently alternate between periods of using heroin and periods of abstinence, particularly when in treatment. Research focusing on treatment for heroin dependence has primarily looked at pharmacotherapy treatments. Pharmacotherapies are chemical detoxification and substitute medications that can be used as maintenance methods for people who are dependent on opiates (Marsch et al., 2005). Most of these treatments are opioid agonists. Opioid agonists are those which mimic the effects of an opioid drug (CDHA, 2004). This means when they are taken the individual develops a deliberately induced tolerance to the medication, as they would to heroin (Ryder et al., 2006). Such treatments reduce the cravings for heroin as well as reduce the effects of heroin should it be taken (Ryder et al., 2006). Some of the most common pharmacotherapies for heroin dependence include methadone maintenance treatment (MMT), levo-alpha-acetyl-methadol (LAAM) and buprenorphine.

A large body of literature exists on the efficacy of these treatments in reducing both heroin use and the related harms that have been discussed previously. A large scale review examining the Australian literature on pharmacotherapies for heroin dependence found that all three treatments significantly reduced heroin use (CDHA, 2004). Moreover, regardless of treatment type, heroin users who remained in treatment increased their number of heroin-free days from 3 days in the month prior to treatment to 22 to 24 days in the third month of treatment. All three treatments were also found to significantly reduce morbidity from fatal heroin overdoses (CDHA, 2004). These findings are consistent with other research that has found these treatments, particularly
methadone maintenance treatment, to be effective in reducing heroin use, lowering mortality, reducing HIV infection as well as injecting risk behaviour (Ball & Ross, 1991; Dolan, Wodak, & Hall, 1998; Longshore, Annon, Anglin, & Rawson, 2005; Mattick et al., 2003; Ward, Hall, & Mattick, 1999; Ward, Mattick, & Hall, 1998; Ward, Mattick & Hall, 1992).

The remaining one third of heroin dependent individuals who manage to abstain from heroin use successfully remain to be thoroughly examined or understood. Indeed, in comparison to the other two thirds of dependent heroin users, little is known about this remaining population in terms of how they achieve abstinence from heroin use and importantly how they maintain it over the long-term. Such information could assist in preventing many of the harms associated with heroin use.

**Stages of Change**

Prochaska and DiClemente’s (1986) transtheoretical model of behaviour change, also known as the Stages of Change model, was developed in an attempt to describe and understand how individuals change an addictive behaviour. Based on a series of studies conducted on self-change of smoking Prochaska and DiClemente (1982, 1983) discovered that individuals progress through a series of stages as they attempt to initiate, modify and maintain addictive behaviour change. This model has been assumed to apply to other addictive behaviours including heroin use and incorporates five stages. These are referred to as precontemplation, contemplation, preparation, action and maintenance. Individuals in the precontemplation stage are not ready to change in the foreseeable future. They are often unaware that their behaviour is a problem, thus it is not that they can’t see the solution, they simply can’t see the problem (Prochaska, DiClemente, & Norcross, 1992). Individuals in the contemplation stage make a
transition to becoming aware that the behaviour is problematic, but with no firm commitment to actively changing (Prochaska et al., 1992). An individual has reached the preparation stage if they have made a firm decision to make a behavioural change. This decision is evidenced by the individual scheduling a date or event that indicates the beginning of action. Individuals have reached the action stage if they are currently engaged in modifying behaviours, experiences or their environment in order to change their behaviour (Prochaska et al., 1992). In order to be classified in the action stage individuals have to have successfully changed the problem behaviour for a period of one day to 6 months (Prochaska et al., 1992). Maintenance is primarily characterized by individuals consolidating the gains achieved during action and preventing relapse. For individuals to be classified in this stage they have to have remained free of the addictive behaviour for more than 6 months. Thus this stage primarily involves stabilising behaviour change and would include drug users defined as being long-term abstainers.

Much of this literature on stages of change has examined the stages and their relevance in clinical settings, specifically in treatment. In particular, research has looked at the importance of matching stages and treatment types. Studies have revealed that the vast majority of addicted people are not in the action stage, but rather are in the contemplation stage, meaning they are not yet ready to change (Allsop, 1996; Prochaska et al., 1992). Yet, paradoxically, a large majority of treatments for drug addiction are action-oriented (Ryder, 1999). The importance of matching stages and treatment types has also been found in research examining pretreatment readiness for change in predicting long-term drug use outcomes. Such studies have assessed individuals' readiness to change prior to treatment and found that those who are in the preparation or action stages upon entry to treatment yield better alcohol and other drug outcomes at
follow-ups than those in precontemplation and contemplation stages (DiClemente et al., 1991; Isenhart, 1997; Zhang, Harmon, Werkner, & McCormick, 2004). These findings, provide further support for the importance of matching stages with treatment types.

Research conducted on the Stages of Change model has almost exclusively focused on the stages from precontemplation through to action and their importance in matching treatment types. However, little research has looked solely at the maintenance stage, particularly in terms of how it is achieved. Thus, there is a lack of research looking at long-term abstinence from drug use even in such prominent behaviour change models as the Stages of change model.

There is, however, a body of literature on long-term abstinence that has been conducted without reference to Prochaska and DiClemente’s (1986) behaviour change model. The second part of this paper will review this literature on long-term abstinence from several drugs, with a particular focus on the research carried out on abstinence from heroin use.

*Long-term abstinence from alcohol use*

The research which has been carried out on long-term abstinence from drug use has primarily looked at licit drugs, particularly alcohol use and predictors of long-term abstinence. One such factor found to consistently predict long-term abstinence from alcohol use has been individual’s degree of self-efficacy, which is described by Bandura (1977) as ones confidence in ones ability to take the steps necessary to deal effectively with an impending situation or task. Individuals with higher confidence in their ability to remain abstinent and to resist alcohol consumption, are more likely to be abstinent at 3 month, 6 month and 3 year follow-up periods (Goldbeck, Myatt, & Aitchison, 1996; Moos & Moos, 2006; Vielva & Iraurgi, 2001).
A closely related factor to self-efficacy that has been shown to significantly predict long-term abstinence from alcohol use is previous length of abstinence. Repeated success in previous attempts of being abstinent can raise perceptions of efficacy for performing the activity, whereas failures can lower these perceptions (Vielva & Iraurgi, 2001). Individuals who are able to maintain abstinence over longer periods of time than others, exhibit higher levels of self-efficacy. This has consequently been found to predict long-term abstinence from alcohol use (Vielva & Iraurgi, 2001).

Such findings on the importance of self-efficacy in maintaining long-term abstinence can be more intricately understood by examining The Relapse Prevention model developed by Marlatt and Gordon (1985). In this model, Marlatt and Gordon theorise that while maintaining abstinence from alcohol use or other addictive behaviours, an individual experiences a raised sense of self-efficacy. The longer the period of abstinence, the greater the increase in their perception of self-efficacy and control. This perception of control continues until the individual is confronted with a high-risk situation, one which challenges the individual’s sense of control and increases the risk of a potential relapse (Marlatt & Gordon, 1985). Such situations can include negative emotional states, interpersonal conflicts or even social pressures. If an individual is able to implement effective cognitive or behavioural coping responses during the high-risk situation, such as resisting social pressures, then the likelihood of relapse is decreased. In addition, the individual experiences a sense of increased self-efficacy through their ability to cope with the high-risk situation. However, if an individual does not execute such coping responses they are likely to experience a lack of control over the situation as well as a decrease in self-efficacy, and consequently are likely to relapse.
Another factor found to predict abstinence from alcohol use is developing sober social networks. It has been found that having more drug using peers and heavy drinkers in one’s social network is significantly and negatively related to abstinence (Weisner, Matzger, & Kaskutas, 2003). Similarly, developing new relationships has been associated with freedom from relapse (Vaillant, 1988). Such relationships have included romantic relationships with a partner or wife, a special relationship with a nonprofessional and friendships with a helping person or mentor (Vaillant, 1988). Thus, developing sober social networks appears to be a critical part of the recovery process.

Research has also been conducted that has specifically examined reasons or motivators for individuals sustaining long term abstinence from alcohol. Studies on Indigenous populations, including qualitative explorations into alcohol use, have identified a number of factors that have contributed to individuals maintaining abstinence from alcohol use in these communities. One salient reason that has been identified is medical conditions (Brady, 1993). Due to serious medical problems or warnings by doctors individuals have been motivated to stay abstinent (Brady, 1993). Other important reasons for abstaining long-term from alcohol use have included family considerations, such as responsibility and commitment to caring for children and elders, and improved life circumstances including employment (Alati, Liamputtong, & Peterson, 2003; Brady, 1993).

Religion and spirituality have also been reported as playing a motivating role in long-term abstinence from alcohol use, particularly for individuals who have converted to Christianity (Brady, 1993). Such research has found that for some dependent alcohol users Christianity legitimises and endorses the practice of becoming abstinent. In addition, it offers a social network which supports change for dependent alcohol users

Similar to the endorsing practices of achieving abstinence by the Christian faith, research has also examined the role of Alcoholics Anonymous (AA) in supporting abstinence amongst dependent alcohol users. The efficacy of AA in helping people achieve abstinence from dependent alcohol use, has received considerable attention from the alcohol and other drug field. Meta-analyses have demonstrated positive but modest relationships between AA meeting attendance and drinking reduction (Emrick, Tonigan, Montgomery, & Little, 1993). However, the overall quality of methodology of many studies in this area is poor (Tonigan, Toseova, & Miller, 1996). One limitation has been the use of self-report assessments of abstinence from alcohol use rather than objective assessments such as urine analysis (Tonigan et al., 1996). Such assessments can be subject to individual bias by underestimating the use of alcohol, thus, hindering the validity of these findings. More importantly, such studies did not control for the effects of prior formal treatment, motivation or such psychosocial correlates as problem severity or demographics. Thus, such positive findings may be the result of other variables accounting for positive drinking outcomes rather than processes unique to AA meetings. For example, individuals who were more motivated and who had less severe alcohol dependence may have sought AA in order to maintain abstinence, rather than have relied solely on AA to overcome their alcohol dependency. Whilst, the true efficacy of AA is still unclear, more recent research has provided some useful insights into this debate.

Morgenstern and colleagues (1997) examined the therapeutic effects and mechanisms of action of affiliation with AA after treatment. In this study, Morgenstern
and others assessed individuals in intensive 12-step substance abuse treatment during treatment and at one and six month follow-ups. It was found that increased affiliation with AA did predict better outcomes. However, the effects of affiliation with AA were mediated by a number of common change factors. Morgenstern and colleagues found that AA’s relationship with outcome was mediated by its effects on increasing self-efficacy, encouraging active coping efforts and helping to maintain individual’s high levels of motivation to refrain from alcohol use. However, this was only for individuals whose level of motivation was already high at treatment entry. For individuals with low pretreatment motivation, AA affiliation did not increase initial levels of motivation, and this was seen to be an important predictor of outcome. These findings suggest that greater AA affiliation can assist in maintaining abstinence from alcohol use through the mediating factors of self-efficacy, motivation and active coping efforts, however this is only effective if individuals are already highly motivated to sustain such abstinence.

Whilst these findings provide some answers to the debate surrounding the efficacy of AA, more research is needed on the mechanisms of AA to substantiate these findings.

In addition, this study had some important limitations that need to be considered. First, the study sample consisted predominantly of males who were from more socially stable backgrounds, therefore, it is difficult to generalise findings to females and less socially stable individuals. Second, although treatment experience was controlled for the fact that participants received such intensive treatment before AA may have still had an impact on or interacted with the processes used by AA. Thus, it is difficult to determine if the positive findings were due solely to processes unique to AA.
Long-term abstinence from tobacco use

In addition to research conducted on alcohol use, a body of literature also exists on long-term abstinence from tobacco use. Similar to alcohol use, research has predominantly focused on the predictors of long-term abstinence from smoking. Two widely researched predictors in the area of smoking abstinence have been motivation and self-efficacy. Pretreatment motivation has been found to consistently predict abstinence from smoking (Barnes, Vulcano, & Greaves, 1985; Jackson, Stapleton, Russell, & Merriman, 1986; Richmond, Austin, & Webster, 1988; Richmond, Kehoe, & Webster, 1993; Seeker-Walker, Flynn, Solomon, Vacek, & Bronson, 1990). Richmond and colleagues measured levels of motivation in individuals, using a self-rating scale, to determine whether this could predict abstinence from smoking. It was found that individuals with higher motivation levels upon entry to treatment were more likely to remain abstinent at 12-month follow-up (Richmond et al., 1993). As with the literature on alcohol use, level of self-efficacy also appears to have a significant role in predicting long-term abstinence from smoking. Numerous studies have found that low self-efficacy in one's ability to successfully abstain from smoking has predicted failure to remain abstinent, consequently resulting in relapse (Boardman, Catley, Mayo, & Ahluwalia, 2005; Conditote & Lichtenstein, 1981; Gulliver, Hughes, Solomon, & Dey, 1995; Gwaltney, Shiffman, Balabanis, & Paty, 2005; Gwaltney et al., 2001). Conversely, individuals with high self-efficacy in their belief to successfully abstain from smoking has predicted abstinence (Chang et al., 2006; Sanders, Peveler, Mant, & Fowler, 1993).

Another predictor that has also received much attention in research conducted on smoking abstinence is financial stress. In a study by Siahpush and Carlin (2006) the
association between financial stress and subsequent abstinence among current smokers and relapse among already abstinent smokers was examined. It was found that current smokers with financial stress were less likely to abstain from smoking and abstinent individuals with more financial stress were more likely to relapse (Siahpush & Carlin, 2006). These findings have also been replicated in other studies that have found higher as opposed to lower socio-economic status to be a significant predictor of long-term smoking abstinence (Richmond et al., 1993).

Whilst the causal pathways between financial stress and inability to remain abstinent are still largely unknown, a number of hypotheses have been put forward regarding their association. Some have proposed that individuals with higher socio-economic status engage in more healthy lifestyle behaviours, including stopping smoking, than those in lower socio-economic brackets (Richmond et al., 1993). Others have suggested that smoking acts as an affordable painkiller (or coping strategy) for the stress induced by those in financial hardship (Dorsett & Marsh, 1998). Thus, those in more financially stable situations are thought to rely less on smoking as a stress reliever. Regardless of the association, lack of financial stress appears to play a role in maintaining smoking abstinence.

Social networks have also been found to play an important role in abstinence from smoking, as they have with alcohol use. It has been found that smoking status of a partner significantly predicts the ability to successfully abstain from smoking. Sanders and colleagues (1993) found that individuals whose partners were non-smokers predicted sustained abstinence for up to one-year. Research has also shown that individuals who live with smokers as opposed to non-smokers have a smaller chance of successfully abstaining from cigarette use (Gourlay, Forbes, Marriner, Pethica, &
McNeil, 1994; Senore et al., 1998). It has been suggested that this is due to having a lack of social support to stop smoking (Richmond et al., 1993). In general, studies have found that having less contact with smokers in one's social network and surrounding oneself with peers who are supportive of non-smoking has been associated with long-term abstinence (Panday, Reddy, Ruiter, Bergstrom, & de Vries, 2005; Richmond et al., 1993). These findings replicate those on alcohol use whereby sober social networks, or non-smoking networks in the case of smoking, play an integral role in maintaining abstinence (Vaillant, 1988; Weisner et al., 2003).

What remains unclear about such research is whether the presence of smokers or the absence of smokers in one's social network is more influential in maintaining abstinence in the long term. One study by Mermelstein and colleagues (1986) specifically examined the role of social networks in long-term abstinence from smoking. In this study, three kinds of support factors were assessed. These included support from a partner related specifically to quitting, perceptions of general (nonsmoking) support resources and the presence of smokers in participants' social networks. It was found that high levels of both partner support and general support were associated with only shorter-term (3 months post treatment) abstinence from smoking (Mermelstein et al., 1986). Presence of smokers in participant's networks, however, significantly determined individuals who relapsed by 12-month follow-up. That is to say, having smokers among individual's close social networks significantly hindered their ability to maintain abstinence in the longer-term. Mermelstein and colleagues concluded that once initial abstinence has been achieved, non-smoking networks may not see the need to continue reinforcing and supporting the individual to remain abstinent. Similarly, the individual may not seek their ongoing support or reinforcement for such abstinence. Thus, the
individual becomes more vulnerable to smokers in their network in the longer term as they may perceive they need less support to remain abstinent.

The area of long-term abstinence from alcohol and tobacco use, has received considerable attention in the AOD field. However, if this phenomenon is to be truly understood it is important to examine the research literature on illicit drugs. This may reveal if similarities or differences exist between maintaining abstinence from both licit and illicit drugs. That is to say, are the mechanisms for maintaining long-term abstinence from these drugs the same? Literature on long-term abstinence from cocaine use will be examined to explore this issue.

_Long-term abstinence from cocaine use_

Whilst not as prevalent as the research on alcohol use, a moderate amount of research has also been carried out on long-term abstinence from cocaine use, particularly examining predictors of cocaine abstinence. Some studies have found certain social-relationship variables to be good predictors of post-treatment abstinence from cocaine use. Greater social integration, referring to an individual’s amount and frequency of social contacts and interpersonal relationships, has significantly predicted abstinence from cocaine use at 6-month follow-ups (Havassy, Wasserman, & Hall, 1995). Higher levels of perceived support have been found to be a strong predictor of continued abstinence. Studies have found that perceived emotional support, which is how an individual perceives the support available to them, has predicted 6 month abstinence at follow-up (Havassy et al., 1995; Mckay, Merikle, Mulvaney, Weiss, & Koppenhaver, 2001).

Drug use in the social network has also been found to predict abstinence. The absence of current cocaine users and the presence of former users (who are also working
to abstain from cocaine use) in one’s social network has been found to predict abstinence at 6 month follow-ups (Havassy et al., 1995). These findings reflect those on alcohol and tobacco use, whereby sober social networks have played an important role in the recovery process from alcohol dependence (Panday et al., 2005; Weisner et al., 2003). Together, this literature indicates such social-relationship variables as greater social integration, perceived support and sober networks at completion of treatment have successfully predicted long-term abstinence from cocaine use.

However, some studies have found that these findings on social-relationship variables are only relevant to some cultures. Greater social integration, perceived support and lack of drug use in the social network have only been found to predict abstinence for Caucasian individuals. When studies have examined the predictive power of these variables with individuals of other ethnic backgrounds, including African Americans they have not been able to account for abstinence from cocaine use at follow-up periods (Havassy et al., 1995). Thus, these findings appear to be confined only to Caucasian individuals and consequently highlight the need for research to consider such cultural differences in the area of long-term abstinence from drug use.

One of the most consistently reported predictors for cocaine abstinence has been treatment retention. Studies have shown that shorter stays in treatment have been related to higher cocaine relapse rates, whereas longer treatment retention has predicted abstinence from cocaine use (Gainey, Wells, & Hawkins, 1993; Rapp, Siegal, Li, & Saha, 1998; Simpson, Joe, Fletcher, Hubbard, & Anglin, 1999). Participation in posttreatment services or support, also referred to as aftercare, has also been found to be particularly predictive of longer-term abstinence. Numerous studies have found that clients attending aftercare services and self-help groups such as Cocaine Anonymous
Long-term Heroin Abstinence 20

(CA) after treatment are more likely to maintain abstinence that those not attending such services (Fiorentine, 1999; Mckay et al., 2001; Miller, Ninonuevo, Klamen, Hoffmann, & Smith, 1997; Siegal et al., 2002; Siegal, Rapp, Li, Saha, & Kirk, 1997).

However a majority of these studies conducted on self-help groups such as CA have some noteworthy limitations. First, outcome assessments used for determining abstinence from cocaine use often involve self-report as opposed to biological assays such as urine analysis, a limitation discussed previously on the research conducted on AA. Thus, the reliability of such outcome data from these studies is somewhat questionable. Second, such studies are largely conducted using homogeneous sample populations, particularly males. As such, the generalisability of these findings are severely limited, as it is not known if such groups as Cocaine Anonymous are effective for females in maintaining abstinence.

Research examining the reasons as to why individuals sustain long-term abstinence from cocaine use is less prevalent. However, one prominent theme identified in this area of research is individuals having a “stake in conventional life” (Waldorf, Reinarman, & Murphy, 1991, p. 233). This conventional life has been described as a “setting that includes life chances,” one which allows individuals to maintain an ordinary every day life by having the aid of structural supports (Waldorf et al., 1991, p. 233). Waldorf and colleagues (1991) found in their longitudinal study of cocaine users that individuals with such structural supports in their lives such as family, friendship networks, jobs and other community involvements were more easily able to leave their heavy cocaine use behind than those without such structural supports (Waldorf et al., 1991). Such findings have been replicated in more recent research on cocaine abstinence (Siegal et al., 2002). These findings also reflect those from qualitative
explorations of alcohol use using indigenous populations whereby family and employment assisted in recovery from alcohol dependence (Alati et al., 2003; Brady, 1993). Overall, this research suggests that the social context of a cocaine user's life, that is having a stake in conventional life, may foster the ability to overcome cocaine dependency.

Studies have also been conducted that have examined strategies used by individuals that have promoted long-term cocaine abstinence. Among those most frequently identified by individuals have included thinking about what they could lose, moving to a new area, avoiding people and places and severing all ties with friends currently using cocaine (Granfield & Cloud, 1996; Kirby, Lamb, Iguchi, Husband, & Platt, 1995; Shaffer & Jones, 1989). These findings can be understood by examining addiction models of change that specifically emphasise the use of coping strategies in recovery from drug dependence. One coping skill, which has been identified by two such models (Prochaska & DiClemente, 1986; Litman, 1986) is that of stimulus control. Stimulus control is when an individual consciously restructures their environment or avoids high-risk situations in order to avoid negative triggers of problematic behaviours or enhance new behaviours (Prochaska et al., 1992). This strategy is seen as particularly important in order to prevent relapse and to sustain abstinence in the longer term (Prochaska et al., 1992; Connors, Maisto, & Donovan, 1996).

So far, it can be seen that a substantial amount of literature exists on long-term abstinence from alcohol and tobacco use and a moderate amount on cocaine use. As mentioned at the beginning of this paper, little research has examined the one third of heroin users who successfully manage to maintain abstinence over the long-term. The
next section of this paper will highlight the need to explore this population, and will review the literature on long-term heroin abstinence.

*Heroin Use*

Limited research exists on long-term abstinence from heroin use. This is surprising considering the relatively long history heroin has had in Australia. Indeed, heroin was first noted as a drug of concern in Australia in the 1960s before it reached epidemic proportions in the 1970s and 1980s (Hall et al., 1999). As has been discussed, the use of heroin has continued to be associated with considerable harms. Thus, illicit heroin use has been of particular concern to the Australian community for almost half a century, yet long-term abstinence (a fundamental goal for the treatment of heroin dependence) remains to be thoroughly examined and understood.

Moreover, it is the properties of this drug which make it particularly difficult to remain abstinent from, unlike other drugs. Heroin has the second highest percentage of people who have ever used and developed dependence (Anthony et al., 1994). In addition, especially among heroin users, repeated cycles of abstinence and relapse to heroin use often occur over extended periods (Hser, Hoffman, Grella, & Anglin, 2001). Indeed, longitudinal studies spanning over 30 years have found that while a minimum of five years of heroin abstinence considerably reduces the likelihood of future relapse, a small portion can still relapse after 15 years of abstinence (Hser et al., 2001). These findings are in striking contrast to those found among individuals dependent on alcohol. Such studies have found that relapse to alcohol use is rare after abstinence has been maintained for five years (Vaillant, 2003). These findings have supported other research which has found that heroin users have been found to experience higher rates of relapse as opposed to other drugs, such as alcohol (El, El, Bashir, & Bashir, 2004). Together
this research suggests abstaining from heroin use, long-term, may prove particularly
difficult, due to its high rates of dependency. For these reasons, it is important to
examine the literature on long-term abstinence from heroin use.

Long-term abstinence from Heroin Use

The majority of studies that do examine the achievement of long-term abstinence
from heroin use, focus on describing the characteristics of this population. These data
include individuals’ previous treatment history, whether people are intravenous as
opposed to non-intravenous users of heroin, whether other illicit drugs are
simultaneously used and whether they are involved in criminal activities (Darke et al.,

These studies have found that individuals who achieve long-term abstinence do in
fact differ to those who are unsuccessful at achieving such abstinence. Individuals who
achieve long-term abstinence from heroin use are more likely to have had no previous
treatment history, less likely to have been intravenously using heroin at treatment entry,
have less criminal convictions and have a greater period between the time they first
began using drugs to the time they began injecting (Darke et al., 2005; Sheehan,
Oppenheimer & Taylor, 1993). In contrast, individuals who have not achieved long-
term abstinence are more likely to be injecting at intake to treatment, including multiple
drugs, have more criminal convictions and have a smaller period between first using
drugs and injecting (Sheehan et al., 1993). Whilst such studies provide useful
information on the demographic and treatment characteristics of those who achieve
long-term abstinence, they fail to address the more subjective factors that may be the
underlying reasons for individuals achieving long-term abstinence from heroin use.
Some limited research has examined the role of coping strategies in those individuals who have achieved long-term heroin abstinence. Such research has found that individuals who remain abstinent at 12 months follow-up make more consistent use of cognitive (positive self-affirmations), distraction (doing or thinking about something else when tempted to use) and avoidance coping strategies in comparison to the time of their treatment intake (Gossop et al., 2002). These findings can be explained through Marlatt and Gordon’s (1985) Relapse Prevention model as discussed previously. In this model implementing effective cognitive or behavioural coping responses for high-risk situations, such as avoiding drug using social networks, can decrease the likelihood of relapse. It also reduces the likelihood of future relapses as the individual experiences a sense of increased self-efficacy through their ability to cope with high-risk situations.

Older studies conducted specifically on natural recovery populations (those who cease their drug use without treatment) have found that individuals abstaining from heroin use also make use of specific coping strategies. These studies have found that individuals who naturally recover from heroin dependency utilise a variety of behavioural strategies to assist them in this process (Biernacki, 1986). These strategies have included, building new structures in one’s life, making use of social networks of family and friends for support and breaking off relationships with drug using peers (Biernacki, 1986; Peele, 1989; Stall & Biernacki, 1986). The coping strategy of stimulus control is evident in these findings, whereby individuals consciously restructure existing environments. Alongside this the use of helping relationships, which is another strategy incorporated in Prochaska and DiClemente’s (1986) model of change, is also apparent. This strategy involves individuals utilising strong support systems in their life such as friends and family, by being open and trusting about their problems (Prochaska et al.,
This strategy is seen as an important element in ensuring recovery from drug dependency and particularly in natural recovery populations (Granfield & Cloud, 1996; Prochaska et al., 1992). Overall, these findings suggest that such cognitive and behavioural coping strategies may also play an important role in assisting individuals to remain abstinent from heroin use, as found in research on cocaine use.

Certain studies have endeavoured to examine factors associated with long-term heroin abstinence that may be the underlying reasons for sustaining such abstinence. Amongst the factors most consistently identified include increased employment, enhanced social stability including little involvement with the law and enhanced mental health, such as fewer depressive symptoms (Hser et al., 2001; Sheehan et al., 1993).

Whilst these studies provide useful information on those who successfully abstain from heroin use, unlike qualitative designs, they do not directly explore individual’s reasons for long-term heroin abstinence.

One particular study by Bammer and Weekes (1994) closely examined individual’s reasons for stopping heroin use, and reasons associated with maintaining abstinence by using an in-depth qualitative design. Factors found to be important for both motivating stopping heroin use and maintaining abstinence included a change in situation or environment such as environmental relocation or the formation of a new relationship. Fear of incarceration or being caught up with the police were also common factors, as well as concern for children. Factors found to be important solely for maintaining abstinence included learning a new way of living, dealing with past personal issues, reaping the rewards of a conventional lifestyle as well as employment (Bammer & Weekes, 1994). These findings reflect those found by Waldorf and colleagues (1991) in their study of cocaine users, whereby structural supports such as
family, friendship and employment were important factors in enabling individuals to overcome cocaine dependency. However, more research is needed in this area on heroin abstinence, particularly recent studies using qualitative designs. Such research would potentially serve two functions. First, it would provide a more in-depth and comprehensive understanding of this phenomenon in heroin users and second it would determine if the factors identified in Bammer and Weekes (1994) study are still important for current abstainers from heroin use.

By examining the phenomenon of long-term abstinence in both the licit drugs of alcohol and tobacco and the illicit drugs of cocaine and heroin, a number of similarities were found. One such similarity was the importance of high-self efficacy in abstaining from these drugs long-term. As Marlatt and Gordon (1985) propose in their model on relapse prevention this may well protect against high-risk situations. Developing sober social networks was also found to be a strong predictor of long-term abstinence across alcohol, tobacco and cocaine use. Cognitive and behavioural coping strategies, particularly stimulus control, were a fundamental skill for cocaine and heroin users to avoid negative triggers and enhance abstinence. Finally, having support structures such as family and employment significantly assisted in recovery across all drugs except tobacco use.

Limitations

Of the research conducted on long-term abstinence from alcohol, tobacco, cocaine and heroin use, the following limitations were found. First, a majority of the studies reviewed included homogeneous samples. Many studies only recruited male participants, who were often Caucasian. Such samples hinder the generalisability of the findings to other populations. As such it is not known whether the mechanisms
underlying long-term abstinence from such studies translate to other genders and cultures. Second, much of the research has focused on predictor variables and their associations with long-term abstinence. Whilst such research may be useful for treatment providers, in terms of predicting those who are likely to abstain and those who are not, it does not explore directly the subjective reasons or factors for individuals achieving long-term abstinence. Third, methodologically weak designs used in research conducted on self-help programs such as AA, limit the ability to determine the true efficacy of these programs in facilitating long-term abstinence. In particular, such studies have failed to control for the effects of other confounding variables which may have likely accounted for the modest but positive findings. In addition, absence of biological assays to assess drug use outcomes and inclusion of self-reported drug use assessments may overestimate the efficacy of such self-help groups. Fourth, most of the research conducted on long-term heroin abstinence has focused on describing the demographic and treatment characteristics of those who are likely to achieve such abstinence. As such there is a significant lack of recent research examining individuals' subjective reasons and motivations for achieving long-term abstinence from heroin use.

**Future Research**

More thorough and controlled research should be conducted on the efficacy of self-help groups such as AA and CA and their role in achieving long-term abstinence. This would potentially determine, the true effectiveness of such groups in aiding long-term abstinence and may possibly reveal their method of action. Future research should also examine cultural and gender differences in achieving long-term abstinence. This may provide vital information for treatment providers when dealing with diverse population groups. Most importantly, more qualitative research is needed examining
individuals’ subjective reasons or motivations for achieving long-term abstinence. However, such qualitative explorations are needed the most in the area of heroin abstinence. Particularly, this research needs to explore reasons or motivators for achieving long-term heroin abstinence in current abstainers. Research in this area would potentially provide a more solid and complete understanding of this phenomenon in those who abstain from heroin use. This knowledge may help health professionals formulate supports and programs for heroin users that assist long-term abstinence and prevent potential relapse episodes.

**Conclusion**

From examining the literature on long-term abstinence from alcohol, tobacco, cocaine and particularly heroin use, the following conclusions can be made. First, it can be seen that numerous harms are associated with being dependent on heroin use. Whilst much research has focused on those who die from heroin use and those who cycle through periods of dependence and abstinence during treatment, little has focused on those who manage to successfully abstain from heroin use over the long-term. Second, although Prochaska and DiClemente’s (1986) Stages of Change model has been devised to describe and understand how individuals change addictive behaviours, limited research has been conducted on the final stage of this model, being maintenance. Third, in reviewing the literature on long-term abstinence from alcohol, tobacco, cocaine and heroin use various similarities were found. Self-efficacy, developing sober social networks, having support structures in one’s life such as family and employment and utilising cognitive and behavioural coping strategies were found to be key factors that aided in long-term abstinence across more than one drug type. Fourth, in comparison to the literature found on alcohol, tobacco and cocaine use, limited research exists on long-
term abstinence from heroin use. This is despite the many harms associated with heroin use and its high rates of relapse. What limited research there is, largely fails to explore current heroin abstainers and their reasons or motivations for achieving long-term abstinence.

The purpose of this paper was to review the literature on long-term abstinence, from a psychological perspective, specifically examining the research literature on long-term abstinence from heroin use. Within this paper it can be seen that a wide body of literature exists on long-term abstinence from alcohol, tobacco and also on cocaine use. In contrast, a dearth of literature was found on long-term abstinence from heroin use, particularly qualitative explorations examining individual’s subjective reasons for abstaining from heroin use long-term. Such research would potentially provide a much needed understanding of this phenomenon in heroin users as it has been highlighted throughout this paper.
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Life Beyond Heroin: An Exploration of the Motivations for Long-term Heroin Abstinence

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Edith Cowan University
Abstract

Dependency upon heroin is a pervasive and long-lasting affliction which is associated with considerable harms and risks. It has been estimated that over a 20-year period only one third of all dependent heroin users will become abstinent, leaving that part of their life behind. Despite this, limited research has endeavoured to understand the motivating factors which support an individual to give up and abstain from heroin use, long-term. This qualitative study therefore aimed to explore the motivations for individual’s long-term heroin abstinence using a social constructivist framework. In order to provide a holistic account of this phenomenon and the processes involved in achieving long-term abstinence, participants’ journey with heroin use was also explored. Seven participants, five male and two females, who had abstained from heroin use for a period of at least 2 years were interviewed using an in-depth interview schedule. Using content analysis, six themes emerged that were central to participants journey with heroin use and the achievement of long-term heroin abstinence: ‘experience of heroin use’; ‘developing a dependency upon heroin’; ‘experiencing the impact of heroin use’; ‘realisation of addiction’; ‘decisions to stop heroin use’; ‘achieving long-term abstinence’. The research found that participants constructed their motivations for long-term abstinence in unique and diverse ways. Motivations for long-term abstinence included employment, family or commitment to children, removing oneself from drug using environments, treatment, personal motivators and wanting to lead a normal life. The study has implications for treatment providers and health professionals regarding the improvement of treatment services and the promotion of long-term abstinence.

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Life Beyond Heroin: An Exploration of the Motivations for Long-term Heroin Abstinence

It has been estimated that between 1-4 percent of heroin users die each year (Darke & Zador, 1996; Davoli et al., 1997; Hastrup, 1999; Sporer, 1999). The mortality rate of a person dependent upon heroin is 13 times that of an individual who does not use heroin and who is the same age. Deaths associated with heroin use result from overdose, contracting blood-borne viruses (BBV’s), violence and alcohol-related causes (Hall, Lynskey, & Degenhard, 1999). Overdose remains one of the major harms associated with dependent heroin use (Ryder, Walker, & Salmon, 2006). Indeed, in 2005, 357 deaths were attributed to accidental overdose in Australia (National Drug and Alcohol Research Centre, 2007).

Perhaps more concerning than the harms associated with the use of heroin is the difficulty individuals experience in overcoming a heroin dependency. Indeed, unlike other drugs, the properties of heroin make it particularly difficult to remain abstinent. Heroin has the second highest percentage in terms of people who have ever used and developed dependence (Anthony, Warner, & Kessler, 1994). This is higher than rates for cocaine, alcohol and stimulants such as methamphetamine (Anthony et al., 1994). Heroin users have also been found to experience increased rates of relapse as opposed to other drugs, such as alcohol (El, El, Bashir, & Bashir, 2004). In addition, repeated cycles of abstinence and relapse to heroin use often occur over extended periods, making heroin dependence a pervasive and long-lasting affliction (Hser, Hoffman, Grella, & Anglin, 2001). Together this research suggests abstaining from heroin use, long-term, may prove particularly difficult.
Due to the difficulty associated with long-term abstinence from heroin use, it is important to look carefully at what happens to heroin users over time. It has been found that over a 20-year period, one of three outcomes is likely to occur for a heroin-dependent person (Hall et al., 1999). One-third will alternate between periods of using heroin and periods of abstinence, with such abstinence usually occurring when the individual is in treatment or in prison. One-third will become abstinent, meaning they will have ceased all use of heroin, leaving that part of their life behind (Hall et al., 1999). This group can be classified as long-term abstainers. And one-third will die. Research conducted on these three groups has primarily focused on those who die, and those who cycle between periods of using heroin and periods of abstinence, with little research on those who achieve long-term abstinence.

In the alcohol and other drug field (AOD) long-term abstinence from drug use has been defined as remaining abstinent (free from a particular drug) for a sustained period after a definite quit date (Hughes, Keely, & Naud, 2004). Although the AOD field has had some difference of opinion on the defined time period of long-term abstinence, it is generally agreed that 12 to 18 months abstinence from drug use is necessary for it to be considered long-term (Gossop, Stewart, Browne, & Marsden, 2002; Siegal, Li, & Rapp, 2002). This differs from short-term abstinence which is defined as remaining abstinent from a drug for a period of 1-4 weeks (Hughes et al., 2004). Whilst effective treatment for alcohol and other drug use has been measured by individuals' achievements of long-term abstinence and improved quality of life in areas such as employment, health, legal and psychological functioning (Siegal et al., 2002), little is known about how it is actually achieved, particularly in heroin users.
One of the most prominent models in the AOD field that has been developed in an attempt to describe and understand how individuals change an addictive behaviour is Prochaska and DiClemente's (1986) transtheoretical model of behaviour change. This model incorporates two dimensions. The first dimension, known as the Stages of Change describes how individuals move through a series of stages when trying to change an addictive behaviour. These stages signify an individual's readiness to change and include five major classifications; precontemplation, contemplation, preparation, action and maintenance with relapse considered an integral part of the process (see Appendix A) (Prochaska, DiClemente, & Norcross, 1992). The second dimension, referred to as the Processes of Change describes the cognitive and behavioural processes required to move from one stage to the next (see Appendix B). Research conducted on the Stages of Change has predominantly focused on the stages from precontemplation to action, little with research examining maintenance (Allsop, 1996; DiClemente et al., 1991; Isenhart, 1997). Whilst some research has examined the stage of maintenance in relation to the processes involved in attaining it, this research has almost exclusively looked at smoking cessation and weight loss behaviour change (DiClemente et al., 1991; Prochaska, Norcross, Fowler, Follick, & Abrams, 1992). Consequently, there is a lack of research examining long-term abstinence from heroin use even in such prominent models as the transtheoretical model of behaviour change.

Of those that have investigated the phenomenon of long-term abstinence in the AOD field, the majority has been conducted primarily on licit drugs, such as alcohol and tobacco. These investigations have provided some insight into understanding how long-term abstinence from drug use is achieved.
Alcohol and Tobacco Use

The research which has examined long-term abstinence from alcohol and tobacco use predominantly focuses on the predictors of long-term abstinence. Factors found to consistently predict long-term abstinence from alcohol use include an individual’s degree of self-efficacy (Goldbeck, Myatt, & Aitchison, 1996; Moos & Moos, 2006; Vielva & Iraurgi, 2001), previous length of abstinence achieved in past quit attempts (Vielva & Iraurgi, 2001), and the development of sober social networks (Vaillant, 1988). Predictors of long-term abstinence from tobacco use identified in the AOD literature have included level of pretreatment motivation (Barnes, Vulcano, & Greaves, 1985; Jackson, Stapleton, Russell, & Merriman, 1986; Richmond, Austin, & Webster, 1988; Richmond, Kehoe, & Webster, 1993; Secker-Walker, Flynn, Solomon, Vacek, & Bronson, 1990) socio-economic status (Richmond et al., 1993; Siahpush & Carlin, 2006) and synonymous with the literature on alcohol use, level of self-efficacy and non-smoking social networks play a significant role in predicting long-term abstinence from smoking (Boardman, Catley, Mayo, & Ahluwalia, 2005; Chang et al., 2006; Gulliver, Hughes, Solomon, & Dey, 1995; Gwaltney, Shiffman, Balabanis, & Paty, 2005; Gwaltney et al., 2001; Panday, Reddy, Ruiter, Bergstrom, & de Vries, 2005; Richmond et al., 1993).

Much of the research conducted on long-term abstinence from drug use has primarily focused on licit drugs. In comparison, long-term abstinence from illicit drugs, including cocaine and heroin use has received less attention in the AOD field.

Cocaine Use

Research examining long-term abstinence from cocaine use has also focused predominantly on predictors. Greater social integration, referred to as an individual’s
amount and frequency of social contacts and interpersonal relationships (Havassy, Wasserman, & Hall, 1995), level of perceived emotional support (Havassy et al., 1995; Mckay, Merikle, Mulvaney, Weiss, & Koppenhaver, 2001), having abstinent social networks (Havassy et al., 1995) and treatment retention (Galney, Wells, & Hawkins, 1993; Rapp, Siegal, Li, & Saha, 1998; Simpson, Joe, Fletcher, Hubbard, & Anglin, 1999) have been identified as important factors. These findings on the importance of abstinent social networks in abstaining from cocaine use, long-term, reflect those on alcohol and tobacco use.

One prominent theme identified in qualitative research on cocaine abstinence is individuals having a “stake in conventional life” (Waldorf, Reinarman, & Murphy, 1991, p. 233). This conventional life has been described as a “setting that includes life chances,” one which allows individuals to maintain an ordinary every day life by having the aid of structural supports (Waldorf et al., 1991, p. 233). Waldorf and colleagues (1991) found in their longitudinal study of cocaine users that individuals with such structural supports in their lives such as family, friendship networks, jobs and other community involvements were more easily able to leave their heavy cocaine use behind than those without such structural supports (Waldorf et al., 1991). Such findings have been replicated in more recent research on cocaine abstinence (Siegal et al., 2002) and highlight the importance of the social context in abstaining from cocaine.

Whilst some literature exists on long-term abstinence from cocaine use even less has looked at long-term abstinence from heroin use.

*Heroin Use*

The majority of studies that examine the achievement of long-term abstinence from heroin use, focus on describing the characteristics of this population. This data
includes individuals’ previous treatment history, whether people are intravenous or non-intravenous users of heroin, whether other illicit drugs are simultaneously used and whether they are involved in criminal activities (Darke et al., 2005; Hser et al., 2001; Sheehan, Oppenheimer, & Taylor, 1993). Whilst such studies provide useful information on the demographic and treatment characteristics of those who achieve long-term abstinence, they fail to address the more subjective factors that may be the underlying reasons for individuals achieving long-term abstinence from heroin use.

Gossop and colleagues (2002) examined the role of coping strategies in individuals who achieved long-term heroin abstinence and those that relapsed. In this study cognitive strategies (positive self affirmations), distraction strategies (doing or thinking about something else when tempted to use) and avoidance coping strategies (staying away from drug using networks) were explored. It was found that individuals who remained abstinent at 12 months follow-up made more consistent use of cognitive, distraction and avoidance coping strategies in comparison to the time of their treatment intake than those who relapsed (Gossop et al., 2002). These findings suggest coping strategies may play a pivotal role in achieving long-term abstinence from heroin use.

Certain studies have endeavoured to examine factors associated with long-term heroin abstinence that may be the underlying reasons for sustaining such abstinence. Amongst the factors most consistently identified include increased employment, enhanced social stability including little involvement with the law and enhanced mental health, such as fewer depressive symptoms (Hser et al., 2001; Sheehan et al., 1993). Whilst these studies provide useful information on those who successfully abstain from heroin use, unlike qualitative designs, they do not directly explore an individual’s reasons for long-term heroin abstinence.
The importance of social contexts in abstaining from heroin use has been emphasised by Biernacki (1986) in a qualitative study conducted on naturally recovered heroin users (those who cease their drug use without treatment). Biernacki revealed how dependent heroin users successfully stopped their heroin use and became abstinent from heroin use without treatment. For most participants the resolution to stop using heroin was preceded by either an accumulation of negative experiences coupled with a significant and disturbing personal event or hitting 'rock bottom' defined as “a highly dramatic, emotionally loaded life situation” (1986, p. 43). Biernacki also found that individuals who naturally recovered from dependent heroin use employed a variety of strategies that drew on their surrounding social context. These strategies included, building new structures in one’s life, making use of social networks of family and friends for support, breaking off relationships or removing oneself from drug using networks, often through geographic relocation.

In a more recent study, Bammer and Weekes (1994) examined individuals’ reasons for ceasing heroin use, as well as reasons for maintaining abstinence in an in-depth qualitative study of 18 Australians. Change was found to be a complex process, often involving more than one factor. ‘Hitting rock bottom’, experiencing or witnessing a crisis such as an overdose, ‘maturing out’ or becoming sick of the lifestyle were important factors for primarily motivating change. Factors found to be important for both stopping heroin use and maintaining abstinence included a change in situation or environment such as geographic relocation or the formation of a new relationship. Fear of incarceration or being caught up with the police were also common factors, as well as concern for children. In addition, Bammer and Weekes (1994) found that certain factors were important for maintaining abstinence. These included learning a new way of
living, dealing with past personal issues, reaping the rewards of a conventional lifestyle as well as employment.

With the exception of the few exploratory studies conducted on long-term heroin abstinence, limited qualitative research has endeavoured to understand the factors which support an individual to give up and abstain from heroin use, long-term. Understanding these factors or motivations may prove useful in assisting individuals to overcome heroin dependency and prevent many of its associated harms. Potentially for this to occur the phenomenon of long-term abstinence from heroin use needs to be explored.

This qualitative study will explore the motivations for people’s long-term heroin abstinence. The main research question for this research is: ‘How do individuals construct their motivations for long-term heroin abstinence?’

Method

Research Design

An in-depth qualitative design was used in order to elicit an understanding of participants’ motivations for long-term heroin abstinence and to explore the complexity of this phenomenon (Liamputtong & Ezzy, 2005). This study was set within a social constructivist framework. Social constructivists posit that “meaning is not discovered but constructed” through an individual’s interaction with the world in which they are engaged (Crotty, 1998, p. 42). Thus, many people could experience the same event but would each construct a different meaning from the experience. Extending from this point, constructivists argue that reality is not one truth, it is relative and dependent on the individual’s unique experiences and interpretations (Gergen, 1999). These interpretations are shaped by social, cultural, political and historical norms (Gergen, 1999).
Participants

Seven participants (five male, two female) were recruited from the Perth metropolitan area in Western Australia. Ages ranged from 27 to 34 years. Due to the amount of information-rich cases that were obtained, those that are “rich enough and cover enough of the dimensions” explored in the study, seven participants were found to be sufficient by the researcher in the present study (Liamputtong & Ezzy, 2005, p. 49).

Two sampling methods were used to recruit participants. The first involved “snowball sampling”, where initially, a limited number of participants with the appropriate characteristics were recruited through personal contacts. A referral chain was created from the personal contacts of participants and associates which increased the sample size (Liamputtong & Ezzy, 2005). Such sampling methods are beneficial when exploring hidden populations, such as individuals who have previously used heroin (Biernacki, 1986; Liamputtong & Ezzy, 2005). The second method of recruitment employed a volunteer sampling method once, the initial referral chain had been exhausted. This method requested people to volunteer to participate through the use of advertising and the distribution of flyers (Liamputtong & Ezzy, 2005). This process is particularly useful in identifying potential participants who are difficult to contact directly, such as those who have abstained from heroin use long-term (Liamputtong & Ezzy, 2005).

The present study aimed to recruit participants who had become long-term abstainers from dependent heroin use. To ensure that participants had previously been dependent on heroin, participants met the study’s criteria for dependence. Dependence was defined as daily use of heroin for a period of at least 6 months (Bammer & Weekes, 1994). To be eligible as a long-term abstainer from heroin, participants had to be
abstinent from heroin use for a period of at least 2 years as abstinence was defined as no use for at least 2 years (Gossop et al., 2002; Siegal et al., 2002). The shortest period of abstinence from heroin use by a respondent was 3 years, and the longest period was 7 years. The mean length of abstinence for the entire sample was 5 years. The researcher did not adhere strictly to the study’s criteria. One respondent had only been a daily user for 4 months; and whilst all participants had ceased heroin use, one participant was still on methadone maintenance treatment (MMT), a synthetic opiate drug, at the time of interviewing.

Instrument

An interview schedule of 8 open-ended questions was used to elicit information about an individual’s experience with heroin use and specifically his/her motivations for long-term abstinence (Appendix C). In order to provide a holistic account of this phenomenon, questions pertaining to participants’ initial use of heroin, dependency on heroin, the impact of this on life aspects, realisations of when it became problematic and factors important in the decision to stop heroin were also asked. The questions were derived from the literature examining long-term abstinence from drug use, both in naturally recovered and treated populations (Biernacki, 1986; Vaillant, 1995). Examples of interview questions included “What do you think was the reason/reasons that you decided to stop using heroin in this final attempt?” “What do you think has motivated you to stay off heroin for this long period of time?” These questions were followed by probes such as “Are there specific motivators or factors that keep you on this track?”

In order to determine the flow and clarity of the interview questions (Breakwell, 1995), the questions were trialed with a female aged 56 years who had abstained from tobacco use for a period of 10 years. As a result, questions that were double-barrelled
were simplified to singular questions and potential probes were added to the questions. For example the question asking “How did heroin impact on your life?” was followed up by probes such as “Did it impact on your relationships with family or friends?”

Procedure

Interviews were conducted in participants’ households and a pre-interview was carried out to explain the nature of the study and ensure the 2 year abstinence requirement for the study. Participants were provided with an information sheet prior to commencing the study outlining the nature of the study including issues concerning confidentiality, the rationale for the study and contact details of the researcher in case of any further questions (Appendix D). Attached to the information sheet, was a list of counselling and alcohol and other drug services for participants should they be required (Appendix E). Prior to the commencement of the interview participants completed a consent form (Appendix F) and were assured of confidentiality and anonymity. This was particularly important in the current sample of participants considering the sensitive nature of heroin use. During the interview the researcher used a funneling approach (Smith, 1995) when salient issues were raised by participants which were particularly important to the experience of long-term abstinence. This approach allowed for the researcher to obtain specific and at times unforeseen information by funneling broader questions to more specific questions. Following the interview, participants were debriefed. This allowed for participants to raise any concerns about the interview that they may have experienced and to clarify any issues. Immediately following each of the 7 interviews, brief notes were made in a research journal including participants’ comments and reflections by the researcher. The notes recorded in the journal were used to assist in analysis by further defining responses to interview questions. All interviews
were audio-taped and averaged 60 minutes in duration.

Data Analysis

Following the interviews, data were transcribed verbatim to ensure accuracy of descriptions for analysis. Data were analysed using the technique of content analysis. Content analysis primarily "involves the identification of codes prior to searching for these in the data" (Liamputtong & Ezzy, 2005, p. 259). Using content analysis, categories are allowed to emerge from the data. Units of analysis can include words, themes, characters (persons) or concepts (Berg, 2001). Sub-themes were initially identified using a question ordered matrix (Appendix G) (Miles & Huberman, 1994). The matrix primarily involved the ordering of research questions into one column and participants responses to these questions in another. One final column was designated for the sub-themes derived from participants' responses to each question. The sub-themes that emerged from the data were grouped together with other similar themes. This allowed for the generation of relevant master themes through a process of memoing and note taking.

In an attempt to prevent researcher bias and misrepresentation of the data, a co-analyst, independent of the research, cross-checked the final list of themes and subthemes (Miles & Huberman, 1994). Through a process of consultation and negotiation, several of the initial themes and sub-themes were combined. Finally, through data-reduction, six major themes, and several sub-themes, were identified (Miles & Huberman, 1994).

Rigour is needed as a final method of ensuring authentication of the data (Grbich, 1999). This method involves converging, completing and cross-checking the data (Grbich, 1999). First, in order to uncover any inconsistencies, the researcher compared
the journal notes written immediately after each interview with the re-read transcribed data. Second, member checking was conducted by presenting a summary version of transcripts to a small number of participants (Silverman, 1993). This was to verify the themes and sub-themes with participants, and to ensure accurate interpretation of the findings by the researcher (Silverman, 1993). As a final measure, themes and sub-themes derived from the data were checked by a colleague to corroborate the findings (Patton, 1990).

Findings and Interpretations

The aim of this study was to explore the experiences of individuals who have abstained from heroin use over a long period of time. Six major themes were derived from participants’ responses during analysis (see Table 1) that reflected their journey with heroin use and experience with long-term abstinence: experience of heroin use, developing a dependency upon heroin, experiencing the impact of heroin use, realisation of addiction, decision to stop heroin use and achieving long-term abstinence. Also listed are the sub-themes which emerged as salient within each of the main themes.

Table 1. Themes and Sub-themes related to the experience of heroin use

<table>
<thead>
<tr>
<th>Main themes</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience of heroin use</td>
<td>First experience with heroin use</td>
</tr>
<tr>
<td>-</td>
<td>Influence of media</td>
</tr>
<tr>
<td>-</td>
<td>Social (Recreational)</td>
</tr>
<tr>
<td>-</td>
<td>Personal</td>
</tr>
<tr>
<td>Developing a dependency upon heroin</td>
<td>Affordability and accessibility</td>
</tr>
<tr>
<td>-</td>
<td>Social networks</td>
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<tr>
<td>-</td>
<td>Awareness</td>
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<tr>
<td>-</td>
<td>Escapism</td>
</tr>
<tr>
<td>Experiencing the impact of heroin use</td>
<td>Health</td>
</tr>
<tr>
<td>-</td>
<td>Personality and interpersonal functioning</td>
</tr>
<tr>
<td>-</td>
<td>Economic implications</td>
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<tr>
<td>-</td>
<td>Family relationships</td>
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</tbody>
</table>
Table 1. (continued)

<table>
<thead>
<tr>
<th>Main Themes</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realisation of addiction</td>
<td>Financial difficulties</td>
</tr>
<tr>
<td></td>
<td>Family issues</td>
</tr>
<tr>
<td></td>
<td>Experiencing a crisis/ Hitting rock bottom</td>
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<tr>
<td></td>
<td>Becoming tired of the lifestyle</td>
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<td></td>
<td>Relapse</td>
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<td></td>
<td>Personal readiness</td>
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<td></td>
<td>Alternative drugs</td>
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<tr>
<td></td>
<td>Influence of using social networks</td>
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<td></td>
<td>Treatment</td>
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<tr>
<td>Decisions to stop heroin use</td>
<td>Parenthood</td>
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<tr>
<td></td>
<td>Heroin drought</td>
</tr>
<tr>
<td></td>
<td>Legal issues</td>
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<tr>
<td></td>
<td>Personal identity &amp; personal growth</td>
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<tr>
<td></td>
<td>‘Maturing out’</td>
</tr>
<tr>
<td>Achieving long-term abstinence</td>
<td>Employment</td>
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<tr>
<td></td>
<td>Family/ Commitment to children</td>
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<tr>
<td></td>
<td>Removal from drug using environments</td>
</tr>
<tr>
<td></td>
<td>Treatment</td>
</tr>
<tr>
<td></td>
<td>Personal motivators</td>
</tr>
<tr>
<td></td>
<td>Wanting a normal life</td>
</tr>
</tbody>
</table>

**Experience of heroin use**

Most participants commented that their first experience with heroin use had been negative. Some participants such as P1 reported having experienced a physically aversive reaction to heroin:

*I literally felt like I had been poisoned and I spent the whole night vomiting up, like I did sort of get a good feeling from it but the bad feeling sort of way override that.*

A number of factors were identified by participants that were influential in their first use of heroin. The influence of the media in glorifying heroin use played an important role in participants first trying heroin use. As Furst and colleagues (2004) stated, it was the combination of motion pictures, deaths of rock stars and the arrests of
movie stars that lead to increased media attention and the “subsequent glamorization and notoriety of heroin” (p. 439). P4 commented on the influence of heroin’s glamorization:

you had movies coming out like Trainspotting and you know people in your favourite bands and that were on heroin so...it was in a sense being glorified and by doing it you kind of felt like you know you were...part of sort of something that was special or fun.

Social networks were important in initially using heroin. The influence of close friends using heroin was identified by almost all participants as important in first experimenting with heroin use. Harling (2007) also found that individuals were introduced to illicit drug use by someone who was well known to them such as close friends or family members. Social gatherings were also a salient reason for using heroin recreationally or on weekends. Such gatherings often involved only a close group of friends and were described by P4 as an intimate shared experience. In such situations heroin brought about feelings of connectedness between one another, as P5 stated:

it was just so loving, a beautiful loving thing... it was like when you’re on mushrooms or something you’re all together, and you’re all connected...

A number of participants also commented on the more personal reasons for initially using heroin. Nearly all participants commented on the need to experiment with heroin. This supports previous research that has found curiosity is one of the most important reasons for initially trying heroin (Kaufman, Chitwood, Comerford, & Koo, 2004). Participants also commented on the positive and therapeutic effects of using heroin, such as feelings of relaxation and euphoria. For some participants heroin was also used as a way to escape from stress and pain. As P2 stated:
I had a lot more going on in my life stress wise and stuff like that. And it was just a good way to escape like for the time I was on it. I didn’t have to worry about anything else sort of thing... just numbed all the pain...

**Developing a dependency upon heroin**

Prior to participants’ heroin use becoming a dependency, nearly all had used heroin socially or recreationally for a period of at least 6 months, some using heroin for up to 5 years before it becoming daily use. This is consistent with the literature conducted on heroin use that has found dependency rarely occurs in advance of 6 months after first use (Bennett, 1986; Coomber & Sutton, 2006). The transition from occasional use to regular use was influenced by a number of factors identified by participants.

Being in countries where heroin was easily accessible and relatively affordable was identified by two participants. Both P1 and P4 commented on the availability of heroin in other countries being a strong reason for their increase in heroin use. As P1 stated:

*I went to [Country] and it escalated there... it was very cheap and affordable there and there was lots of it. It was very easily accessible. Everyone in the market sold it and they would ask you if you wanted it, you didn’t have to go chasing it...*

For others, relocating to areas where heroin dealers were situated meant heroin was readily available. As such participants’ heroin use increased considerably after moving to areas where it was easy to obtain. Residing in areas where heroin was already easily available made it easy for other participants to use heroin on a regular basis.

Being able to afford to use more heroin was also influenced by whether participants had well paid jobs. For some, having a steady influx of money from paid work meant buying heroin more regularly was relatively easy. For those without paid work,
alternative money making strategies were a way in which regular heroin use could be supported. P5 commented on growing and selling his own hydroponic production of marijuana to close friends as a way in which heroin could be purchased more regularly.

Heroin using social networks also helped each other out to purchase larger quantities of heroin. This also meant covering each other to buy heroin, until the other had received money from dole payments or other sources. For P5 ‘covering’ was a way in which he and his friends helped each other out:

> hey man I’ll help you out until you know dole day it ain’t no probs you know...

For some participants heroin use increased as a result of being shouted by friends. This was particularly the case for P6 as she stated that she was always shouted by friends:

> I did have a problem with it, cause it was always given to me. I have always been shouted always, always ...

Heroin use also increased if participants had contact with those in high places namely ‘head honchos’. This meant, they were able to access heroin anywhere and anytime they wanted. For others, getting involved in relationships with those who were also using socially, led to an increase in heroin use. This was particularly the case for P7:

> then I started a relationship with a girl that also used it socially and then just me and her together all the time and it just snowballed until it became a daily ritual... the social becomes personal you know, it was a different thing totally.

The lack of awareness of recreational heroin use becoming regular heroin use was identified by some participants. For P2 becoming dependent on heroin was something that he was not consciously aware of:

> suddenly it was once every day and then suddenly it was 3 or 4 times a day... by the time I realised I had a problem it was already too late the problem was already there.
For P3, his use of heroin increased in order to escape from the hurt of a relationship breakdown:

*my best mate... took off with my girlfriend around Australia... so I think that's when I started getting into hard, hard type thing. So I think I was just trying, when I first started getting heavy I was probably yeah just trying to avoid dealing with the shit.*

**Experiencing the impact of heroin use**

The impact of participants regular heroin use was widespread, affecting numerous aspects of their life functioning. Regular heroin use had consequences for participant’s health. A number of participants commented on the impact that their heroin use had on loosing a substantial amount of weight. This was described by P4:

*I remember coming back from ___________ (country) and Mum looked at me and just thought I looked like death warmed up you know I probably lost 10 kilos or something yeah and um very thin and very dark under the eyes.*

For P6 losing weight was a reinforcing reason to continue using heroin, as she was able to loose weight quickly and easily compared with alternative methods:

*cause I was like overweight I really liked that cause I lost heaps. I was like 85 kilo’s and I lost, I got down to, I was really thin. So what I thought looked good, actually looked revolting... but it was just easier than getting up and going for a walk...*

For some participants, their regular heroin use had also led to them contracting the Hepatitis C Virus (HCV). Research conducted on individuals’ experience with Hepatitis C suggests that upon receiving HCV diagnosis, individuals are overwhelmed with an awareness of not only the stigma associated with having an infectious disease but also the association between injecting drug use and HCV (Faye & Irurita, 2003). This finding was supported in the current study as the stigma surrounding HCV had made it particularly difficult for P1 to deal with at the time she found it:
somewhere along the track, I'm not sure where, I caught Hepatitis C.

[How was that for you?]

Yeah that's been a huge head mess up. When I first found out I felt like I was a leper and at that point I felt like I had to tell everyone that I was around. But I know better now. Cause ... I know how it's spread and I know that people don't need to know about it. But um yeah, that had a huge impact on me getting that.

The impact of regular heroin use on participant’s personality and interpersonal functioning was a salient theme. For some, heroin dependency affected their ability to trust others:

Well I became a lot more paranoid and just less trust worthy towards people. Just like it felt very hard to relate to people who didn’t use... I didn’t take much in what people told me and that as being true (P2)

A number of participants had become more reclusive and antisocial whilst using heroin, particularly from loved ones such as family. This retreat was not however from their immediate social networks that were using heroin. This supports previous research whereby the friendship networks of heroin and cocaine users often reduce in size and become less diverse due to individuals seeking other users like themselves (Frey et al., 1995; Liebow et al., 1995). For other participants maintaining friendships with non-using networks had become a distant priority. P7 commented on cutting himself off from his non-using friends, as a result of becoming consumed with the heroin using life:

you cut yourself off from a lot of people as well because all your doin, you live in your own little heroin life you know so... that’s your first thought. Once you’ve got your fix well then yeah then you know if your not sort of working on getting your next one or whatever then you might see friends...

Some participants also commented on the impact of heroin use on their emotional well-being, the way in which it ‘blanketed’ painful feelings and emotions and made them incapable of coping with those feelings when it was not there. This was illustrated by P1’s experience with heroin use:
when you’ve been on it for so long your emotions are so raw when your not on it. You just feel like you are stripped of everything and you just feel like crying all the time...

[And so you don’t know how to deal with those emotions?]
I guess you don’t, well you haven’t for so long, because you’ve just blanketed it for ages, well for years for me...and you don’t know how to cope with your own feelings...

Regular heroin use also had economic implications for participants. For three participants using heroin regularly impacted on their ability to work and hold down jobs. For P3 heroin use had a ripple effect in leading to his financial difficulties. Getting into financial debt had resulted in arguments with his family. As a result of this, P3 left working for his family and with no source of income began stealing off them. P1 commented on the struggle to hold down the jobs she had as a result of becoming unreliable or on occasion turning up to work ‘stoned’. P2 described how the lifestyle associated with heroin use made it difficult to hold down a job:

*I never worked the whole time cause I couldn’t hold down a job cause I lived weird hours. Like when most people would be sleeping I would be awake sort of thing trying to get money.*

Other participants, like P7, managed to maintain full-time work on a regular basis. For P7 maintaining full-time work was a way in which his heroin use could be sustained without resorting to other methods of income. In this way P7’s heroin use became a daily expenditure that was carefully budgeted for out of every pay check.

*Well for me...I always worked as a________, I always had a job and I just budgeted what I earned to you know to the point where I’d have it twice a day, in the morning and at night and I just budgeted my money for that whole week...*

One particularly common theme identified by all participants was the effect that their heroin use had on family relationships. Whilst some participants had still remained in contact with family members, the dynamics of their relationships with family
members had changed substantially. P2 commented on the loss of family trust as a result of his heroin use:

> I still seen them, but there was just a total different vibe to my family set up. Whereas I knew as soon as I wasn’t around, people were talking about it. When I did come to visit and that I knew as I left people would be checking their purses and making sure that I hadn’t knocked anything off from em.

For other participants heroin use had caused them to retreat from family members. For some participants this was so family members wouldn’t find out about their heroin use. Other participants distanced themselves so loved ones wouldn’t worry about them or see them ‘wasted’. Becoming consumed with the heroin life was the reason for P4’s retreat:

> I think when you’re using, you become selfish you know whether you like it or not and I guess your main priority is yourself and getting on and you know to think of like your relationship with your parents and how that’s going is just kind of a distant priority, which is really sad but that’s just the way it is.

**Realisation of addiction**

The first conscious realisation that participants’ heroin dependency had become problematic was influenced by a number of factors.

Experiencing financial difficulties was the first realisation for a number of participants. Such difficulties included running out of things to sell at the hock shop and getting into debt after stopping paid employment. For P7 this realisation occurred after finding it increasingly difficult to maintain his addiction on the money he was making:

> it got to the point of where...I just couldn’t handle... how hard it was to maintain that habit on the money I was making, you know it just wore me out it...

For others, family issues that arose as a result of heroin use led to their first realisation. For P2 being faced with the possibility of not seeing his nephew as a result of his heroin use was the first ‘wake up’ call:
Yeah I'd say before my nephew was born. Basically my sister told me straight out that if I didn't clean up my act I'd never see my nephew... So that was basically the first wake up

Findings by Biernacki (1986) and Bammer and Weeks (1994) indicated that when heroin dependent individuals experienced a crisis of some sort such as an overdose this resulted in a decision to stop heroin use. For the participants in the current study having experienced a crisis, such as the death of a loved one, often had the opposite effect to those in Bammer and Weekes (1994) and Biernacki's (1986) study. Despite an initial reality check, the pain resulting from these loses often led to an increase in heroin use, rather than a resolution to stop. For P1, up until that time, using heroin was her only way of coping. Consequently after the death of two close friends from overdoses increasing her use to cope with the grief and loss she was feeling was her natural response. For P4, after a short time away from heroin, the suicide of a close friend resulted in him taking up heroin use again as a way to cope with the grief. For P2 experiencing the loss of a friend to an overdose, resulted in using heroin more heavily than ever before despite it initially 'hitting home':

Whereas when _____ died that was it... finally it hit home, someone that I cared about who was close to me had died... But that also in a way made it worse because I used even more after he died. Because I felt so bad about it that the only way I knew to escape from it was to use heroin.... I'd say that would be about the worst period of my life sort of thing. As far as using and that.

For P6 the resolution to stop was only triggered after she had experienced a series of crises that immediately impacted on her:

But when it happened to me, like when shit hit the fan and I got my dose... that's when I realised you know so the bad had to happen to me, I could see it all happening around me but your so you know you are selfish you know you don't care too much to stop... you need to get hit by a train or something... before I did
you know I had a boyfriend hang himself out the back and I nearly lost my child and you know like just with welfare...

This experience reflects Biernacki's (1986) notion of hitting rock bottom, whereby a subjective state of reaching the lowest point in one's life leads to a resolution to stop heroin use.

Becoming tired of the lifestyle associated with heroin use was a realisation for some participants. For P4 this realisation came after becoming fed up with relying on heroin to feel normal:

*I was just fed up with um dealing with the absolute fear and that of waking up and knowing that I had to score to feel normal you know.*

Having experienced these realisations did not necessarily lead to participants successfully leaving their heroin use behind. For nearly all participants numerous attempts were made to give up heroin use before they were successful. Consequently, relapse was a common occurrence. These findings support Prochaska, DiClemente, and Norcross's (1992) transtheoretical model of behaviour change whereby relapse is considered "the rule rather than the exception with addictions" (p. 1106).

One related theme to relapse identified by participants in their attempts to give up heroin use was their personal readiness to change. For some participants, failed attempts to stop heroin use were often a result of not being ready to change. This reflected Prochaska and DiClemente's (1986) precontemplation stage, whereby individuals have no intention to change their behaviour in the foreseeable future. In such cases attempts to change were often made for the benefit of family and friends rather than for the participants themselves. Other participants commented on being in a state of ambivalence about changing whilst they were using heroin. This is also referred to as being in the Contemplation stage of readiness to change (Prochaska & DiClemente,
1986). In this way they were aware that their dependency was a problem and as such were seriously considering overcoming it, but had no firm commitment to actively changing. This was apparent in P4's experience:

> the whole time I'd be using I'd be in a continuous battle with myself like you know “what are you doing you shouldn't be doing this, get off, get off, get off.”

A number of participants after getting off heroin for short periods of time, commented on developing speed addictions. The reasons for this were varied. For some participants changing from heroin to speed use had occurred after making a contact who was selling plenty of good quality speed. For others speed was viewed as a less terrifying alternative to heroin. The fear associated with ‘detox’ from heroin use was largely responsible for this shift. For P6, changing from heroin to speed occurred after becoming involved with a partner who did not like heroin:

> And the guy that I was going out with um he didn’t actually like the stuff so I was lucky in that he helped me get off... like he just didn’t get off on it and I overdosed a couple of times and he just said to me like “gotta get off that crap”. So I did, I just gave it a miss... not longer after, we both developed speed habits so we went from that to that in you know 3 months or something just really bad on speed.

A major issue identified in the AOD literature, regarding long-term abstinence from alcohol and other drug use is the influence of using social networks (Gourlay, Forbes, Marriner, Pethica, & McNeil, 1994; Senore et al., 1998; Weisner, Matzger, & Kaskutas, 2003). A number of participants commented on the difficulty in which they experienced in trying to stop heroin, whilst their friends continued using heroin. This was articulated by P3:

> I guess I was trying to stop and all my other friends weren’t and like when I first tried... If I didn’t hang around them I’d be alright, but it’s pretty hard when you trying to get off and your kind of around it, its pretty impossible.

P5 also stated:
Oh if everyone stopped I would have stopped too, but half the people stopped and half didn’t...

Seeking treatment for heroin dependence was a prominent theme identified by participants in their attempts to give up. A number of participants commented on the use of methadone maintenance treatment (MMT) as a way in which they tried to overcome their heroin dependence. MMT is a full agonist drug, meaning it mimics the effects of opioid drugs (Ryder et al., 2006). Some participants reported moderate success with methadone in terms of abstaining from heroin use for long periods of time. However, for the majority of participants, the difficulty experienced with MMT was ‘getting off’ methadone. Similar to Bammer and Weekes (1994) findings, participants reported the difficulty of withdrawing from methadone, due to the severity of symptoms and their duration. As P2 stated, “well I got onto methadone which in a way was worse, cause that was harder to get off than heroin.” Participants also commented on the restrictions MMT placed on their everyday living, due to having to take it daily. As P1 articulated:

I decided I wanted to get off methadone, I was sick of the restrictions to having to go to a chemist every day. And of course I couldn’t get take-away’s because I was still using. So I was literally tied to the chemist and I was sick of the fact that I could never go on a holiday or go camping. Or do anything like that. And even to what hours your chemist is open sort of restricts your job options a bit too.

The use of methadone had varied results in stopping participants from using heroin whilst on MMT. Some participants reported limited use of heroin whilst on methadone, others such as P1 continued to use heroin and other central nervous system depressants whilst on methadone:

it did help in some ways but I still kept using when I could... I’d still probably still use once a week or once a fortnight or something even though I needed a lot more to get stoned because I was trying to override my methadone that I already had in my system. But then umm, I discovered that I could override it by taking lots of
'benzo's' [a minor tranquilliser] at the same time as having the heroin. But which is a pretty bad lethal cocktail, methadone, 'benzo's' and heroin.

This finding supports the literature regarding MMT, which has found that a number of individuals continue to use heroin whilst on the program (Ward, Hall, & Mattick, 1999). Some participants commented on switching from MMT to Subutex, a partial agonist drug, due to the difficulties associated with using methadone. This was described by P4:

*I was on that for about a year [MMT] and then the Subutex program came out, so I switched from methadone onto the Subutex [And was that better for you?] um yeah I think so, yeah because I knew how addictive methadone was for one and I knew how hard it was to get off. So I kind of thought well you know if I’m to have any hope of getting off I want to switch over onto the Subutex cause its gonna be easier and I’d heard that Subutex... you only have the dose every second day and things like that.*

Naltrexone, which is used to block the effects of opiates (Ryder et al., 2006) unlike MMT, was another popular treatment method used by participants. Research conducted on the efficacy of naltrexone has found that whilst individuals who remain on naltrexone programs experience an increased number of heroin-free days, such programs have a lower retention rate than other treatments such as MMT (Commonwealth, Department of Health and Ageing, 2004). Thus, the difficulty of this treatment is retention, keeping individuals on naltrexone for long periods of time. This finding was supported by the current study as it was found that a number of participants discontinued their naltrexone after only a short period of time. As P3 stated:

*back when they had the tablets, say when I first started the naltrexone treatment it was so easy to relapse because you just go, and just spit the tablet out*

This was similar for P5, even though his mother was assisting him by administering his naltrexone tablets:
like mum would come in...every morning and give me my naltrexone pill you know, but I did that for a while about a month and then I’d just slip it “yeah I’ve had it” and she had faith in me after about a month so she’d put it in my mouth sort of thing, but I was like “yeah yeah” and put it under my tongue “yeah I’m going back to sleep” as soon as she’d walk out, you know spit it or whatever. Just because my mates were getting on still too.

Other treatment and withdrawal methods utilised by participants included outpatient drug counselling (DC), residential treatment in Therapeutic Communities (TCs), clinic detoxifications, home detoxifications, rapid opioid detoxifications (ROD’s) and naltrexone implants. Some participants had undergone a number of these methods, and found success with only certain treatments. Others found little if any benefit from such treatment and withdrawal methods. P1 stated that there was no one treatment that was the panacea for her heroin dependence:

I’ve tried so many different ways to quit and um I don’t really think there is a magic cure, cause I’ve done methadone twice, I’ve done rapid dexos’s I think about 3 times. I’ve been into a detox unit twice for a week for each time. I’ve done in home detox’s with nurses. I’ve done it by myself. I’ve tried many various ways to quit.

**Decision to stop heroin use**

The factors responsible for the decision to stop heroin use differed to those that prompted the ‘realisation’ that their use was a problem. For most participants a combination of factors were responsible for the final decision to stop heroin use. This supports previous literature that has found recovery from heroin dependence is often a complex process involving a range of factors and which occurs over an extended period of time (Bammer & Weekes, 1994; Pearson, 1987; Taylor, 1993). This process was described by P2:
No light globe went off suddenly and there was the answer. It was just everything seemed to be pushing me in that direction.... So it was just a lot of different factors that fell into place that caused me to stop.

Becoming a parent was a strong motivator to stop heroin use for some participants. For P1 the responsibility of motherhood and the desire to be a good mother was important in the decision to change:

at that point I got pregnant and I had a girl and that gave me really strong motivation... to quit, because I had responsibility for someone other than myself and I didn’t want her to grow up with a drug addicted mum and that be her legacy too.

These findings are consistent with those of Bammer and Weekes (1994) whereby wanting to be a good parent was important in stopping dependent heroin use.

One particularly salient theme, new to emerge in the literature on long-term abstinence, was the influence of the heroin drought in participants’ decisions to stop heroin use. This drought, which occurred early in 2001, resulted in the sudden and dramatic decrease of heroin availability in Australia (Degenhardt et al., 2005). Research conducted on the heroin drought and health outcomes (Smithson, McFadden, Mwesigye & Casey, 2004) has found that the heroin drought has been associated with substantial declines in ambulance overdose callouts, an increase in MMT enrolments and a decline in acquisitive crime. However, little research has looked at the influence of the heroin drought in individuals’ decisions to stop heroin use. In the current study it was found that a number of participants had stopped their heroin use, in part, due to the difficulty in trying to access heroin. P1 stated that after spending an entire day trying to get heroin, and not being able to get even close to it, she gave up searching:

I remember trying one day. I tried all day, went through my whole phone book and phoned. I couldn’t even get close to it, I couldn’t even get someone that knew someone that could get it. So in the end I just gave up.
P2 commented on the difficulty in trying to get heroin, having become distanced from previous contacts.

*it was harder to get unless you had the connections...and because I'd withdrawn from people so much I didn't have the connections any more.*

Maintaining regular heroin use became too hard for P4 as a result of the heroin shortage, consequently this lead to him seeking treatment:

*that contributed I think towards me getting onto methadone because it just it was such a drought that you know it was it was hard to be an addict cause it just wasn't around, so I think that was a large contributor to me sort of saying 'right, this is ridiculous um you know I've got to find some other means to cope' and its kind of I guess why yeah I went on to methadone.*

The fear of legal consequences and wanting to avoid gaol was important in the decision to stop for P2 and P3 and this is consistent with the findings of Bammer and Weekes (1994). For example P3 had never received a criminal conviction for any heroin related crimes. Consequently, the prospect of his 'luck running out' and being arrested was a strong motivator for him to stop heroin use. Wanting to avoid long-term imprisonment was a strong reason for P2 to cease his use of heroin:

*Like I got to the point with my like, with the police that I couldn't afford anymore to be making money the way I was whereas I would be spending a lot of time in jail.*

The decision to stop heroin use was also a result of issues surrounding participants' own personality identity and need for personal growth. The need for personal growth was particularly salient for P4's resolution to stop heroin:

*I knew that heroin, methadone, subutex they all suppressed my personality ... and my lived experience... I wanted to open myself up to sort of start living again and open myself up to experiences in life that are healthy and good you know...* 

The loss of personal identity was an important reason for P6 to stop:
Just, I just, I lost the person I was. I didn’t know who I was and it scared the hell out of me... it changed who I was, it changed me to believe things that weren’t real. Just like thinking back, I just changed and that’s what made me stop you know.

Bammer and Weekes (1994) found that ‘maturing out’ was an important factor that lead to the resolution to stop heroin use. This finding was supported in the current study and was articulated by P1:

I guess the fact that I was getting older and I used to think that I was young and invincible and I couldn’t really see the rest of my life cause I just thought I’m young and it doesn’t really matter and I’ve got heaps of time to change... But as every year went by and I kept thinking “this isn’t changing and I’m heading towards 30 and I’m still like that.”

**Achieving long-term abstinence**

Similar to the decisions to stop heroin use, most participants identified a number of motivating factors that were responsible for maintaining long-term abstinence. Participants constructed these motivations in unique and diverse ways that were reflective of their experiences, values and life histories.

The importance of having structural supports in one’s life, such as employment, has been found to be pivotal in the AOD literature in leaving dependent drug use behind (Bammer & Weekes, 1994; Hser et al., 2001; Sheehan et al., 1993; Waldorf et al., 1991). These findings were supported in the current study as employment was identified as a key motivator in staying abstinent from heroin use for a number of participants. For P2, starting full-time work filled the void that was left after using heroin and provided a sense of normality:

once I gave up heroin it just seemed like I had nothing really. Cause I know it sounds really stupid, but at least when you’ve got a drug habit you’ve got something to do everyday you know ...whereas now I get up and go to work which
is, which I kinda enjoy. It sounds strange to say you enjoy work and I don't actually enjoy the physical side of work but I enjoy the regularity of getting up going to work. I know every Thursday I'll get paid in the bank for working so, its good to sort of having a bit of what do you call it, normality to my life.

Commitment to children and the responsibility of being a parent was important for a number of participants in staying abstinent. This was one of the biggest motivations for P7 to stay off heroin:

\textit{but yeah you know he[son] focuses me not to ...and that's another huge reason, that's probably the biggest reason to not become a you know messed up on any drugs...so that's a huge thing.}

For three participants family relationships played a key role in staying abstinent. All of these participants commented on reaping the rewards of having good relationships with their family members. For P2 regaining family trust and being dependable was particularly important to P2 and this included being able to take his nephew out with the full trust of family members. Being open to relationships with family members, particularly siblings was important for P4. For P7 the value he placed on the current relationship with his family and not wanting to jeopardise this relationship was a strong motivator to stay abstinent:

\textit{that's one of the best you know the family thing I have now I wouldn't change it for the world, its so beautiful its worth so much more than, you know ...yeah na its sort of something you don't wanna ruin now that I've got it, cause it wasn't there for a long time you know I cherish it. So yeah that is very, you know that stops me for sure}

Similar to the findings of Biernacki (1986) removing oneself from drug using environments was identified by a number of participants as critical in staying off heroin use. This process, referred to as stimulus control by Prochaska and DiClemente’s (1986) Process of Change model has been found to be particularly important in maintaining
behaviour change (DiClemente et al., 1991; Prochaska & DiClemente, 1983).

Participants commented on the powerful influence of drug using environments. P7 attributed his long-term abstinence from heroin use primarily a result of staying away from such environments:

>You know probably, the biggest thing is like...just not, not putting yourself in the position to test that trust and that's the biggest thing I've always done. Is yeah be away from the environment...because you know its just so powerful hey... its like walking on thin ice, I spose you know you just don't know when its gonna crack, so I don't want to put myself in that position

Part of removing oneself from drug using environments also involved developing or surrounding oneself with abstinent social networks. These abstinent networks acted as strong support systems for participants, and are referred to as helping relationships by Prochaska and DiClemente’s Processes of Change model (1986). An abundance of literature in the AOD has also emphasised the importance of non-using helping relationships in abstaining from alcohol and other drug use, long-term (Havassy et al., 1995; Panday et al., 2005; Richmond et al., 1993; Sanders, Peveler, Mant, & Fowler, 1993; Vaillant, 1988). For many participants these networks included friends who had also stopped using heroin. For other participants such as P6 having a partner who was also a previous user of heroin helped provide strength and support to staying abstinent:

>and having a good relationship with someone, we're both ex users of it and we both want the same thing you know. Probably be a lot more difficult to say no if I was single. [Really?] Yeah, yeah cause its a lot harder. But I've found someone that I'm really fond of now so and we both, just everyday we're just there for each other.

[So do you think you both kind of use each other as strength?]
Yeah, stepping stones, yeah definitely
Methadone maintenance treatment (MMT) was identified by P5 as an important reason for staying off heroin. As tolerance to methadone is deliberately induced, the euphoric effects experienced by the user are blocked (Ryder et al., 2006). Consequently, methadone can act as a deterrent for individuals wanting to use heroin, as the euphoric 'high' is difficult to experience whilst on MMT. For P5 the reason for staying off heroin was a matter of it not being worth his while as any money spent on heroin would be wasted:

I always remember that one time um I was on methadone ... and I had a half way [half a gram of heroin] at 150 bucks worth and I didn't fucken feel it. So from that day on I was like I'm not gonna spend...

Participants identified a number of personal motivators and factors responsible for their long-term abstinence from heroin use. For some participants staying abstinent from heroin use was partly attributed to achieving their own personal goals. In this way achieving such goals were self-reinforcing to continue on the same track they were on.

As P1 stated:

I got my credit rating back which was good because before that I was black listed, I couldn't even get a mobile phone on credit. I bought a house, which was a major goal for me and I knew I could never do that if I was still on heroin because every spare cent I had went to it... once you start doing these things they start making you feel good about yourself because you've started to achieve something and you want to carry it on I guess.

Resolving old issues was also central to the recovery process for some participants. This supports Bammer and Weekes (1994) findings whereby dealing with past personal issues was important in maintaining change. For P6 resolving old issues from her past was particularly salient in maintaining long-term abstinence:

the most for me, I realised that I'm not to blame for things that have gone wrong in the past when I was a child and things like... I went through a lot of guilt that I
was carrying ... and I just learned to forgive myself ... and accept myself and learn to love the person that I was rather than be against, be against you know. Once I started to figure all of that out it was easy, I just had to give myself a bit of a little bit of faith and belief...

The need for personal growth was a significant motivator for some participants not only in stopping heroin use, but also in maintaining abstinence. P4 articulated:

I just didn’t want to be bound by drugs and things like that anymore and this continues to this day ... I wanted to sort of move forward and grow and things like that and I knew I couldn’t while I was using so um yeah that’s always sort of been a big factor as well

‘Maturing out’ was also identified as an important personal factor that played a role in staying abstinent. For P7

I guess I dunno maybe now a bit more age, a bit more life experience whatever its, what is it going to give, it’s going to give me the physical thing which is lovely you know but what’s it going to do for me mentally now you know is, am I just you know when I have it, am I gonna be feeling guilty to myself or whatever ... sort of the mental things the more important thing now...

For some participants maintaining an ‘addict’ identity was a contributing factor to staying off heroin. For these participants being an ‘addict’ was central to their immediate self-concept and identity. In this way participant’s ‘addict’ identity was viewed as an inherent and permanent condition. As such, maintaining abstinence from heroin was regarded as something that needed to be continually worked at. This included constantly being aware of who they were and conscious of their vulnerability to using heroin. As P3 articulated:

...always just keep conscious of the fact that you’re an addict and always will be type thing.

P7 similarly stated:
And inside like I know I'll always be a heroin addict, whether I never use again I'll still be an addict to the day I die you know. So you know its something that you never fully free yourself of...

These findings differ to those of Granfield and Cloud (1996), whereby naturally recovered respondents did not adopt addict identities. In other words respondents from Granfield and Cloud’s (1996) study did not see themselves as addicts or recovered addicts, rather, they saw themselves in some other way.

A number of participants had become removed from mainstream society as a result of their dependent heroin use. Consequently, wanting to lead a normal life and be part of mainstream society was another motivating factor for participants in maintaining long-term abstinence from heroin use. This was articulated by P2:

I think, I just want a better life. I actually want a life where I do normal things like normal people do. I want to get up in the morning and just go to work like normal people. Just want to be part of society instead of living on the fringes of society.

P6 also stated:

I just want that. I want that so bad (laughs). That’s all I want, like I just want a normal life...

Conclusion

The aim of the present study was to investigate the motivations for individual’s long-term heroin abstinence. Utilising a social constructivist framework (Crotty, 1998; Gergen, 1999), participants’ motivations for long-term abstinence were constructed based on their own individual interpretations and perspectives of this phenomenon. The key finding of the present study was that participants constructed their motivations for long-term abstinence in unique and diverse ways, depending on their backgrounds, values and experiences. This was evidenced by the number of sub-themes that emerged
from participants’ responses to motivations for long-term heroin abstinence.

Motivations for long-term abstinence included employment, family or commitment to children, removing oneself from drug using environments, treatment, personal factors such as achieving personal goals, resolving old issues, need for personal growth, maintaining an ‘addict identity’, ‘maturing out’ and wanting to lead a normal life.

Through exploring the heroin use journey that led to participants’ long-term abstinence, a number of important findings were made. First, participants’ initial use of heroin was influenced by a number of social, personal and cultural factors. Second, consistent with the literature (Bennett, 1986; Coomber & Sutton, 2006), dependency upon heroin did not appear to occur in advance of 6 months. Developing a dependency upon heroin was again influenced by social and personal factors but also factors associated with the availability and accessibility of heroin. Third, the impact of participants dependent heroin use was widespread, affecting numerous aspects of their life functioning. Fourth, having experienced a ‘realisation’ such as an emotional crisis, did not necessarily lead to participants experiencing a resolution to stop heroin use. Contrary to previous literature (Bammer & Weekes, Biernacki, 1986), experiencing such crises often had the opposite effect, as participants heroin use increased as a way to cope with the pain. In addition, relapse was a common occurrence (Prochaska et al., 1992) and often signified a lack of readiness to change by participants (Prochaska & DiClemente, 1986). Seeking treatment and withdrawal options was an integral part of participants’ attempts to stop heroin use following such ‘realisations’. It was found that different treatments worked for different people (Bammer & Weekes, 1994) and in some cases treatment provided little, if any, benefit. Thus, no one treatment was the solution for participants overcoming heroin dependence. Last, for most participants
more than one factor was involved in the decision to stop heroin use. These factors included personal factors such as 'maturing out' and personal identity and growth as well as environmental factors including the heroin drought.

One final, but important, conclusion to be drawn from this study was that change was found to be a complex process, as demonstrated through participants' detailed and intricate journey with heroin use (Bammer & Weekes, 1994; Pearson, 1987; Taylor, 1993). It often occurred over an extended period of time and involved a combination of contributing factors (Bammer & Weekes, 1994).

The main limitation of the study was that the majority of participants were recruited through snowball sampling. Such sampling methods are prone to resulting in homogenous samples, as the characteristics of the initial respondent can shape the structure of the sample (Liamputtong & Ezzy, 2005). Future studies could endeavour to recruit a more representative sample, through contacting treatment agencies and self-help groups such as Narcotics Anonymous.

Another limitation to be noted, regards the study's inclusion criteria. The criteria for dependence and abstinence were not strictly adhered to. One participant did not meet the full 6 months criteria for dependence and another participant was enrolled in the MMT program at the time of interviewing. However, due to the sensitive nature of heroin use and the difficulty in accessing this population, allowances were made in these two cases.

The knowledge obtained from this study may have some practical implications for treatment providers and other health professionals in supporting individuals to overcome heroin dependency and maintain long-term abstinence. The findings illustrated that different treatments worked for different people. Thus, it is important
that a number of treatment options are made available for individuals that are trying to overcome heroin dependency. This includes MMT, other maintenance treatments such as Subutex, abstinence-oriented drug treatments such as Naltrexone in the form of implants and tablets, and drug-free treatment approaches such as residential treatment in Therapeutic Communities (TC's) and outpatient drug counselling (DC). In order to increase retention in maintenance treatments such as MMT and Subutex, it is suggested that pharmacy-based MMT and Subutex programmes be expanded to improve availability and accessibility.

It is also recommended that residential treatment in Therapeutic Communities (TC's) and outpatient drug counselling (DC) encourage individuals to develop or maintain structural supports such as employment, community involvements and family and social networks. These structural supports may assist individuals in ceasing dependent heroin use and help to maintain long-term abstinence. In addition, supporting the use of behavioural strategies such as stimulus control and helping relationships (Prochaska & DiClemente, 1986) may work to assist those both stopping dependent heroin use and those maintaining abstinence by preventing relapse. Finally, encouraging the use of goal setting may provide individuals with incentives to not only stop heroin use but may encourage individuals to maintain abstinence once it is achieved.
References


## Stages of Change

Table 2. *Definitions of the Stages of Change*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition of Stage</th>
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<tbody>
<tr>
<td>Precontemplation</td>
<td>Those in this stage are unaware that their behaviour is a problem and are not ready to change in the foreseeable future.</td>
</tr>
<tr>
<td>Contemplation</td>
<td>Individuals are aware that the behaviour is problematic, but have no firm commitment to actively changing</td>
</tr>
<tr>
<td>Preparation</td>
<td>Those that have made a firm decision to make a behavioural change. This decision is evidenced by the individual scheduling a date that indicates the beginning of action</td>
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<tr>
<td>Action</td>
<td>Individuals have reached the action stage if they are currently engaged in modifying behaviours, experiences or their environment in order to change their behaviour</td>
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<tr>
<td>Maintenance</td>
<td>Those in this stage have remained free of the addictive behaviour for more than 6 months. Individuals have stabilised behaviour change and are consolidating the gains achieved during action.</td>
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(Adapted from Prochaska, DiClemente and Norcross, 1992)
### Table 3. Definitions of the Processes of Change

<table>
<thead>
<tr>
<th>Process</th>
<th>Definition of Process</th>
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<tbody>
<tr>
<td>Consciousness raising</td>
<td>Increasing information about oneself and the problem behaviour</td>
</tr>
<tr>
<td>Self-reevaluation</td>
<td>Assessing how one feels and thinks about oneself with respect to problem behaviour and how one may feel and think if change took place</td>
</tr>
<tr>
<td>Self-liberation</td>
<td>A commitment to and a belief in the ability to change</td>
</tr>
<tr>
<td>Counterconditioning</td>
<td>Substituting alternatives for problem behaviours</td>
</tr>
<tr>
<td>Stimulus control</td>
<td>Avoiding or countering stimuli that elicit problem behaviours: consciously restructuring existing environments</td>
</tr>
<tr>
<td>Reinforcement management</td>
<td>Rewarding oneself or being rewarded by others for making changes</td>
</tr>
<tr>
<td>Helping relationships</td>
<td>Being open and trusting about problems with those who care; family, friends, religious affiliations, and coworkers</td>
</tr>
<tr>
<td>Dramatic relief</td>
<td>Experiencing and expressing feelings about one’s problems and the solutions</td>
</tr>
<tr>
<td>Environmental reevaluation</td>
<td>Assessing how one’s problems impact upon the environment</td>
</tr>
<tr>
<td>Social liberation</td>
<td>Increasing alternatives for non-problem behaviours available in society</td>
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(Adapted from Prochaska, DiClemente and Norcross, 1992)
Appendix C

Interview Schedule

1. I am interested in hearing about your experience with heroin use. Could you tell about this experience in terms of how you began to use heroin.

2. What were the reasons for your heroin use becoming more regular?

3. How did your dependent heroin use impact on your life?
   - Did it impact on relationships with family or friends?
   - Did it impact on other aspects of your life such as work or your health?
   - If yes/no why.

4. From the time you began using heroin when did you first attempt to give up heroin use? Can you tell me about this experience.
   - Why was it that you first decided to stop using heroin?
   - What do you think was the reason that you returned to heroin use in that particular instance?

5. Since that time were there other instances where you attempted to give up heroin use. Can you tell me a bit about these experiences.
   - What were the reasons that you decided to give up heroin use?
   - Did you seek any types of treatments? If yes/no what were these?
   - What were the reasons that you returned to heroin use?

6. How long was it before, your final attempt to give up heroin use? What do you think was the reason/reasons that you decided to stop using heroin in this final attempt?

7. What do you think has motivated you to stay off heroin for this long-period of time?
   - Are there specific motivators or factors that keep you on this track?

8. How long has it been that you have stayed off heroin now? How has life been for you, having remained abstinent for this period of time?
Appendix D

Information Sheet

Thank you for your interest in this study. My name is Lucy Dann and I am currently completing my Psychology (Honours) degree at Edith Cowan University, Joondalup Campus.

This exploratory study is designed to investigate individuals' motivations for long-term heroin abstinence. This research will hopefully lead to the development of more effective treatment programs, specifically in relapse prevention, through identifying the key motivations for long-term heroin abstinence. Knowledge of these key motivators may help health professionals to formulate more structured support programs for current users of heroin to counter potential relapse episodes. In a broader sense, this research may carry through to having a beneficial impact at the community as well as the individual level.

The rationale and design of the study has satisfied the strict guidelines laid down by the Edith Cowan University Ethics Committee. Please be assured that any information that you provide will be held in strict confidence by the researcher. Your involvement in this study will be to participate in 1 interview and answer general questions in relation to your experience having abstained long-term from heroin use. Understand that the interview, approximately 30 to 60 minutes duration, will be audio-taped for transcription and that the tape will be erased thereafter. The reason for recording the interview is to ensure that an accurate record of what was discussed during the interview can be analysed. Full copies of interview transcripts will be provided for your perusal. You are able to make comments or request information to be altered. At the conclusion of this study, a report of the findings will be available upon request.

Please understand that your participation in this research is totally voluntary and you are free to withdraw at any time during this study without penalty, and to remove any data that you may have contributed.

Although it is envisaged that this research will not be stressful, if at any time you become distressed with any aspect of this study, assistance is available to you through a number of counselling services attached. Any questions concerning this project can be directed to me via my contact details below or my supervisor Dr Moira O’Connor on 6304 5593 or David Ryder (Secondary Supervisor) on 6304 5452. If you would like to talk to an independent person, you may contact Ms Kim Gifkins, Edith Cowan University Research Ethics Officer on 6304 2170 or research.ethics@ecu.edu.au.

If you are interested or would like further information, I can be contacted on the following:
9390 5457 (h)
0423 395 455 (m)
lidann@student.ecu.edu.au

Yours Sincerely
Lucy Dann
Appendix E
List of Counselling/Alcohol and Other Drug Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol &amp; Drug Information Service</td>
<td>9442 5000</td>
</tr>
<tr>
<td></td>
<td>1800 198 024</td>
</tr>
<tr>
<td>Narcotics Anonymous</td>
<td>9227 8361</td>
</tr>
<tr>
<td>Next Step Drug &amp; Alcohol Services (East Metro)</td>
<td>9219 1919 (East Metro)</td>
</tr>
<tr>
<td></td>
<td>9246 6767 (North Metro)</td>
</tr>
<tr>
<td></td>
<td>9439 5966 (South Metro)</td>
</tr>
<tr>
<td>UnitingCare West</td>
<td>1300 663 298</td>
</tr>
<tr>
<td>Holyoake- The Australian Institute on</td>
<td></td>
</tr>
<tr>
<td>Alcohol &amp; Addiction Resolutions</td>
<td>9416 4444</td>
</tr>
<tr>
<td>Relationships Australia</td>
<td>1300 364 277</td>
</tr>
<tr>
<td>Lifeline (24 hrs)</td>
<td>13 11 14</td>
</tr>
<tr>
<td>Salvo Care Line (24 hrs)</td>
<td>9442 5777</td>
</tr>
<tr>
<td>Samaritans (24 hrs)</td>
<td>9381 5555</td>
</tr>
</tbody>
</table>
Appendix F

Participant Consent Form

I __________________________ have read the information sheet provided and agree to participate in the research study conducted by Lucy Dann of Edith Cowan University. I understand the purpose and nature of the study and am participating voluntarily. Any questions I have asked have been answered to my satisfaction. I understand that my name and other demographic information, which might identify me, will not be used. I agree to participate in this activity, realising that I may withdraw at any time, with no penalty, should I decide to cease my participation. I grant permission for the interview to be audio recorded and understand that the recording will be erased once the interview is transcribed. I agree that research data gathered for the study may be published, provided I am not identifiable.

__________________________________________  ______________________________________
Research Participant  Date

__________________________________________  ______________________________________
Primary Researcher  Date
## Appendix G

### Question-Ordered Data Matrix

(Example Only)

<table>
<thead>
<tr>
<th>How it started</th>
<th>Question</th>
<th>Participant</th>
<th>Quote</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How you began to use heroin?</strong></td>
<td>Participant 1</td>
<td>Um around that time the movie Trainspotting came out and it had a lot of hype around the movie and it sort of glorified it quite a bit and made it seem kinda cool.</td>
<td>Heroin was glorified. Portrayed as cool/ fashionable by media</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participant 2</td>
<td>I didn't start in any particular way, it was just something I tried basically.</td>
<td>Just experimented with it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participant 3</td>
<td>So it was all just like the cool thing and Trainspotting had just come out. And it was actually quite popular like you know everyone thought it was the sick thing.</td>
<td>Cool thing/ Popular Media portrayed it as cool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participant 4</td>
<td>I guess it all started when I was introduced to (Friend) who was like who ended up being the best male friend that I ever had. And he knew a drug dealer who um sold heroin and stuff and he would dabble in stuff now and then like once a fortnight and things like that.</td>
<td>Introduced to heroin by a close friend</td>
<td></td>
</tr>
</tbody>
</table>
| | Participant 5 | tried it once at the _____.
And it wasn’t very much but it was just enough thinking that this makes me feel totally at ease…. loved it yeah, | Feelings of Relaxation |
| | Participant 6 | I spose I just did it cause I was young just thought aw you know I’ll just try it and it made me really sick like I threw up from it, like I only had the tiniest amount probably like 10 dollars worth of it or something and it made me really sick |
| | Participant 7 | and then I guess heroin sort of socially with a few of us, which I first had when maybe I was 20, socially for oh you know 18 months, you know do it 3 times a week not do it again for 4 months | Tried it cause young- and just wanted to experiment with it
Had bad experience- made her feel sick- threw up
Began using socially with a few friends |
Instructions for Authors

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1. Submission of manuscripts

Manuscripts should be in English and up to 3000 words in length, but articles of any length will be considered. Please discuss longer articles with the Editor before submission.

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The first page should include (1) the title of the paper (2) name/s of the author/s (3) full institutional address/s (4) an abbreviated title (for running headlines within the article).

Each author's name should include one given name, the surname and any initials. Authors' qualifications should be given and one current relevant appointment.

At the bottom of the page give the full name and address (including telephone and fax number and email address if possible) of the author to whom all correspondence (including proofs) should be sent. The second page should repeat the title and contain an abstract of not more than 200 words (structured abstracts are welcomed). The third page should repeat the title as a heading to the main body of the text. Within the text section headings and subheadings should be typed on a separate line without numbering, indentation or bold or italic typeface.

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Within the text references should be indicated by the author's name and year of publication in parentheses, e.g., (Tones, 1996) or (Wilson & Styles, 1990), or if there are more than two authors (Power et al., 1996). Where several references are quoted consecutively within the text the order should be alphabetical. If more than one paper from the same author(s) and year are listed, the date should be followed by (a), (b), etc., e.g., (Plant, 1990a).

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