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Predicting Outcome of In-patient Opiate Detoxification: Successes and Failures at Completion of Detoxification and Longer-term Abstinence

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Summary of Contents:

Research Dossier
Predicting Outcome of In-patient Opiate Detoxification: Successes and Failures at Completion of Detoxification and Longer-term Abstinence

Academic Dossier

Critical Review 1:
Is there a Role for Eye Movement Desensitization and Reprocessing (EMDR) in the Treatment of Substance Misuse?

Critical Review 2:
The Efficacy of Relapse Prevention in the Treatment of Substance Misuse, with Particular Reference to Opiate Users

Professional Dossier

An Audit of Clinical Supervision in a Statutory Specialist Drug Service

Curriculum Vitae
Academic Dossier (Critical Review One): Is there a role for Eye Movement Desensitization and Reprocessing (EMDR) in the Treatment of Substance Misuse? ........................................................... 88

Introduction ....................................................................................................................... 88
What is EMDR? ................................................................................................................... 88
An Information Processing Model of Trauma ................................................................. 90
Is EMDR an Effective Treatment? ............................................................................. 90
EMDR and Substance Misuse ....................................................................................... 92
  1) Installing a Positive State ......................................................................... 93
  2) Desensitisation of Triggers and Urge Reprocessing ...................................... 94
  3) Trauma and Substance Misuse .................................................................... 95
  4) Psychopathology and Substance Misuse ..................................................... 97
Factors to Consider in the Use of EMDR with Substance Misuse clients .......... 97
  At What Point should Trauma Treatment be Considered? ......................... 97
  Is it possible to use EMDR with individuals still using substances? .... 98
Conclusion ......................................................................................................................... 99
References ....................................................................................................................... 100

Academic Dossier (Critical Review Two): The Efficacy of Relapse Prevention in the Treatment of Substance Misuse, with Particular Reference to Opiate Users................................................................. 107

Introduction ....................................................................................................................... 107
What is Relapse Prevention? ........................................................................................... 108
Efficacy of Cognitive-Behavioural Relapse Prevention Interventions .............. 109
Comparative efficacy of Relapse Prevention Interventions ...................... 109
Methodological Limitations and Considerations for Future Research ....... 111
  Evaluation of Essential and "Added Value" Components of Relapse Prevention ...................................................................................................................... 113
Comparative Efficacy of Relapse Prevention for Particular Populations .......... 115
Client or Therapist Characteristics ...................................................................... 117
Is Relapse Prevention an Effective Intervention with Opiate Users? .............. 117
Methodological Considerations and Future Research ...................................... 118
Why so Little Research on Relapse Prevention with Opiate Users? .............. 119
Conclusion ....................................................................................................................... 120
References ....................................................................................................................... 121
APPENDIX 1 ..................................................................................................................... 128
Professional Dossier: An Audit of Clinical Supervision in a Statutory Specialist Drug Service

<table>
<thead>
<tr>
<th>Introduction</th>
<th>138</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is Clinical Supervision?</td>
<td>139</td>
</tr>
<tr>
<td>Background</td>
<td>139</td>
</tr>
<tr>
<td>Aims of the Audit</td>
<td>140</td>
</tr>
<tr>
<td>Establishment of Standards</td>
<td>141</td>
</tr>
<tr>
<td>Receipt of Management Supervision</td>
<td>141</td>
</tr>
<tr>
<td>Receipt of Caseload Supervision</td>
<td>142</td>
</tr>
<tr>
<td>Receipt of Clinical Supervision</td>
<td>142</td>
</tr>
<tr>
<td>Familiarity with the S.D.S. Policy on Caseload Supervision</td>
<td>142</td>
</tr>
<tr>
<td>Use of Caseload Supervision Form</td>
<td>143</td>
</tr>
<tr>
<td>Frequency of Supervision</td>
<td>143</td>
</tr>
<tr>
<td>Contract Setting</td>
<td>144</td>
</tr>
<tr>
<td>Agenda Setting</td>
<td>145</td>
</tr>
<tr>
<td>Models of supervision</td>
<td>145</td>
</tr>
<tr>
<td>Satisfaction with Clinical Supervision</td>
<td>147</td>
</tr>
<tr>
<td>Questionnaire Return Rate</td>
<td>147</td>
</tr>
<tr>
<td>S.D.S. &quot;away days&quot;</td>
<td>148</td>
</tr>
<tr>
<td>Main Recommendations Arising out of the Audit</td>
<td>148</td>
</tr>
<tr>
<td>Results of Re-audit at Six months (see Table 1)</td>
<td>149</td>
</tr>
<tr>
<td>Changes in Service at Re-audit</td>
<td>153</td>
</tr>
<tr>
<td>Discussion</td>
<td>153</td>
</tr>
<tr>
<td>Limitations of the Current Audit</td>
<td>154</td>
</tr>
<tr>
<td>References</td>
<td>155</td>
</tr>
<tr>
<td>APPENDIX 1</td>
<td>157</td>
</tr>
<tr>
<td>Supervision Questionnaire</td>
<td>157</td>
</tr>
</tbody>
</table>

Curriculum Vitae

| BSc Degree (copy of certificate) | 163 |
| Diploma in Clinical Psychology (copy of certificate) | 164 |
Research Dossier: Predicting Outcome of In-patient Opiate Detoxification: Successes and Failures at Completion of Detoxification and Longer-term Abstinence

Abstract

Predictors of outcome of in-patient opiate detoxification and abstinence at 3-month follow-up were investigated using a prospective design. 70 individuals admitted to an in-patient Unit were interviewed at admission to the Unit, and outcome status at three months was ascertained for 89% of participants.

A variety of baseline distal or personal measures were taken at admission. Intermediate or background measures were taken at admission, discharge and at 3-month follow-up.

59% of participants successfully completed in-patient detoxification. None of the distal or intermediate measures predicted successful completion of detoxification. The best predictor of completion of in-patient detoxification was key worker ratings of confidence that their client would complete the detoxification.

Of those with a known outcome, 45% were abstinent from opiates or opioids at 3-month follow-up. None of the distal or intermediate measures predicted outcome at 3-month follow-up, although there was evidence that higher client coping self-efficacy (as measured by the DTCQ-8) at admission and at discharge, related to outcome status at three months. The best predictors of abstinence at 3-month follow-up were key worker ratings of confidence in their client's ability to remain abstinent, taken at discharge from the Unit, and the client going to a residential treatment centre.

Implications for clinical practice and future research are discussed.
Introduction

Background

“Detoxification is one of the safest, most inexpensive and simplest procedures in medicine, but as a method for treating addiction it is one of the least successful” (Lipton & Maranda 1983, page 31). Overall rates of relapse amongst heroin users following detoxification have been cited as lying in the region of 70 to 80% at 6-month follow-up.

Poor outcome can be looked at in terms of dropping out of treatment, or in terms of relapsing following treatment. The two are linked in that longer retention in treatment is associated with better outcome. Generally, studies have shown that addicts who complete treatment, whether detoxification, therapeutic community or methadone maintenance treatment, are more likely to have a favourable outcome on a variety of measures including lower relapse rates. Specifically, with regard to in-patient opiate detoxification, Baekeland and Lundwall (1975) estimated that patients who completed treatment were three times as likely to be drug free a year later than those who do not complete it.

Reported dropout rates for opiate in-patient detoxification programmes varies considerably, e.g. 18%, Gossop, Green, Phillips and Bradley, (1989), 23%, Raynes, Patch and Fisch, (1972), 38%, Powell et al. (1993), and 48%, Raynes, Fisch, Levine, McKenna and Patch, (1973). The drop out rates for in-patient detoxification are generally lower than for out-patient detoxification e.g. Gossop, Johns and Green, (1986) reported drop-out rates of 83% and Kosten, Rounsaville and Kleber, (1985) 60%, but generally higher than for methadone maintenance programmes.

However, for those that complete in-patient detoxification, there have been some promising outcomes reported in the last 12 years from a number of programmes in the United Kingdom. For example, Gossop et al. (1989) reported outcomes of 51% complete abstinence at 6-month follow-up for the 82% that completed an in-patient programme. Powell et al. (1993) reported even higher abstinence rates of 59% at 6-month follow-up for the 62% that completed their in-patient programme (up to five weeks for most individuals). Gossop et al. (1989) reported a positive association between prognosis and length of hospital admission.

In summary, although overall rates of relapse amongst heroin users following detoxification has traditionally been cited as high, the prognosis appears to be better for those completing in-patient detoxification and for those undergoing longer hospital stays.
Purpose of the Research

The prediction of outcomes and the appropriateness of matching treatment interventions has vexed researchers for many years. Earlier research in the treatment of schizophrenia reported relatively low predictor-criterion relationships, but Luborsky and McLellan (1978) hypothesised that outcome prediction in the rehabilitation for drug-dependent patients might be “more successful”. This was not the case. Staff ratings at the time of discharge, following three months of residential treatment, correlated .27 with the actual outcome at six months. Luborsky and McLellan (1978, page 396) concluded “It is equally difficult to predict the outcome of treatment for substance use patients as for other patients – the outcomes of treatment are often not as good for the drug abuse patients, but they are just as unpredictable”.

Nevertheless, the question of outcomes is crucial to treatment centres. Waiting lists frequently exist, and clinicians have to make judgements as to the appropriateness of particular interventions for patients referred for treatment. Predicting which individuals will succeed in achieving abstinence is a highly complex area, but were it possible to predict early on in treatment those individuals with poor prognosis, interventions could thus be targeted and focussed accordingly.

Predicting treatment outcomes has been widely investigated in the addiction field in general, but the results are conflicting, and comparison of studies is problematic for the following reasons. Firstly, there are treatment variables. Only a handful of published studies specifically address the question of predictors of outcome of in-patient opiate detoxification, and even these differ in the method and length of detoxification. More studies have looked at predictors of outcome amongst methadone maintenance clients; other studies have investigated outcome following out-patient detoxification and drug free residential treatment. Given the widely reported finding that out-patient programmes have higher drop out rates than in-patient detoxification programmes, and that in-patient programmes have higher drop out rates than methadone maintenance, these treatment variables in themselves are highly influential in terms of outcome (Baekeland and Lundwall 1975). No randomised controlled trials were found. Secondly, outcome variables vary from successful completion of detoxification, cessation of illicit opiates, lapse, and relapse. Thirdly, the length of follow-up also varies, from successful completion of treatment to Vaillant’s (1996) 12-year follow-up. Whilst both data sets are important from the point of view of assessing outcome, shorter treatment outcomes are more likely to reflect treatment effects than outcomes over extended periods. Fourthly, client characteristics vary across studies. The strictest criteria for inclusion
was a study by Kanof, Aronson and Ness (1993), in which clients were only deemed suitable for out-patient detoxification if they were on a stable dose of methadone and had not used any illicit drugs in the preceding three months, were working or attending full time education, showed no evidence of continued involvement in drug culture related activities, were attending regular counselling sessions and showed no evidence of any current major affective disorder.

Assessment of Potential Relapse Predictors

A number of different models have been proposed for understanding and evaluating relapse/outcome variables (see Connors, Maisto & Zywiak, 1996, Donovan 1996). The models are broadly similar in their classification of variables, but they vary in terminology.

Shiffman (1989) presented a multivariate, multi-level approach for the assessment of potential relapse predictors, and this model, based on prospective measurements, is used for the purposes of this research.

Shiffman (1989) argues that three levels of assessment must be considered in order to adequately describe and predict the likelihood of relapse:

(i) Distal/personal characteristics – which are relatively longstanding, enduring, stable and unchanging.

(ii) Intermediate/background characteristics – variables that fluctuate over time, but do so relatively gradually.

(iii) Proximal precipitants – those that occur at or immediately prior to the lapse. These are relatively transient and occur within the context of a high-risk situation.

Donovan (1996) has expanded this model to include transitional variables that influence whether a lapse leads to a relapse.
Shiffman (1989) suggests that a model that focuses on distal/personal and intermediate/background factors is able to predict who will relapse, but not when relapse will occur.

In the smoking literature, fixed variables have been found to be less effective as predictive variables than dynamic factors (DiClemente, Fairhurst & Piotrowski, 1985). The same is true in the alcohol literature (Miller, Westerberg, Harris and Tonigan, 1996). Not enough research has been carried out with opiate users to reach definitive conclusions about the relative contribution of these variables.

Distal/Personal Factors

Distal or personal factors are what the person brings into the situation, his/her make up, personal background characteristics and behavioural competencies. It includes, for example, age of onset of drug use, personality factors, presence and severity of concurrent psychiatric problems, concurrent other drug use, and presence of cognitive impairment or reduced problem solving abilities. Assessment involves only a single assessment at some baseline point, since, Shiffman (1989) argues, these are relatively stable background variables.

Drug history and prior treatment history

The effects of prior treatment history are confounded with age, longevity and severity of drug use. Whilst intuitively these variables might be considered significant prognostic indicators,
Stark (1992) in a review of attrition in substance abuse treatment, found no evidence for individuals with prior treatment dropping out of a current treatment episode.

More recently, Brewer, Catalina, Haggerty, Gainey and Fleming (1998) conducted a review of published research from 1966 to 1996, using statistical meta-analytic techniques to identify risk factors for continued illicit opiate use in patients treated for opiate abuse. The study identified 69 research studies where patients received some kind of treatment for their addiction where detoxification from illicit opiates was expected. 43% of studies involved methadone maintenance, 17% hospitalisation, 9% naltrexone and 7% methadone detoxification. Unfortunately, Brewer et al. (1998) did not differentiate between those studies involving detoxification and those involving methadone maintenance, and the findings therefore need to be considered within this context.

Brewer et al. (1998, page 84) concluded that their meta-analytic results are roughly consistent with earlier narrative reviews; that “no variable included in the meta-analysis is strongly longitudinally predictive of continued drug use, and only a handful of variables appear to be modestly longitudinally associated with continued use”. They found that variables relating to the subjects' drug history and degree of opiate/drug abuse problems before treatment tended to have slightly stronger associations with continued use, although these were generally of small magnitude. As an example, longer histories of opiate use and from an earlier age, no prior periods of abstinence from opiates, prior treatment for opiate addiction, association with substance abusing peers, abstinence from/light use of alcohol, short length of treatment, and leaving treatment prior to completion were moderately associated with continued illicit opiate use both during and after treatment. Polydrug use, previously thought to be a moderate predictor of relapse, actually showed only negligible to small longitudinal associations with continued use.

San, Cami, Peri, Mata and Porta (1989) found no significant difference between successes and failures at in-patient detoxification, in age, sex, weight, length of opiate use, number of previous attempts to discontinue heroin, and heroin use in the week prior to in-patient detoxification. They do not report on longer-term outcome. However, Vaillant (1966) found that length of prior addiction did not predict future long-term outcome.

Murphy and Bentall (1997) found that number of non-opiate drugs used prior to admission for in-patient detoxification, predicted whether or not clients were in receipt of medication to modify their withdrawal on discharge from the Unit.
Studies in the alcohol field have produced conflicting results, although the tendency is for outcomes to be poorer in those with a longer history and severity of dependence. Miller et al. (1996) found that problem severity e.g. alcohol dependence symptoms, was positively associated with relapse at six months. Baekeland and Lundwall (1975) reported higher dropouts from in-patient alcoholism treatment with individuals in the advanced stages of alcoholism. Goldbeck, Myatt and Aitcheson (1997) found that abstainers and non abstainers at 3-month follow-up after in-patient detoxification, did not differ significantly on severity of alcohol dependence (SADQ scores) nor number of drug related problems on admission. However, age of regular onset of drinking and longest period of abstinence in the previous two years, added to a self-efficacy rating, successfully predicted outcome in 88% of cases.

Personality
Fisher, Elias and Ritz (1998) suggested that the role of personality characteristics in relapse is unclear. They found that high emotional instability and low conscientiousness, as measured on the NEO-Personality Inventory, increased the risk of relapse following substance abuse treatment. However, neither the Millon Clinical Multiaxial Inventory (e.g. Craig 1984) nor the MMPI (e.g. O’Leary, Calsyn, Chaney & Freeman 1977, Brown and Brewster 1973) were able to successfully predict drop outs from a detoxification drug abuse programme.

Some studies have, however, found a relationship between some personality measures and residential treatment outcome. Zuckerman, Sola and Masterson (1975), for example, found that the MMPI profiles of those who dropped out indicated generally more psychological symptomatology, especially with regard to the schizophrenia and mania scales.

However, Powell et al. (1993, page 488), in a study of in-patient opiate detoxification, found that “none of the personality variables (neuroticism, anxiety and impulsivity) predicted days of opiate use at 6 months, nor did they differentiate subjects going on to further residential rehabilitation from those returning to the community”. In addition, the hypothesis that certain personality traits would predispose to lapsing in the context of specific precipitants was unsupported.

The findings, therefore, in this area are inconsistent.
Belief Systems

**Maladaptive schemas**

An area that has been under-researched in the field of addictions is the role of schemas. Beck (1979) proposed that early maladaptive schemas (EMS's) develop during childhood as a result of relationships with significant caretakers. These EMS's, once in place, selectively filter for corroborating experiences such that schemas are extended, elaborated and reinforced throughout the individual's lifetime. During childhood, an EMS is considered functionally useful in that it is a means for the child to understand and manage the environment. However, in adulthood, the EMS outlives its usefulness and creates anxiety and/or depression when it is activated by situations relevant to the particular schema. EMS's are considered to be at the core of the individual’s self-concept and are thought to be highly resistant to change. Young (1994, 1998), based on his clinical experience with chronic and/or difficult psychotherapy patients, identified 16 schemas, of which 15 formed the basis of his schema questionnaire.

Whilst the role of core beliefs has been systematically researched in depressed (Beck, Rush, Shaw & Emery, 1979), personality disorders (Young, 1994), and eating disorder populations (Waller, Meyer & Ohanian, 2001), there has been no research to date on the role of core beliefs in substance misuse populations.

**Defeat and entrapment**

There has likewise been no research in the field of addictions in the role of entrapment and defeat. The key theme of entrapment (internal and external) is the desire for movement and escape. Defeat relates to a sense of failed struggle. There is evidence for the role of both defeat and entrapment in depression (Gilbert & Allan, 1998).

**Severity of withdrawal symptoms**

There are conflicting results in this area.

Kanof et al. (1993) found that patients who failed to complete out-patient opiate detoxification manifested significantly greater subjective and objective signs of opioid withdrawal. Rounsaville, Kosten and Kleber (1985), and Kosten et al. (1985) likewise found that failures at out-patient detoxification had higher maximum self-rated withdrawal symptoms, but only those in the clonidine detoxification group and not those in the methadone detoxification group. They concluded that this variable, however, was less important as a predictor of outcome than the client’s psychological symptom state at the onset of the study.
Phillip, Gossop and Bradley (1986) found that anticipated levels of withdrawal distress were found to be predictors of withdrawal severity during in-patient opioid detoxification, but were not associated with higher rates of attrition.

Clearly this in an area that warrants further research in the area of in-patient opiate detoxification.

Ability to tolerate pain
Hajek, Belcher and Stapleton (1987) found that breath-holding endurance was significantly related to end of treatment outcome in cigarette smokers. It was hypothesised that breath holding endurance might be related to the ability to withstand the discomfort associated with cigarette withdrawal.

This variable has not been investigated in other substance misuse populations.

Intermediate/Background Factors
Shiffman (1989) suggests that distal/personal and intermediate/background factors operate together to “set the stage” or predispose the individual for relapse to occur. The effects of intermediate factors are hypothesised to be cumulative, and therefore require repeated assessments.

Examples of intermediate/background factors are major life events, enduring life strain, everyday life problems, social and environmental supports, stress-coping skills/anticipatory coping skills, general sense of personal efficacy, motivation for self improvement and general expectancies concerning the effects of substance use etc.

Social support
Research has consistently found a significant relationship between social support, contact with drug using peers and outcome.

Support from family and friends has been found to be predictive of long term success in weight reduction, and giving up drinking (Billings and Moos, 1983, Brownell, 1984). In the opiate field, Gossop, Green, Phillips and Bradley (1990) found that “activities or events defined by the subject as expected to be helpful in remaining drug free” (which might include social support), were predictive of outcome at six months.
Vaillant (1966) found the prognosis to be better for addicts who were married (and had been employed) for at least four years.

Other studies have reported the negative effect on drug using peers. Cummings, Gordon and Marlatt (1980) identified social pressure as a precipitant in relapse in 36% of heroin users, 32% of smokers and 18% of “alcoholics”. Project Match (1997) reported less successful outcomes amongst male drinkers who had greater alcohol involvement and support for drinking.

Psychological factors
“Motivational readiness” has long been regarded by clinicians as an important factor in the successful treatment of addictive behaviours, often described as a prerequisite (Rollnick, Mason & Butler, 1999). Although definitions of the terms and measures vary, there is consensus in the literature that “motivational readiness” is multidimensional, including such concepts as self-efficacy, locus of control, outcome expectancies and coping. The exact mechanisms linking these concepts is unclear, complicated by the fact that research has not always clearly defined them. Self-efficacy has arguably been the most widely cited and researched of these psychological concepts, across a variety of therapeutic domains.

**Self-Efficacy**

Self-efficacy, a concept first introduced by Bandura (1977), is the belief in one’s capabilities to manage prospective situations. According to the theory, an individual will engage in coping behaviour when faced with difficult situations if they have the requisite skills, have developed an expectation of confidence in being able to carry out alternative behaviours, and a belief that engaging in particular behaviours will result in the desired outcome. Self-efficacy is regarded as a situationally specific concept, which differs from more global notions of self-confidence, self-esteem or general behavioural competence.

Bandura’s (1977) theory has been applied to the filed of alcohol and substance misuse, and in particular, the process of relapse. Within Marlatt and Gordon’s (1985) cognitive-behavioural model of the relapse process, individuals with high self-efficacy about their ability to avoid relapse are more likely to utilise coping responses and therefore be less vulnerable to relapse, than those with low self-efficacy expectations. Confidence is therefore presumed to be a requisite factor in remaining abstinent.

In the smoking literature, self-efficacy has consistently been found to be related to outcome. DiClemente, Fairhurst and Piotrowski (1995, page 120) remarked that “In almost every case,
efficacy evaluations, particularly abstinence efficacy evaluations, have been the most significant, or among the only significant predictors of smoking cessation treatment outcome that emerged from studies that included a wide range of other predictors’.

Unfortunately, there has been less research conducted among drug and alcohol misusers, and conflicting results have been found regarding the predictive validity of self-efficacy.

In research with problem drinkers, a number of studies have reported self-efficacy ratings at intake to be predictive of outcome status at follow-up. For example, Rist and Watzl (1983) found that individuals who relapsed to drinking within three months of discharge from inpatient treatment, had rated themselves prior to treatment as being less able to resist social pressure to drink than abstainers. Solomon and Annis (1990) reported self-efficacy ratings at intake to predict levels of alcohol consumption at follow-up, but not abstinence status.

Rychtarik, Prue, Rapp and King (1992) looked at self-efficacy at the start and at the end of intake, and found lower self-efficacy at intake to the programme to be predictive of relapse status at six and 12 months. Self-efficacy at the end of treatment was unrelated to relapse status. Rychtarik et al. (1992) comment on a possible ceiling effect to explain the lack of significance of end of treatment ratings, with their clients showing “unrealistically” high expectancies for success at the time of discharge. However, contrary to these findings, Goldbeck et al. (1997) found self-efficacy at the end of treatment to be predictive of abstinence status at 3-month follow-up, as measured on the Situational Confidence Questionnaire (SCQ, Annis 1982) and on a global measure of self-efficacy (confidence item of the SEQ). They did not assess self-efficacy at the start of treatment. Goldbeck et al. (1997) also found that key worker ratings of confidence at abstinence, taken at discharge, successfully differentiated between the abstainers and relapers at three months, and that key workers were significantly less confident than the clients.

There are two studies specific to self-efficacy and in-patient opiate/opioid detoxification, which found contradictory results. Whilst Gossop et al. (1990) reported higher confidence at abstinence on admission to predict less drug use at two months and abstinence at six months after discharge, Powell et al (1993) also found a correlation, but in the opposite direction to that predicted. They found that those individuals with greater confidence at admission in their ability to resist drug use, as measured on a questionnaire based closely on Annis’s (1982) SCQ, reported more heavy drug use at 6-month follow-up.

Burling et al. (1989) in a study of in-patient drug and alcohol misusers, concluded that changes in self-efficacy ratings during treatment were better predictors of relapse status at 6-
months rather than start or end of treatment ratings. They found that eventual abstainers increased their self-efficacy two-fold over relapers during the course of treatment. They did not find a significant difference in self-efficacy scores at intake between the problem drinkers and the other substance misuse groups.

Reilly et al. (1995) carried out a study with opiate users undergoing a 180 day methadone detoxification out-patient programme, and found that self-efficacy ratings (as measured by Annis’s 1982 SCQ), measured at the start of the stabilisation phase and immediately before the start of the methadone taper phase, successfully predicted illicit opiate use. They found that self-efficacy continued to account for variance when other factors e.g. demographic characteristics were controlled statistically.

There are major methodological problems in comparing studies. Differences in study populations, methodological techniques, treatment interventions and choice of outcome variables may account from some of the variability in results. But in addition, the definition and measurement of self-efficacy and confidence varies, making understanding and interpretation of the literature confusing and sometimes misleading. However, a consistent outcome emerging from these studies is the importance of repeated measures when assessing confidence and self-efficacy. Some studies used only a single baseline measure of confidence, but self-efficacy should be considered as a state that changes over time with experience, and not akin to a personality trait.

Self-efficacy is a particularly complex variable and one that needs to be clearly defined in studies. Self-efficacy is often used as a generic term, but DiClemente et al. (1995) proposed five subtypes of self-efficacy; coping self-efficacy, treatment behaviour self-efficacy, recovery self-efficacy, control self-efficacy, and abstinence self-efficacy. Research outcomes may differ depending on which of these constructs is being measured. Most studies use measures of self-efficacy that assess anticipatory coping or confidence in future high-risk situations. Control self-efficacy relates to the individuals confidence in their ability to control the behaviour in various high risk situations e.g. the ability to resist the urge to use heroin, as measured on Annis’s (1982) Situational Confidence Questionnaire. But confusingly, coping self-efficacy is purported to measure belief in one’s ability to cope successfully with specific situations e.g. resist pressure from friends to use the substance. Marlatt, Baer and Quigley (1995) criticised these subtypes, arguing that there is overlap between the different categories. This could explain why some studies refer to Annis’s (1982) SCQ as a measure of control self-efficacy, whilst others refer to it as a measure of coping self-efficacy.
Using these definitions, Gossop et al. (1990) were measuring abstinence self-efficacy using a global judgement of confidence (subjects rated their ability to stay off opiates over six different time periods), whilst Powell et al. (1993), Burling et al. (1989), Rychtarik et al. (1992) and Golbeck et al. (1997) measured control or coping self-efficacy, using either the SCQ (Annis 1982) or a questionnaire based closely on the SCQ.

Marlatt et al. (1995, page 310) wrote:

Given the variability of scales measuring different facets of self-efficacy at different phases of change and for different addiction problems, more research is needed to specify which efficacy scales for what problems will best direct treatment decisions and different phases of change.

If it were possible to do this, treatments could then be focussed on individuals at high risk of relapse, with an emphasis on increasing self-efficacy through such techniques as performance mastery, experience etc.

**Therapist Prognostic Ratings**

Findings in this area are mixed. Although earlier work, e.g. Luborsky et al. (1978), suggested therapist judgements to be poor predictors of outcome, more recent work with drinkers, e.g. Goldbeck et al. (1997), and Curtis Breslin, Sobell, Sobell, Buchan and Cunningham (1997), found key worker prognostic ratings to improve outcome prediction. However, when also taking into account within-treatment measures, for example, within treatment drinking, Curtis Breslin et al. (1997) found that therapist ratings no longer accounted for a significant amount of the unique variance. The implication is that key worker prognostic ratings are important factors in determining outcome, and could be used to inform treatment decision-making processes, but they need to be considered alongside other within-treatment and pre-treatment variables.
Aims of the Research

The aims of this research were two-fold:

a) To compare the outcomes for opiate users admitted for in-patient detoxification under the care of the Specialist Drug Service, with those reported in the recent literature. The rates were determined for successful completion of in-patient detoxification, and abstinence from opiates/opioids at 3-month follow-up.

b) To further the research base into predictors of outcome for opiate users undergoing in-patient detoxification.

The current study is prospective in design, with a focus on baseline measures, but with ongoing measures of self-efficacy and confidence as predictors of outcome. Miller et al. (1996) criticised relapse models based on descriptive antecedents of relapse collected as retrospective client self-report. He felt that it is important to test prospectively models representing causal antecedents of relapse. Whilst recognising the importance of proximal and transitional precipitants in the relapse process, for the sake of simplicity, these variables are not considered in this research.

Hypotheses

This study is largely exploratory in nature. Results of other studies examining predictive factors have provided conflicting results and there are few studies looking specifically at opiate users.

However, on the basis of previous research, the following hypotheses were advanced:

Self-Efficacy

H1. Global measures of self-efficacy, particularly ratings of abstinence self-efficacy taken at admission for detoxification, in themselves will be poor predictors of completion of detoxification and abstinence at follow-up.

H2. Measures of coping self-efficacy will be better predictors of abstinence at follow-up.

H3. Key workers are likely to be less confident and more accurate in their predictions than clients themselves.
Length of Time in Treatment

H4. Longer time in treatment will be related to abstinence at follow-up i.e. those individuals who successfully complete detoxification (see definition of outcome 1, page 31) are more likely to be abstinent at follow-up than those who do not complete.

H5. Those individuals who engage in planned aftercare (naltrexone or residential treatment), are more likely to be abstinent at 3-month follow-up.

The following areas are more exploratory in nature:

Core Beliefs

There are no normative data on substance misuse populations, using the Young Schema Questionnaire (Young, 1998). The aim in using this questionnaire was to explore its applicability to opiate users, and to assess the relationship between core beliefs and outcome.

Leung, Waller and Thomas (2000) found that pre-treatment core beliefs in bulimic women were associated with degree of change in bulimic psychopathology, after a course of group cognitive-behaviour therapy. On the basis of these findings with eating disorders, and the work of Young (1994) with individuals with personality disorders, it was hypothesised that:

H6. Individuals with higher maladaptive schema scores are more likely to relapse.
H7. Individuals with higher maladaptive schema scores are more likely to opt for a residential treatment programme on completion of their detoxification.
H8. Individuals with higher maladaptive schema scores are expected to have longer drug using histories, and to have started using opiates at a younger age.

Entrapment

There are no normative data on substance misuse populations using the entrapment questionnaire and therefore the aim of using this questionnaire was to explore the applicability of the entrapment questionnaire with opiate users, and to assess its relationship to outcome.

On the basis of the work on entrapment and depression (e.g. Gilbert and Allan, 1998), it was hypothesised that:
H9. Higher entrapment scores, both internal and external, are associated with poorer outcomes i.e. higher rates of non-completion of detoxification and higher rates of relapse.

Ability to Tolerate Discomfort

H10. Non-completers of detoxification will have higher withdrawal scores.

H11. Completers and abstainers are able to hold their breath for longer time periods i.e. are generally better able to withstand pain and discomfort.

Specialist Drugs Service (S.D.S.) “myths”?

Staff within S.D.S. hold certain beliefs about standards that clients should achieve prior to coming in for detoxification. This study examines the evidence for these beliefs.

H12. Individuals stable on methadone prior to admission are more likely to complete their detoxification and be abstinent at follow-up.

H13. Those planning to go to a residential treatment centre are more likely to complete their detoxification.

H14. Previous experience of abstinence and longer periods of abstinence are related to a better outcome.

H15. Living with other users/having a using partner is related to poorer outcome.
Method

Participants

All patients admitted to the drug detoxification beds at the local psychiatric hospital under the care of the Specialist Drug Service were invited to take part in the study. Patients were eligible to participate in the study if they were undergoing primary opiate or opioid detoxification and their goal was complete abstinence from opiates or opioids, at least for the three months following their detoxification.

Over a period of 18 months, a total of 70 patients were recruited. Only one patient refused to participate. The sample consisted of 57 men (81%) and 13 women (19%), mean age 29 years (range 20-47 years). The majority were single at the time of admission (77%), 24 (34%) were living with their parents, six (9%) were married or cohabiting with another drug user, 14 (20%) were living alone, 18 (26%) were living with drug using friends and 8 (11%) were living with non-drug using friends.

The mean age of initial heroin use was 19 years (range 12-24 years) and the mean length of problematic use was 8 years (range 3-13 years). The majority, (74%), had a previous experience of abstinence from opiates and opioids (range 1 to 12 times), from one week to 11½ years (mean 54 weeks, median 11 weeks), but for 18 participants (26%), this was their first serious attempt at detoxification.

The majority, (84%), were admitted for opioid or opiate detoxification only, but 7% received additional adjunctive medication for alcohol withdrawal and 9% for benzodiazepine withdrawal. 9 participants (13%), had used methadone only in the 30 days prior to their admission and 8 (11%), had used heroin only. The majority (76%) had used a combination of the two. The mean starting dose of methadone mixture was 32mg (range 0 to 80mg).

23 participants (33%) planned to go straight on to a drug residential treatment centre at the end of their detoxification, and 42 (60%) planned to return home on naltrexone, the opiate blocker, and to attend relapse prevention or self help groups in the community. For the remaining 5 individuals, naltrexone was not an option due to severe liver damage. The majority of residential treatment centres will not accept individuals on naltrexone, but one individual planned to go to a residential treatment centre on naltrexone.
All participants stated abstinence from opiates or opioids for at least three months as their stated goal following detoxification. The average length of stay on the ward was 11 days.

Measures

Drug-Taking Confidence Questionnaire (DTCQ-8)

(Sklar & Turner, 1999, Appendix 2)

This is an 8-item, self-administered questionnaire, derived from the 50 item-Drug-Taking Confidence Questionnaire (Annis, 1982). It is designed to assess anticipatory coping self-efficacy across categories of potential relapse situations, including negative emotional states, physical discomfort, pleasant emotions, testing personal control, urges and temptations to use, conflict with others, social pressure to use and pleasant times with others. Individuals are instructed to imagine themselves in each situation and indicate on a 6-point scale how confident they are that they could resist the urge to use heroin or other opiates in each of the 8 situations (0 = not at all confident to 100 = very confident).

A global coping self-efficacy score can be obtained by calculating the mean of the 8 responses.

Sklar and Turner (1999) showed this measure to be a reliable and valid global indicator of coping self-efficacy. The DTCQ-8 accounted for 95% of the variance in the total DTCQ-50 scores and correlated 0.97 with the total DTCQ-50 scores. Construct validity was demonstrated using the SOCRATES-revised (Miller, 1991).

Self-Efficacy Questionnaire (SEQ - client version)

(Goldbeck, Myatt & Aitchison, 1997, Appendix 3)

Individuals rate themselves on a 7-point semantic differential scale with regard to their confidence to complete the detoxification programme, their confidence at remaining abstinent over a period of three months (the main self-efficacy measure), the degree of difficulty expected in remaining abstinent, their anticipated need for help, their desire/motivation to stop using, and their perceived ability to use heroin once or twice without relapsing.

On completion of the self-efficacy questionnaires, participants were asked what they based their ratings of confidence on, for example, if they gave themselves 6 out of 7 in term of
confidence at completing the detoxification programme, they were asked why they had given themselves 6 and not 7? If they rated 7, they were asked what made them 100% confident.

Participants were asked to complete this questionnaire at the beginning of their admission (SEQ1), on discharge from the Unit (SEQ2), and at 3-month follow-up (SEQ3). The only differences between the three questionnaires, was that in the SEQ2, the question relating to completion of the detoxification programme was omitted, and in the SEQ3, “How confident are you that you will remain abstinent from heroin over the next 3 months?” was changed to “How confident are you that you will be abstinent from heroin over the next 3 months?”. This change in wording was required to make the questionnaire relevant to all participants, including those who had relapsed.

Breath-holding Task

(Hajek et al., 1987)
Individuals were asked to remain seated, to take a deep breath, and to see how long they could hold their breath for.

Christo Inventory for Substance-misuse Services (CISS)

(Christo, Spurrell & Alcorn, 2000, Appendix 4)
This is a 10-item outcome evaluation tool completed by the key worker. The inventory identifies 10 areas, including; social functioning, general health, sexual/injecting risk behaviour, psychological functioning, occupation, criminal involvement, drug/alcohol use, ongoing support, compliance and working relationships. Outcome areas are scored on a 3-point scale of problem severity: 0 = none, 1 = moderate and 2 = severe. A total score of 0 to 5 is classified as “low problem severity”, 6 to 12 “average problem severity”, and 13 to 20 “high problem severity”.

A study looking at the validation of the Christo Inventory (Christo et al., 2000) found an item alpha coefficient of internal consistency of 0.74, a test-retest coefficient of 0.82, and an inter-rater coefficient of 0.82. It demonstrated good face validity and satisfactory concurrent and discriminant validity.
Self-Efficacy Questionnaire—(key worker version)

(Goldbeck et al., 1997, Appendix 5)
These are parallel versions of the client questionnaires, but with the wording “How confident are you that your client will ....”

Key workers were likewise asked to record the reasons for their ratings.

The Entrapment Scale

(Gilbert & Allan, 1998, Appendix 6)
This is an 18-item, self-completion scale. Individuals indicate on a five point scale the degree to which the items represent their view of themselves; 0 = not at all like me, to 4 = extremely like me. The scale has three factors: internal entrapment (6 items), which relates to escape motivation triggered by internal feelings and thoughts e.g. “I feel trapped inside myself”, external entrapment (10 items), which relates to perceptions of things in the outside world that trigger escape motivation e.g. “I feel trapped by other people”, and contentment (two items).

Subject’s scores were calculated for internal entrapment, external entrapment and contentment by taking the mean for the summed items for each of the three factors.

The Schema Questionnaire: Short Form (YSQ-S)

(Young, 1998, Appendix 7)
This is a 75-item self-completion questionnaire designed to identify early maladaptive schemas or unconditional core beliefs. Beck (1979) sees these as representing the deepest level of cognition, formed largely in early childhood.

Individuals are instructed to read through statements and to rate from on a 7-point scale how well they think it describes them; 1 = “completely untrue of me” to 6 = “describes me perfectly”.

The questionnaire identifies 15 schemas, including, for example, abandonment (the belief that one will inevitably be deserted by others), defectiveness/shame (the belief that one has unacceptable, irreparable flaws) and emotional inhibition (the belief that it is not acceptable to experience or express emotions).
There are five statements relating to each schema. A mean for each schema was calculated, providing 15 individual scores, five aggregated schema scores and one total score. In all cases, a higher score reflects a more maladaptive, unhealthy core belief system.

Schmidt, Joiner, Young and Telch (1995) demonstrated test-retest reliability and internal consistency of the YSQ (205-item). They also reported the YSQ to possess convergent and discriminant validity with respect to measures of psychological distress, self-esteem, cognitive vulnerability for depression and personality disorder symptoms.

Waller et al (2001) concluded that the 75-item shortened version of the YSQ had similar levels of internal consistency to the 205-item long version. In their study, the YSQ-S demonstrated good reliability and discriminant validity. However, there are no published reports on using this scale with substance misuse populations.

Opiate Withdrawal Scale (OWS)

(Modified from Ghodse, 1995, Appendix 8)
This is a 19-item scale listing a variety of opiate withdrawal symptoms, e.g. yawning, poor sleep, sweating, vomiting, diarrhoea etc. This scale is designed to be completed by a member of staff in discussion with the client. For each withdrawal symptom, the staff member records a number from 0 to 3; 0 indicating no symptoms and 3 indicating marked or frequent symptoms.

The highest total withdrawal score for any one day during the admission was extracted from the case records.

Starting Dose of Methadone

The dose of methadone given on the day after admission was used as the starting dose. The reason for this is that the amount of opiates or opioids used on the day of admission was highly variable and not considered to be a reliable indicator of the level of dependence, given that individuals often binge just before coming into hospital. The dose of methadone given on the day after admission is calculated on the individuals drug use on admission and on evidence of opiate withdrawal in the first 24 hours on the ward.
3-month Follow-up Interview

(Appendix 9)
Participants were asked about their drug use in the last 7 days, 30 days and three months. They were also asked to indicate on a scale from 1 to 10 their level of satisfaction with their detoxification, support from their key worker, and their aftercare. They were invited to comment on how things could have been better. In addition, they were asked to complete the SEQ3 and the DTCQ-8.

Procedure

Ethical approval was obtained from the Trust's Research Ethics Committee. Participants were given an information leaflet inviting them to take part in the study, and written consent was obtained at the start and also at the point of discharge, giving the researcher consent to contact at three months.

The in-patient detoxification programme is based on a 30-bedded psychiatric ward. At any one time there are a maximum of five Specialist Drug Service patients on the ward, typically admitted for 2-week opioid or opiate detoxification. The detoxification regimen consists of a rapid blind methadone reduction, up to four days, followed by lofexidine and adjunctive medication for withdrawal symptoms. The actual detoxification regimen usually lasts 10 and 12 days. Induction on to Naltrexone, an opioid blocker, is offered on day 14 of the admission, just prior to leaving the Unit. Individuals going on to a residential drug treatment centre are expected to go straight from the Unit to the treatment centre.

The Unit itself provides a range of occupational therapy activities on and off the ward, and there is access to regular ear acupuncture sessions. Ward and community staff provide individual support and counselling throughout the programme.

Patients are admitted for in-patient detoxification following a minimum of three months individual and/or group preparation with their key worker from the Specialist Drug Service. Many will have undergone a period of methadone substitution prior to their detoxification, either under the care of their G.P. or with the Specialist Drug Service. Prior to admission, all patients are required to have fully worked out after-care plans, specifying the type and intensity of support following their detoxification. Those going on to a residential treatment centre following detoxification will also have been required to attend for a Community Care Assessment, and to have participated in group counselling prior to being accepted for funding.
for residential treatment. Those not planning on attending a residential treatment centre are strongly encouraged to consider naltrexone as part of their aftercare plan.

Patients who agreed to participate in the study were interviewed between 24 and 48 hours after admission, a point at which withdrawal effects would be expected to be minimal. The interview lasted approximately 30 minutes. Information was collected on demography, their opiate using history, previous experience of abstinence, and their planned outcome (Appendix 1). Participants also completed the breath holding task, the SEQ-1 and the DTCQ-8. Participants were then shown how to complete the Schema Questionnaire and the Entrapment questionnaire, and these were left with the client to complete over the next 24 hours. All were offered help in completing these questionnaires, but most felt capable of doing this on their own.

Specialist Drug Service key workers were asked to complete the CISS and a parallel key worker version of the SEQ-1 within 24 and 48 hours of their client being admitted.

Participants were then asked to complete the SEQ-2 and the DTCQ-8 on discharge from the Unit, whether or not they had successfully completed their detoxification regimen. Key workers completed the parallel version of the SEQ-2 at the point of discharge.

Participants were then contacted by telephone and/or letter 12 weeks after leaving the Unit, and received a follow-up interview at a location of their choosing, usually in their home or at the Specialist Drug Service offices. Where the individual had moved out of the area or it was proving difficult to arrange a face to face meeting, the interview was conducted over the telephone. Participants were assured of the confidentiality of the results.

During the follow-up interview, participants were asked about their drug use in the previous week, month and three months since leaving the Unit. A urine sample was requested, in order to verify self-reported drug use. Participants also completed the SEQ-3 and the DTCQ-8. Individuals were reimbursed with a £10 gift voucher and travel expenses for participating in the follow-up interview.

3-month follow-up interviews were successfully conducted with 40 participants (57%). However, three month outcome status was ascertained for an additional 22 participants using information obtained from professionals or family members who were in contact with the participants.
Points of Outcome

1. **Outcome 1 (Discharge from the Unit)**
   a) Unsuccessful completion of in-patient detoxification i.e. voluntarily left the unit or disciplinary discharge before having completed the withdrawal regimen.
   b) Successful completion of in-patient detoxification, i.e. completed the withdrawal regimen.

2. **Outcome 2 (3-month follow-up)**
   a) Abstinent from heroin or methadone at the point of follow-up (i.e. no use in the previous week).
   b) Lapsed or relapsed; i.e. using heroin or methadone at the point of follow-up (i.e. within the last week).

Individuals who had used heroin, methadone, or other opiates/opioids at some point following discharge, but not using at the point of follow-up, were classified as abstinent for the purposes of this study. Those individuals who were using heroin, methadone or other opiates/opioids at the point of follow-up were classified as having relapsed, even if they were not using on a daily basis. Use of other non-opiate/opioid drugs at follow-up did not affect the classification.

**Statistical Analysis**

A large number of factors were examined for their relationship to outcome at two points; completion of in-patient detoxification (completers or non-completers) and 3-month follow-up (abstinent or relapsed). Comparisons of the groups were made using independent t-tests for continuous variables, and chi-squared tests for binary variables, except in cases with small sample sizes (n<5), in which case Fisher’s Exact Test was used instead of chi-squared.

As the object of these preliminary analyses was to generate candidate variables for multiple regression analysis, no correction was made to take account of multiple comparisons, and no covariates were included. In addition to significant variables, variables tending to significance (0.05<p<0.1) were also noted. Subsequently all of the candidate variables identified in the previous analyses as being associated with outcome were entered as predictor variables in stepwise logistic regression analyses. The contribution of individual predictors to a significant overall model was evaluated by the Likelihood Ratio (Tabachnick & Fidell, 2000).

Self-efficacy measures (DTCQ-8 and SEQ), which were administered on more than one occasion, were also analysed by partial correlation and analysis of covariance. All analyses
included the factors age, gender, length of problematic use and longest period drug-free as covariates. Because the confidence ratings were multiple measures, the analysis of covariance included one within-subjects factor, time (at admission, at discharge, and 3 month follow-up) and one between-subjects factor (abstinent or relapsed at three months). Planned t-tests were used to compare groups at each time-point. The analyses were repeated using successful completion of detoxification as an additional covariate; these results were essentially the same as those reported.

Two-tailed tests were used in all analyses.
Results

Overview of Data Set

Of the original 70 participants, outcome status at discharge was ascertained for all admissions.

Outcome status at three months was ascertained for 62 individuals. For 40 of these individuals, outcome status was ascertained by a 3-month follow-up interview, either carried out face to face (73%) or over the telephone (28%). For 22 participants, outcome status at three months was ascertained from information obtained from either family members or professionals in contact with the participant. Outcome at 3-month follow-up was unknown for 8 individuals. Unless stated otherwise, these 8 clients were excluded from all of the analyses.

28 clients completed full self-efficacy and confidence ratings at all three time points (admission, discharge and 3-month follow-up). 52 key workers completed full self-efficacy and confidence ratings at both time points (admission and discharge).

Overview of Outcomes

Completion of In-patient Detoxification

41 individuals (59%) successfully completed in-patient detoxification. The successful completers spent a mean of 14 days on the ward (SD ±2.28 days), which is the anticipated length of stay. The non-completers spent a mean of 8 days (SD ±3.00 days). Assuming three or four days of methadone reduction on admission to the ward, day 8 is the estimated time of peak withdrawal. The successful completers were significantly more likely to complete their treatment plan ($X^2=20.00$, ***$p<0.001$), and to self discharge at the end of their admission (Fisher’s Exact Test, *$p=0.010$).

26% went straight on to a residential treatment centre at the end of their detoxification (78% of those planning to do so). 30% left the ward on naltrexone (49% of those planning to do so), and 46% returned home (only 7% planned to neither go onto naltrexone or residential treatment). One individual went to a residential treatment centre on naltrexone (Table 7).
Of those who failed to complete the detoxification, 5 individuals received a disciplinary discharge due to their use of illicit drugs on the ward, but the majority, (83%), took their own premature discharge.

63% of those interviewed at three months expressed satisfaction with the detoxification (25% indicated 10/10, mean rating 7.03, SD ±2.70). 20% expressed dissatisfaction with the detoxification. 83% felt adequately supported by their Specialist Drug Service key worker during the detoxification.

Abstinence from Heroin at 3-month Follow-up

Out of the original 70 participants, 62 had a known outcome at three months. The overall rate of abstinence from heroin for these 62 individuals was 45%. Of those who successfully completed detoxification, and whose three month outcome status was known, 19 (53%) were still abstinent at three months, and 17 (47%) had relapsed.

89% of participants that went straight on to residential treatment centre on completion of their detoxification were abstinent at three months. 44% of those successfully inducted onto naltrexone were abstinent at three months. Only 2 (8%) of those who returned home neither on naltrexone nor going on to a residential treatment centre, were abstinent at three months (Table 7).

Validity of Results

Missing Data

3 month follow-up interviews

There were no significant differences in the sample of participants who provided 3-month follow-up interviews with those who did not on age, gender, length of problematic heroin use, or longest period of abstinence (see Table 1). However, those who were interviewed at follow-up spent significantly longer on the ward and were more likely to have completed the detoxification. They were also significantly more likely to have an “outcome as planned” and to be abstinent at three months. Interestingly, they were significantly less confident at admission that they would remain abstinent, compared to the sample that did not provide 3-month follow-up interviews.
The sample of participants who did not provide 3-month follow-up interviews scored higher on the CISS on admission. Although they were significantly more confident at admission that they would remain abstinent, compared to the sample interviewed, their key workers were significantly less confident at admission that they would complete their detoxification and remain abstinent.

**Table 1: Characteristics of clients providing and not providing 3-month follow-up interviews**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data provided (n=40)</th>
<th>Data Missing (n=22)</th>
<th>t value</th>
<th>d.f.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>29.60 (±1.20)</td>
<td>28.41 (±1.05)</td>
<td>0.66</td>
<td>60</td>
<td>p=0.510 n.s.</td>
</tr>
<tr>
<td>Length of problematic heroin use (years)</td>
<td>7.73 (±0.82)</td>
<td>7.39 (±0.89)</td>
<td>0.26</td>
<td>60</td>
<td>p=0.794 n.s.</td>
</tr>
<tr>
<td>Longest period of abstinence (weeks)</td>
<td>38.73 (±10.93)</td>
<td>66.09 (±26.01)</td>
<td>-1.13</td>
<td>60</td>
<td>p=0.263 n.s.</td>
</tr>
<tr>
<td>Days on ward</td>
<td>12.10 (±0.53)</td>
<td>9.14 (±0.83)</td>
<td>3.14</td>
<td>59</td>
<td>*p=0.048</td>
</tr>
<tr>
<td>Total CISS</td>
<td>7.76 (±0.49)</td>
<td>9.90 (±0.69)</td>
<td>-2.50</td>
<td>55</td>
<td>**p=0.007</td>
</tr>
<tr>
<td>K W confidence at client completing detox. (time 1)</td>
<td>5.49 (±0.14)</td>
<td>4.05 (±0.28)</td>
<td>5.24</td>
<td>57</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W confidence at client remaining abstinent (time 1)</td>
<td>4.56 (±0.20)</td>
<td>3.20 (±0.25)</td>
<td>4.17</td>
<td>57</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 1)</td>
<td>5.40 (±0.23)</td>
<td>6.14 (±0.24)</td>
<td>-2.02</td>
<td>59</td>
<td>*p=0.048</td>
</tr>
<tr>
<td>Gender: number (%) male</td>
<td>33 (83%)</td>
<td>16 (73%)</td>
<td></td>
<td></td>
<td>X²=0.82 p=0.366 n.s.</td>
</tr>
<tr>
<td>Completed detoxification: Number (%)</td>
<td>29 (73%)</td>
<td>6 (29%)</td>
<td></td>
<td></td>
<td>X²=10.87 **p=0.001</td>
</tr>
<tr>
<td>Outcome as planned on discharge: number (%)</td>
<td>27 (68%)</td>
<td>8 (38%)</td>
<td></td>
<td></td>
<td>X²=4.87 *p=0.027</td>
</tr>
<tr>
<td>Abstinent at 3 months: number (%)</td>
<td>23 (58%)</td>
<td>5 (23%)</td>
<td></td>
<td></td>
<td>X²=6.93 **p=0.008</td>
</tr>
</tbody>
</table>

Note: data is shown for all clients whose end status is known (n=62) Values are means (± standard error), or number and %

K W = key worker
Client confidence and self-efficacy data

Only 28 clients completed full client self-efficacy and confidence ratings at the three time points (admission, discharge and 3-month follow-up). The characteristics of clients who provided complete data and those who did not are shown in Table 2.

The two groups did not differ significantly on age, gender, length of problematic heroin use, or longest period of abstinence. However, a significantly greater proportion of participants who provided complete data, relative to those with missing data, completed their detoxification and were abstinent at three month follow up.

Table 2: Characteristics of participants providing and not providing full self-efficacy and confidence data

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data provided (n=28)</th>
<th>Data missing (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>30.61 (±1.43)</td>
<td>28.0 (±1.0)</td>
<td>1.53</td>
<td>60</td>
<td>p=0.131 n.s.</td>
</tr>
<tr>
<td>Length of problematic heroin use (years)</td>
<td>7.5 (±0.97)</td>
<td>7.69 (±0.8)</td>
<td>0.15</td>
<td>60</td>
<td>p=0.878 n.s.</td>
</tr>
<tr>
<td>Longest period of abstinence (weeks)</td>
<td>42.0 (±13.71)</td>
<td>53.74 (±18.04)</td>
<td>0.50</td>
<td>60</td>
<td>p=0.500 n.s.</td>
</tr>
<tr>
<td>Gender: number (%) male</td>
<td>23 (±82%)</td>
<td>26 (±77%)</td>
<td></td>
<td></td>
<td>X²=0.298 n.s.</td>
</tr>
<tr>
<td>Completed detoxification</td>
<td>22 (79%)</td>
<td>13 (39%)</td>
<td></td>
<td></td>
<td>X²=9.507 ***p=0.002</td>
</tr>
<tr>
<td>Abstinent at 3 months: number (%)</td>
<td>17 (±61%)</td>
<td>11 (±32%)</td>
<td></td>
<td></td>
<td>X²=4.987 *p=0.026</td>
</tr>
</tbody>
</table>

Note: data is shown for clients whose end-status is known (n=62). Values are means (± standard error) or number and %

Corroboration of Self-reported Outcomes

Urine samples were obtained for 14 (35%) of the participants interviewed at 3-month follow-up, and all verified self reported drug use.
Hypotheses

Some of the hypotheses specifically relate to predictors of outcome. Analyses of predictor variables will be dealt with later in the results section and therefore will not be addressed within each of the hypotheses.

Self-Efficacy

H1. Global measures of self-efficacy, particularly ratings of abstinence self-efficacy taken at admission, in themselves will be poor predictors of completion of detoxification and abstinence at follow-up.

Global self-efficacy measures at admission and completion of detoxification

Participants who completed in-patient detoxification were significantly more confident at admission that they would complete the detoxification. Differences in admission scores on ratings of confidence at remaining abstinence were not statistically significant (Table 3). Likewise, key worker ratings of their confidence in clients completing detoxification, at admission, were significantly higher for the completers than the non-completers. Key workers were also significantly more confident on admission that the eventual completers would remain abstinent.

Table 3: Global self-efficacy measures at admission and completion of in-patient detoxification

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completers of detoxification (n=41)</th>
<th>Non-completers of detoxification (n=29)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client confidence at completing detoxification</td>
<td>6.38 (±0.15)</td>
<td>5.74 (±0.27)</td>
<td>2.16</td>
<td>67</td>
<td>*p=0.034</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent</td>
<td>5.88 (±0.16)</td>
<td>5.43 (±0.32)</td>
<td>1.36</td>
<td>66</td>
<td>p=0.179</td>
</tr>
<tr>
<td>K W confidence in client completing detoxification</td>
<td>5.45 (±0.16)</td>
<td>4.36 (±0.24)</td>
<td>3.90</td>
<td>63</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent</td>
<td>4.40 (±0.19)</td>
<td>3.68 (±0.28)</td>
<td>2.23</td>
<td>63</td>
<td>*p=0.029</td>
</tr>
</tbody>
</table>

Note:
Data is shown for all clients
Self-efficacy measures at discharge and completion of detoxification

Completers of detoxification were significantly more confident at discharge that they would remain abstinent, and they rated themselves as more confident on the DTCQ-8. Key workers likewise were significantly more confident that the completers would remain abstinent. Key workers also rated them as significantly more motivated, and as having less difficulty in remaining abstinent on discharge (Table 4).

Table 4: Significant differences in confidence measures at discharge, between the completers and the non-completers of in-patient detoxification (all data)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completers of detoxification (n=41)</th>
<th>Non-completers of detoxification (n=29)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client confidence at remaining abstinent</td>
<td>5.88 (±0.23)</td>
<td>4.58 (±0.57)</td>
<td>2.52</td>
<td>43</td>
<td>*p=0.016</td>
</tr>
<tr>
<td>DTCQ</td>
<td>76.48 (±3.75)</td>
<td>58.48 (±7.49)</td>
<td>2.33</td>
<td>37</td>
<td>*p=0.025</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent</td>
<td>4.68 (±0.18)</td>
<td>2.23 (±0.33)</td>
<td>6.88</td>
<td>58</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W rating of clients difficulty in remaining abstinent</td>
<td>2.53 (±0.22)</td>
<td>1.62 (±0.24)</td>
<td>2.81</td>
<td>58</td>
<td>**p=0.007</td>
</tr>
<tr>
<td>K W rating of clients motivation</td>
<td>5.85 (±0.19)</td>
<td>3.77 (±0.32)</td>
<td>5.89</td>
<td>58</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

Note: Data is shown for all clients

Abstinence self-efficacy and outcome at three months

Participants who successfully achieved abstinence at three months were significantly more confident at discharge from the ward and at 3-month follow-up that they would remain abstinent. Admission ratings were not significantly different (Table 5).

Further analyses were carried out on the data for the 28 individuals who provided complete self-efficacy and confidence data at all three time points. The overall results are essentially the same, in that client’s ratings of confidence in their ability to remain abstinent were significantly greater in participants who were abstinent at 3-month follow-up than in those who had relapsed (F (1,22)=28.3, ***p<0.001). While the time and end-status interaction was not significant (F (2,44)=2.12, n.s.), it is clear that the difference between groups increased over time (Graph 1). The difference between groups was significant at discharge and follow-
up, but not at admission (Table 5). However, there were interesting differences in admission
certainty data in the two groups. Whilst in those who provided complete self-efficacy and
certainty data, there were no significant differences in admission certainty data ($t$
$(26)=0.292, p=0.772, n.s.) between those who abstained (mean CCA=5.35, SEM± 0.35) and
those who relapsed (mean CCA=5.18, SEM±0.48), in those who did not provide full data,
there was a difference in admission certainty data between those who abstained (mean
CCA=6.64, SEM±0.15) and those who relapsed (mean CCA=5.64, SEM±0.30). In this group,
the difference is significant ($t (31)=2.28, *p=0.029$).

Key workers were significantly more confident both at admission and at discharge that the
eventual abstinence would remain abstinent, compared to those who relapsed (Table 5, Graph
1).

The results were confirmed on analysis of the smaller data set for the 52 key workers who
provided certainty data at both time points (Table 5). Overall, key worker ratings of
certainty in their clients ability to abstain were significantly greater in participants who
were abstinent at three months ($F (1,46)=15.66, ***p<0.001$). The time and end-status
interaction was also significant ($F (1,46)=4.81, *p<0.05$). The difference between groups was
significant at admission and at discharge.
Table 5: Abstinence self-efficacy and outcome at three months

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client confidence at remaining abstinent (time 1)</td>
<td>5.86 (±0.25)</td>
<td>5.48 (±0.25)</td>
<td>1.04</td>
<td>59</td>
<td>p=0.305 n.s.</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 2)</td>
<td>6.09 (±0.23)</td>
<td>5.11 (±0.43)</td>
<td>2.12</td>
<td>40</td>
<td>*p=0.041</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 3)</td>
<td>6.39 (±0.28)</td>
<td>2.76 (±0.40)</td>
<td>7.63</td>
<td>37</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent (time 1)</td>
<td>4.48 (±0.25)</td>
<td>3.78 (±0.24)</td>
<td>2.04</td>
<td>57</td>
<td>*p=0.046</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent (time 2)</td>
<td>4.64 (±0.26)</td>
<td>2.76 (±0.33)</td>
<td>4.34</td>
<td>52</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=17)</th>
<th>Relapsed at 3 months (n=11)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client confidence at remaining abstinent (time 1)</td>
<td>5.56 (±0.37)</td>
<td>4.86 (±0.47)</td>
<td>1.09</td>
<td>22</td>
<td>p=0.287 n.s.</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 2)</td>
<td>6.34 (±0.41)</td>
<td>4.21 (±0.52)</td>
<td>3.04</td>
<td>22</td>
<td>**p=0.006</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 3)</td>
<td>5.96 (±0.35)</td>
<td>3.37 (±0.45)</td>
<td>4.86</td>
<td>22</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=25)</th>
<th>Relapsed at 3 months (n=27)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>K W confidence that client will remain abstinent (time 1)</td>
<td>4.52 (±0.24)</td>
<td>3.74 (±0.23)</td>
<td>2.26</td>
<td>46</td>
<td>*p=0.029</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent (time 2)</td>
<td>4.67 (±0.32)</td>
<td>2.86 (±0.31)</td>
<td>3.99</td>
<td>46</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

Note: Data is shown for clients whose end status is known (n=62)

Values for the selected samples are adjusted means (± standard error), with age, gender, length of problematic heroin use, and longest period of abstinence as covariates.
For the selected samples, data is only shown for those that provided confidence ratings at all time points.
N.B. data is shown for all clients with full client self-efficacy, and client and key worker confidence data (n=28).

\[H2.\] Measures of coping-self-efficacy will be better predictors of abstinence at follow-up.

DTCQ-8 and abstinence at 3-month follow-up

There were significant correlations between clients’ confidence in their ability to remain abstinent (SEQ) and their scores on the DTCQ-8 at all three time points (0.73, 0.63, 0.77 respectively, ***p<0.001).

Taking the complete data set, DTCQ-8 scores at admission and at discharge did not significantly differentiate between those who achieved abstinence at three months and those who relapsed. The only statistically significant difference was at three months (Table 6).
However, analysing data for the smaller subset of 28 individuals who provided DTCQ-8 data at all three time points, overall scores on the DTCQ-8 were significantly greater in participants who were abstinent at 3-month follow-up than in those who had relapsed (F (1,22)=23.78, ***p<0.001). There was a significant end-status interaction with time (F (2,44)=5.24, *p<0.05), with the difference between groups increasing over time. The difference between groups was significant at all three time points (Table 6, Graph 2).

These differences within and between subjects were replicated, controlling for completion of detoxification (F (1,21)=24.078, ***p<0.001, F (2,42)=4.951, *p<0.05).

**Table 6: DTCQ-8 and three month outcome**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTCQ (time 1)</td>
<td>68.34 (±4.19)</td>
<td>64.19 (±4.43)</td>
<td>0.67</td>
<td>59</td>
<td>p=0.506 n.s.</td>
</tr>
<tr>
<td>DTCQ (time 2)</td>
<td>75.14 (±4.03)</td>
<td>67.87 (±6.78)</td>
<td>0.98</td>
<td>34</td>
<td>p=0.335 n.s.</td>
</tr>
<tr>
<td>DTCQ (time 3)</td>
<td>87.87 (±3.53)</td>
<td>40.76 (±5.28)</td>
<td>7.68</td>
<td>37</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=17)</th>
<th>Relapsed at 3 months (n=11)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTCQ (time 1)</td>
<td>73.74 (±4.75)</td>
<td>55.19 (± 6.09)</td>
<td>2.26</td>
<td>22</td>
<td>*p=0.034</td>
</tr>
<tr>
<td>DTCQ (time 2)</td>
<td>78.89 (± 5.04)</td>
<td>55.13 (± 6.45)</td>
<td>2.73</td>
<td>22</td>
<td>*p=0.012</td>
</tr>
<tr>
<td>DTCQ (time 3)</td>
<td>90.67 (±4.74)</td>
<td>42.49 (± 6.07)</td>
<td>5.88</td>
<td>22</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

Note:
Data is shown for clients whose end-status is known (n=62)

Values for the selected sample are adjusted means (± standard error), with age, gender, length of problematic heroin use, and longest period of abstinence as covariates.

For the selected sample, data is only shown for those that provided data at all 3 time points.
Graph 2: DTCQ8 scores for abstainers and relapers at different time points

N.B. data is shown for all clients providing full self-efficacy and confidence data (n=28).

H3. Key workers are likely to be less confident and more accurate in their predictions than clients themselves

Key workers were accurate in their predictions. They were significantly more confident at admission (*p=0.046) and at discharge (**p<0.001) that the eventual abstainers would remain abstinent (Table 5). Clients were less accurate in their predictions. All clients were confident, at admission, in their ability to remain abstinent, and there were no significant differences between those who achieved abstinence and those who relapsed (p=0.305, n.s.) (Table 5).

Key workers were significantly less confident than clients at admission. An ANOVA of client versus key worker confidence ratings at admission of remaining abstinent (controlling for age, gender, length of problematic heroin use, longest period of abstinence and end status, and excluded those with an unknown outcome), produced significant differences (F (1,52)=4.65, *p<0.036).
Key worker and client confidence ratings of ability to remain abstinent were not significantly correlated at admission (Pearson correlation, r=-0.47, p=0.83, n.s.), but were significantly correlated at discharge (Pearson correlation, r=0.62, **p<0.01).

Length of Time in Treatment

| H4. | Longer time in treatment will be related to abstinence at follow-up i.e. those individuals who successfully complete detoxification are more likely to be abstinent at follow-up than those who do not complete. |

The relationship between outcome one (completion of detoxification) and outcome two (abstinence at 3-month follow-up) was in the expected direction, but did not reach statistical significance (X²= 2.324, d.f.=1, p=0.127, n.s.).

| H5. | Those individuals who engage in planned aftercare (naltrexone or residential treatment), are more likely to be abstinent at 3-month follow-up. |

Overview of planned and actual outcomes

90% of those going to a residential treatment centre and 42% of those successfully inducted on to naltrexone were abstinent at 3-month follow-up. Only two participants (8%), who did not go onto naltrexone or go to a residential treatment centre were abstinent at three months (Table 7).
Table 7: Planned outcome and actual outcome at discharge

<table>
<thead>
<tr>
<th></th>
<th>Planned outcome (number of people (n=70))</th>
<th>Actual outcome (number and % of people (n=70))</th>
<th>% of those with outcome as planned at discharge</th>
<th>Number and % of those abstinent at 3 months (n=62)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential treatment centre</td>
<td>23*</td>
<td>18* (26%)</td>
<td>78%</td>
<td>16/18 (89%) 18/20 (90%)**</td>
</tr>
<tr>
<td>Naltrexone</td>
<td>43 •</td>
<td>21• (30%)</td>
<td>49%</td>
<td>8/19 (42%)</td>
</tr>
<tr>
<td>Home</td>
<td>5</td>
<td>32 (46%)</td>
<td>n/a</td>
<td>2/24 (8%)</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>70</td>
<td>28/62 (45%)</td>
<td></td>
</tr>
</tbody>
</table>

Note:
Data is shown for all clients, except in the final column which includes only those whose end-status is known

* One individual attended a residential treatment centre on naltrexone.
** A further two individuals went on to a residential treatment centre within the 3-month follow-up period.

Residential Treatment as aftercare

23 individuals planned to go to a residential treatment centre following their detoxification. 18 (78%) went straight on to a residential treatment centre as planned, and two went sometime later, increasing the admission rate to 87%.

3-month follow-up interviews were carried out with 14 out of the 20 individuals (70%) that went on to a residential treatment centre. 71% were satisfied with the treatment centre. (43% indicated 10/10, mean rating 7.5, SD ±2.79). Only one person was completely dissatisfied.

Outcome status at 3-month follow-up was ascertained for all individuals who went on to a residential treatment centre. Those who went to a residential treatment centre were significantly more likely to be abstinent at three months than those who did not go (89% vs 23%, X²=23.69, ***p<0.001). The mean length of stay in the treatment centre was 71.7 days (SD ±32.37). 70% were still at the residential treatment centre at 3-month follow-up; only 15% (three people) stayed a week or less.

Those planning on attending a residential treatment centre following detoxification were different from those not planning on doing so, in that they were younger, had a shorter history.
of problematic heroin use, had shorter periods of abstinence, were more likely to be single, and had more days of intravenous (IV) use prior to their admission (see Table 8). However, there were no significant differences in frequency of drug use in the 30 days prior to admission.

Table 8: Significant differences between individuals planning and not planning to go to a residential treatment centre

<table>
<thead>
<tr>
<th>Variable</th>
<th>Planning to go to a rehab. (n=23)</th>
<th>Not planning on going to a rehab. (n=47)</th>
<th>t value</th>
<th>d.f.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
<td>26.61 (±1.32)</td>
<td>30.15 (±0.93)</td>
<td>2.18</td>
<td>68</td>
<td>*p=0.032</td>
</tr>
<tr>
<td>Length of problematic use (yrs)</td>
<td>5.00 (±0.38)</td>
<td>9.01 (±0.74)</td>
<td>3.68</td>
<td>68</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>Longest period of abstinence (weeks)</td>
<td>8.3 (±3.27)</td>
<td>76.6 (±18.50)</td>
<td>2.57</td>
<td>68</td>
<td>*p=0.012</td>
</tr>
<tr>
<td>No. of days IV in 30 days prior to admission</td>
<td>18.26 (±2.60)</td>
<td>10.28 (±1.92)</td>
<td>-2.43</td>
<td>67</td>
<td>*p=0.018</td>
</tr>
<tr>
<td>Single</td>
<td>22 (96%)</td>
<td>32 (68%)</td>
<td>Fisher’s exact test</td>
<td>*p=0.013</td>
<td></td>
</tr>
</tbody>
</table>

Note: Data is shown for all clients

Only three individuals planning to go to a residential treatment centre failed to get there. The numbers were too small to allow for any meaningful analysis.

Naltrexone as aftercare

43 individuals planned to go on to naltrexone at the end of their detoxification, and 21 (49%) were successfully inducted onto naltrexone as planned.

Three month interviews were conducted on 18 out of the 21 individuals (86%) who successfully started on naltrexone. Only three people (17%) were still taking naltrexone at three months, 8 (44%) took it for a week or less (mean 33.78 days, SD ±34.06). 8 (44%) expressed dissatisfaction with it, and 8 (44%) were satisfied with it (28% indicated 10/10, mean rating 5.5, SD ±3.88).

Those who were successfully inducted on to naltrexone were significantly more likely to complete their detoxification compared to the group who planned but failed to go on to naltrexone (95% vs 27%, Fisher’s Exact Test ***p<0.001). They were also significantly more likely to be abstinent at three months, (42% vs 6%, Fisher’s Exact Test *p<0.05, Table 9).
There were other significant differences between those who were successfully inducted on to naltrexone, compared to those that planned to but failed. The former had used significantly more days IV prior to admission. Key workers were significantly more confident on admission that those who were later successfully inducted onto naltrexone would complete the detoxification and be abstinent at follow-up. Both key workers and clients were significantly more confident at discharge in the group successfully inducted (Table 9).

Table 9: Significant differences between those successfully inducted on to naltrexone and those not

<table>
<thead>
<tr>
<th>Variable</th>
<th>Went on to naltrexone (n=21)</th>
<th>Planned, but failed to go onto naltrexone (n=22)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days on ward</td>
<td>13.67 (±0.37)</td>
<td>9.82 (±0.81)</td>
<td>4.23</td>
<td>41</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>Number of days IV prior to admission</td>
<td>15.71 (±2.96)</td>
<td>5.38 (±2.26)</td>
<td>2.77</td>
<td>40</td>
<td>**p=0.008</td>
</tr>
<tr>
<td>K W confidence in client completing detox. (time1)</td>
<td>5.60 (± 0.21)</td>
<td>4.53 (±0.26)</td>
<td>3.24</td>
<td>37</td>
<td>**p=0.003</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent (time 1)</td>
<td>4.75 (±0.23)</td>
<td>3.63 (±0.32)</td>
<td>2.89</td>
<td>37</td>
<td>**p=0.006</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 2)</td>
<td>6.06 (±0.24)</td>
<td>3.90 (±0.67)</td>
<td>3.66</td>
<td>26</td>
<td>**p=0.001</td>
</tr>
<tr>
<td>K W confidence at client remaining abstinent (time 2)</td>
<td>5.00 (±0.30)</td>
<td>2.48 (±0.36)</td>
<td>5.21</td>
<td>36</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>Completed detoxification</td>
<td>20 (95%)</td>
<td>6 (27%)</td>
<td></td>
<td></td>
<td>Fisher’s Exact Test ***p&lt;0.001</td>
</tr>
<tr>
<td>Abstinent at 3 months</td>
<td>8/19 (42%)</td>
<td>1/18 (6%)</td>
<td></td>
<td></td>
<td>Fisher’s Exact Test *p=0.019</td>
</tr>
</tbody>
</table>

Note:
Data is shown for all clients planning to go on to naltrexone (n=43), except in the final row, where data is shown for those clients planning to go onto naltrexone and whose end status was known (n=37).
Schemas

\(H6.\) Individuals with higher maladaptive schema scores are more likely to relapse.

There were no significant differences in individual or aggregated schema scores between those who achieved abstinence and those who had relapsed.

There was a trend for the non-completers of in-patient detoxification to score higher at admission on the YSQ-S "Failure to Achieve" than the completers, (Table 13), but this was not quite statistically significant (\(p=0.065\)).

\(H7.\) Individuals with higher maladaptive schema scores are more likely to opt for a residential treatment programme on completion of their detoxification.

There were no significant differences in individual or aggregated schema scores between those planning to go to a residential treatment centre and those not.

\(H8.\) Individuals with higher maladaptive schema scores are expected to have longer drug using histories, and to have started using opiates at a younger age.

The YSQ-S is made up of 15 individual schemas, five aggregated schema groups, and a total schema score. Two variables were examined; length of problematic heroin use and age first used opiates.

A total of 30 correlations were carried out with the individual core belief scores, and one significant correlation was found. "Insufficient Self Control/Self Discipline" correlated negatively with age first used opiates (Pearson correlation, \(r=-0.328, *p=0.016\)). However, the probability of a chance finding at \(p<0.02\) is 1/50, and therefore there is the possibility that this one significant correlation is a chance finding.

A total of 10 correlations were carried out with the aggregated schema groups, and two significant correlations were found. "Impaired Limits" was positively correlated with length of problematic heroin use (Pearson correlation, \(r=0.355, *p=0.017\)), and "Other Directedness" was positively correlated with age first used opiates (Pearson correlation, \(r=\)
0.305, *p= 0.042). The probability of a chance finding at p<0.05 is 1/20, and therefore these two significant correlations can be viewed as statistically meaningful.

**Entrapment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completion of detox. (n=41)</th>
<th>Non-completion (n=29)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal means</td>
<td>1.91 (±0.24)</td>
<td>2.35 (±0.31)</td>
<td>-1.14</td>
<td>51</td>
<td>p=0.261 n.s.</td>
</tr>
<tr>
<td>External means</td>
<td>1.57 (±0.15)</td>
<td>1.97 (±0.21)</td>
<td>-1.60</td>
<td>51</td>
<td>p=0.115 n.s.</td>
</tr>
<tr>
<td>Total entrapment</td>
<td>30.77 (±2.57)</td>
<td>36.09 (±3.39)</td>
<td>-1.27</td>
<td>51</td>
<td>p=0.209 n.s.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal means</td>
<td>2.10 (±0.30)</td>
<td>2.22 (±0.27)</td>
<td>-0.31</td>
<td>45</td>
<td>p=0.760 n.s.</td>
</tr>
<tr>
<td>External means</td>
<td>1.71 (±0.22)</td>
<td>1.83 (±0.17)</td>
<td>-0.47</td>
<td>45</td>
<td>p=0.643 n.s.</td>
</tr>
<tr>
<td>Total entrapment</td>
<td>32.64 (±3.69)</td>
<td>34.84 (±2.65)</td>
<td>-0.49</td>
<td>45</td>
<td>p=0.625 n.s.</td>
</tr>
</tbody>
</table>

*Note:* Data is shown for all clients whose discharge status and outcome status was known.
Ability to tolerate discomfort

**H10.** Non-completers of detoxification will have higher withdrawal scores.

There were no significant differences in highest withdrawal scores between those that completed detoxification and those that did not complete (35 vs 34.25, t=0.295, d.f.=60, p=0.769, n.s.).

**H11.** Completers and abstainers are able to hold their breath for longer time periods i.e. are generally better able to withstand pain and discomfort.

There were no significant differences in length of breath-holding between those who completed detoxification and those who did not (43.09 seconds vs 40.65, t=0.557, d.f.=59, p=0.579, n.s.). Nor was there a significant difference at 3-month follow-up (42.81 seconds for abstainers vs 41.19 for relapsers, t=0.365, d.f.=56, p=0.717, n.s.).

**SDS “myths”?**

**H12.** Individuals stable on methadone prior to admission are more likely to complete their detoxification and be abstinent at follow-up.

9 participants had used methadone only on the 30 days prior to admission, and 8 had used heroin only. The majority had used a combination of the two. There were no significant differences between the heroin only and methadone only groups regarding completion of detoxification (Fisher’s Exact Test, p=1.000, n.s.), nor end status (Fisher’s Exact Test, p=1.000, n.s.). However, there were some interesting differences in the two groups (Table 11).
Table 11: Significant differences between the heroin only and the methadone only groups at admission

<table>
<thead>
<tr>
<th>Variable</th>
<th>Heroin only (n=8)</th>
<th>Methadone only (n=9)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schema scores</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social isolation and alienation schema</td>
<td>3.78 (±0.57)</td>
<td>2.00 (±0.34)</td>
<td>2.67</td>
<td>14</td>
<td>*p=0.018</td>
</tr>
<tr>
<td>Vulnerability to harm schema</td>
<td>3.23 (±0.51)</td>
<td>1.93 (±0.28)</td>
<td>2.24</td>
<td>14</td>
<td>*p=0.042</td>
</tr>
<tr>
<td>Other directedness schema</td>
<td>3.44 (±0.30)</td>
<td>2.59 (±0.19)</td>
<td>2.42</td>
<td>12</td>
<td>*p=0.033</td>
</tr>
<tr>
<td>Overvigilance and inhibition schema</td>
<td>3.69 (±0.25)</td>
<td>2.58 (±0.36)</td>
<td>2.501</td>
<td>12</td>
<td>*p=0.028</td>
</tr>
<tr>
<td>Total schema score</td>
<td>3.52 (±0.33)</td>
<td>2.48 (±0.23)</td>
<td>2.583</td>
<td>12</td>
<td>*p=0.024</td>
</tr>
<tr>
<td><strong>Self-efficacy and confidence measures</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTCQ-8 (time 1)</td>
<td>64.73 (±8.46)</td>
<td>86.79 (±3.91)</td>
<td>-2.368</td>
<td>14</td>
<td>*p=0.033</td>
</tr>
<tr>
<td>Client confidence at remaining abstinent (time 1)</td>
<td>4.63 (±0.68)</td>
<td>6.38 (±0.26)</td>
<td>-2.401</td>
<td>14</td>
<td>*p=0.031</td>
</tr>
<tr>
<td>Client rating of difficulty at remaining abstinent (time 1)</td>
<td>2.13 (±0.61)</td>
<td>5.13 (±0.69)</td>
<td>-3.249</td>
<td>14</td>
<td>**p=0.006</td>
</tr>
<tr>
<td>Client rating of motivation (time 1)</td>
<td>6.13 (±0.40)</td>
<td>7.00 (±0.00)</td>
<td>-2.198</td>
<td>14</td>
<td>*p=0.045</td>
</tr>
</tbody>
</table>

Note:
Data is included for all clients who had used methadone, or heroin only, in the 30 days prior to admission (n=17)

On admission, current heroin users, compared to current methadone users, had significantly higher total maladaptive schema scores, and higher aggregated schema scores on “Social Isolation and Alienation”, “Vulnerability to Harm”, “Other Directedness”, and “Overvigilance and Inhibition”. Current heroin users also felt less confident at admission at remaining abstinent, and they scored lower on the DTCQ-8, i.e. they were less confident in their ability to resist using heroin in specific situations. The heroin users rated abstinence as significantly more difficult, and they rated themselves as less motivated than the methadone users.
**H13.** Those planning to go to a residential treatment centre are more likely to complete their detoxification.

Those planning on going to a residential treatment centre were not significantly more likely to complete their detoxification ($X^2=0.744$, d.f.=1, $p=0.389$, n.s.).

**H14.** Previous experience of abstinence and longer periods of abstinence are related to a better outcome.

There was a tendency in the opposite direction, i.e. those abstinent at three months had less experience of previous abstinence, but the results were not statistically significant (Table 12).

### Table 12: Previous abstinence and outcome at three months

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longest period of abstinence (weeks)</td>
<td>33.07 ($\pm$14.17)</td>
<td>61.09 ($\pm$17.56)</td>
<td>-1.21</td>
<td>60</td>
<td>$p=0.233$ n.s.</td>
</tr>
<tr>
<td>Number of times previously abstinent</td>
<td>1.54 ($\pm$0.26)</td>
<td>2.21 ($\pm$0.45)</td>
<td>-1.22</td>
<td>60</td>
<td>$p=0.228$ n.s.</td>
</tr>
</tbody>
</table>

Note:
Data is shown for all clients whose end-status is known (n=62)

**H15.** Living with other users/having a using partner is related to poorer outcome.

Those living with other users (friends or partners) were significantly more likely to relapse ($X^2=5.372$, d.f.=1, *$p=0.020$). Single individuals were significantly more likely to be abstinent at three months ($X^2=8.094$, d.f.=1, **$p=0.006$).
Predictors of Outcome

Successful Completion of In-patient Detoxification

On admission, the eventual non-completers rated themselves as significantly less confident at completing the detoxification programme compared to the completers. Key workers were likewise less confident at admission that the eventual non-completers would complete the detoxification or remain abstinent following discharge.

Table 13: Significant or near significant differences at admission between completers and non-completers of in-patient detoxification (continuous variables)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completers (n=41)</th>
<th>Non-completers (n=29)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>External means</td>
<td>1.58 (±0.15)</td>
<td>1.97 (±0.21)</td>
<td>-1.60</td>
<td>51</td>
<td>p=0.115</td>
</tr>
<tr>
<td>YSQ-failure to achieve</td>
<td>2.40 (±0.22)</td>
<td>3.14 (±0.36)</td>
<td>-1.88</td>
<td>58</td>
<td>p=0.065</td>
</tr>
<tr>
<td>Client confidence at completing detoxification (time 1)</td>
<td>6.38 (±0.15)</td>
<td>5.74 (±0.27)</td>
<td>2.16</td>
<td>67</td>
<td>*p=0.034</td>
</tr>
<tr>
<td>K W confidence in client completing detoxification (time 1)</td>
<td>5.45 (±0.16)</td>
<td>4.36 (±0.24)</td>
<td>3.90</td>
<td>63</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W confidence that client will remain abstinent (time 1)</td>
<td>4.40 (±0.19)</td>
<td>3.68 (±0.28)</td>
<td>2.23</td>
<td>63</td>
<td>*p=0.029</td>
</tr>
</tbody>
</table>

Note: Data is shown for all clients where discharge status is known (n=70)
Values are means (± standard error)

None of the categorical baseline data were significantly correlated with completion of detoxification.

The five significant or near significant baseline variables were entered as predictors in a stepwise logistic regression analysis, with completion of detoxification as the dependent variable. The regression model accounted for 16% of the variance (Nagelkerke R Square=0.159, *p=0.012, n=51). The only significant predictor was key worker ratings of confidence that client would complete the detoxification (*p<0.05). Using this model, this one variable successfully predicted completion of detoxification status in 61% of cases.
Abstinence from Opiates or Opioids at 3-month follow up

At 3-month follow-up, 28 (45%) participants were classified as abstinent from opiates or opioids and 34 were classified as having relapsed (55%). Of those who were abstinent, 19 (68%) had completed the detoxification, 9 (32%) did not complete the detoxification but were abstinent at 3-month follow-up.

Admission data

Successful abstainers had significantly shorter histories of problematic opiate use. Key workers were more confident, on admission, that their client would complete the detoxification and remain abstinent following discharge (Table 14).

Table 14: Significant or near significant differences at admission between abstainers and relapsers (continuous variables)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days used methadone in 30 days prior to admission</td>
<td>20.11 (±2.59)</td>
<td>25.50 (±1.75)</td>
<td>-1.78</td>
<td>60</td>
<td>p=0.081 n.s.</td>
</tr>
<tr>
<td>Length of problematic heroin use (years)</td>
<td>6.04 (±0.64)</td>
<td>8.90 (±0.94)</td>
<td>-2.41</td>
<td>60</td>
<td>*p=0.019</td>
</tr>
<tr>
<td>K W confidence in client completing the detoxification (time 1)</td>
<td>5.52 (±0.15)</td>
<td>4.56 (±0.23)</td>
<td>3.29</td>
<td>57</td>
<td>**p=0.002</td>
</tr>
<tr>
<td>K W confidence at client remaining abstinent (time 1)</td>
<td>4.48 (±0.25)</td>
<td>3.78 (±0.24)</td>
<td>2.04</td>
<td>57</td>
<td>*p=0.046</td>
</tr>
</tbody>
</table>

Note:
Data is shown for all client whose end-status is known (n=62)
Values are means (± standard error)
2 tailed tests were used in all cases

Successful abstainers at three months were more likely at admission to be single, to be living with non-drug users, and to have planned on admission to go to a residential treatment centre following detoxification. Relapsers were more likely to be female (Table 15).
Table 15: Significant or near significant differences at admission between abstainers and relapsers (categorical variables)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (male)</td>
<td>25 (89%)</td>
<td>24 (71%)</td>
<td>Fisher’s Exact Test p=0.116 n.s.</td>
</tr>
<tr>
<td>Living with a user</td>
<td>6 (21%)</td>
<td>17 (50%)</td>
<td>X^2=5.37 *p=0.02</td>
</tr>
<tr>
<td>Single</td>
<td>26 (93%)</td>
<td>21 (62%)</td>
<td>Fisher’s Exact Test *p=0.006</td>
</tr>
<tr>
<td>Planning to go to a rehab.</td>
<td>18 (64%)</td>
<td>4 (12%)</td>
<td>Fisher’s Exact Test ***p&lt;0.001</td>
</tr>
</tbody>
</table>

Note:
Data is shown for all clients whose end status is known (n=62)

The eight significant baseline variables were entered as predictors in a stepwise logistic regression analysis, with abstinence at 3-month follow-up as the dependent variable. The regression model accounted for 69% of the variance (Nagelkerke R square= 0.692, ***p<0.001, n=59). Five of these variables remained significant in the regression model; living with non-users (*p<0.05), living alone (*p<0.05), planning to go to a residential treatment centre (***p<0.001), key worker’s confidence that the client will complete the detoxification (***p<0.001) and number of days methadone used prior to admission (**p<0.01).

Discharge data
Individuals who were abstinent at 3-month follow-up rated themselves as more confident on discharge from the Unit that they would remain abstinent. Key workers were also more confident on discharge that their client would remain abstinent, they rated them as having less difficulty in remaining abstinent, and to be more motivated compared to those who relapsed (Table 16).
Table 16: Significant or near significant differences at discharge between abstainers and relapsers (continuous variables)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abstinent at 3 months (n=28)</th>
<th>Relapsed at 3 months (n=34)</th>
<th>t value</th>
<th>d.f.</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client confidence at remaining abstinent (time 2)</td>
<td>6.09 (±0.23)</td>
<td>5.11 (±0.43)</td>
<td>2.12</td>
<td>40</td>
<td>*p=0.041</td>
</tr>
<tr>
<td>K W confidence at client remaining abstinent (time 2)</td>
<td>4.64 (±0.26)</td>
<td>2.76 (±0.33)</td>
<td>4.34</td>
<td>52</td>
<td>***p&lt;0.001</td>
</tr>
<tr>
<td>K W rating of client difficulty in remaining abstinent (time 2)</td>
<td>2.68 (±0.30)</td>
<td>1.72 (±0.20)</td>
<td>2.70</td>
<td>52</td>
<td>**p=0.009</td>
</tr>
<tr>
<td>K W rating of client motivation (time 2)</td>
<td>5.80 (±0.23)</td>
<td>4.10 (±0.32)</td>
<td>4.15</td>
<td>52</td>
<td>***p&lt;0.001</td>
</tr>
</tbody>
</table>

Note: Data is shown for all clients whose end-status is known (n=62)

Those who were successfully abstinent at three months were more likely to have attended a residential treatment centre following detoxification (64% vs 6%, Fisher's Exact Test ***p<0.001). Interestingly, although there was a trend for the abstainers to have completed the detoxification, this did not reach significance (68% vs 48%, X²=2.32, p=0.127, n.s.).

The five significant end of admission variables were entered as predictors in a stepwise logistic regression analysis, with abstinence at 3-month follow-up as the dependent variable. The regression model accounted for 51% of the variance (Nagelkerke R square= 0.506, ***p<0.001, n=39). Two of these time 2 variables remained significant in the regression model; key worker confidence in their client remaining abstinent, taken at the point of discharge (**p<0.01) and going to a residential treatment centre (***p<0.001).

All significant variables with three month outcome
The seven significant variables were entered as predictors in a stepwise logistic regression analysis, with abstinence at 3-month follow-up as the dependent variable. The regression model accounted for 61% of the variance (Nagelkerke R square= 0.611, ***p<0.001, n=52). Two of these variables remained significant in the regression model; going to a residential treatment centre (***p<0.001) and key worker confidence at discharge that the client would remain abstinent (***p<0.001).

Using this model, these 2 variables successfully predicted three month outcome status in 85% of cases.
Discussion

Outcomes
Completion of In-patient Detoxification

The study sample consisted of 70 individuals admitted for in-patient detoxification from opiates or opioids, of whom 59% successfully completed the detoxification.

An attrition rate of 41% from in-patient detoxification is within the range reported in the literature generally, but is somewhat higher than the two published UK studies (Gossop et al., 1989, and Powell et al., 1993). This is likely to be a reflection of differences in the treatment programmes, in that the two UK studies reported on outcomes from a dedicated in-patient detoxification Unit, whereas in this study individuals were admitted to a mixed acute psychiatric ward. Moos (1974), reporting on in-patient programmes in general, found that those with high dropout rates had few social activities, little emphasis on patient involvement, and consisted of unfriendly and uncomfortable environments.

In this study, five individuals failed to complete due to disciplinary discharge (use of illicit drugs on the ward), but the majority (83%), took their own premature discharge. Although individuals were not asked at the point of discharge for their reasons for leaving prematurely, 3-month follow-up interviews indicated that whilst the majority were satisfied with the detoxification regimen, many found the environment to be unsatisfactory. Many felt that the ward staff, whilst generally supportive, had insufficient time to meet their emotional, and sometimes their practical needs. In addition, some cited specific problems in their interaction with the psychiatric patients, including being offered illicit drugs. It is therefore perhaps not surprising that the outcome rates are somewhat lower than some other studies.

Individuals who completed the detoxification were significantly more confident at the start of their admission that they would succeed at completing. Key workers were also more confident at admission that they would complete. Key worker ratings of confidence in their client’s ability to complete the detoxification (at admission), successfully predicted outcome of in-patient detoxification in 61% of cases.

There was a tendency for non-completers to score higher on the YSQ-S “Failure to Achieve” schema, although this did not quite reach statistical significance. “Failure to Achieve” is the belief that one is fundamentally inadequate relative to others, and therefore destined to fail in
areas of achievement (e.g. school, career). The results suggest that individuals who fail to complete detoxification hold beliefs at admission that they are less competent than others with regard to achievement, which may become a self-fulfilling prophecy. Scores on the YSQ-S did not significantly correlate with the DTCQ-8 or the SEQ scores and therefore can be seen as a measure of self-efficacy independent of abstinence or coping self-efficacy.

There was also a tendency for non-completers of detoxification to score higher on external entrapment, i.e. they tended to feel more trapped, powerless to change things, unable to see a way out of their current situation etc., although this finding did not reach statistical significance.

No relationship was found between opiate withdrawal ratings and completion of detoxification. Although withdrawal scores have been found to be associated with outcome in some out-patient studies, no such relationship has been found in-patient detoxification research e.g. Phillips et al. (1986), Gossop et al. (1987). Given that fear of withdrawal is commonly cited as the reason for requesting in-patient as opposed to out-patient detoxification, it is possible that there is a ceiling effect, with withdrawal scores being high in all subjects.

There was also no significant relationship between breath holding and outcome. It is unclear what breath holding is actually a measure of, but if indeed it is a measure of ability to withstand pain, as suggested by Hajek et al. (1987), there is no evidence that completers of detoxification were better at enduring pain.

There was also no evidence for the view, commonly held by S.D.S. clinicians, that those individuals stable on methadone prior to their admission were more likely to complete their detoxification than those using heroin. Stability on methadone is often seen by clinicians as an important indication of having made significant behavioural, cognitive and lifestyle stages. Although there was no statistical difference in outcomes between these two groups, nor significant differences in problem severity, as measured on the CISS, the group using heroin only were significantly less confident on admission that they could abstain from heroin use (both as measured on the DTCQ-8 and the SEQ). They also rated abstinence as significantly more difficult than the methadone only group, and they rated themselves as less motivated. They also, as a group, had higher maladaptive schema scores generally, and specifically on “Alienation”, “Vulnerability to Harm”, “OtherDirectedness” and “Overvigilance and Inhibition”. Young (1994) suggests that schemas are highly resistant to change. However, there are no normative data on the YSQ-S with opiate users, nor longitudinal data comparing
scores for individuals who substitute methadone for heroin. Clients using heroin only prior to admission will either have had their methadone prescription discontinued because of continued on-top use of opiates, or they will have purposefully chosen heroin in the belief that withdrawal from heroin is preferable to withdrawal from methadone. It is not possible to ascertain from this study whether those individuals using heroin only prior to admission are representative of heroin users in general, or whether they represent a specific sample of psychologically more vulnerable individuals. It would be interesting to see if schema scores are enduring or whether they improve with changes in drug use. This would be a fruitful area for further research.

Abstinence at three months

45% of those with a known outcome were abstinent from opiates or opioids at 3-month follow-up. Although outcomes were better for those who completed detoxification (53% of those that successfully completed the detoxification were abstinent at follow-up), this finding was not statistically significant.

These outcomes are a little less favourable in comparison to other outcome studies. Powell et al. (1993) and Gossop et al. (1989) reported abstinence rates at 6-month follow-up of 59% and 51% respectively, for those that completed the in-patient programme. Direct comparisons are problematic due to the differences in length of follow-up, and programme differences. In Powell et al.'s (1993) study, for example, some individuals had admissions up to 12 weeks. However, given that residential treatment programmes are typically three to five months in length, it would be realistic to expect that a proportion of those abstinent at three months in this study will have subsequently relapsed at six months.

In this study, there were no significant differences between abstainers and relapsers at three months with regard to age, gender, frequency and type of drug use prior to admission, number of times previously abstinent, longest period of abstinence, age first used opiates, and problem severity as measured on the CISS. These findings are generally consistent with the limited published research in this area.

The only significant distal/personal variable in this study related to outcome at 3-month follow-up was length of problematic heroin use. Individuals abstinent at three months had a significantly shorter history of problematic heroin use (mean 6 years as opposed to 8.9 years). However, individuals with shorter histories were also more likely to go to a residential
treatment centre, which in itself was an important predictor of outcome. This finding may therefore be an artefact.

Individuals who completed their treatment plan, i.e. engaged in planned aftercare, were significantly more likely to be abstinent at 3-month follow-up than those who did not. 90% of those going to a residential treatment centre, 42% of those successfully inducted onto naltrexone, and only 8% of those returning home (not on naltrexone) were abstinent at three months. Going to a residential treatment centre and key workers confidence in their clients ability to abstain, taken at discharge, together predicted outcome status at three months in 85% of cases. Outcome was therefore strongly determined by choice of aftercare, which may also have influenced key worker confidence.

Key workers, generally, were better predictors of outcome at three months than clients, both on admission and discharge ratings of confidence at abstinence. The finding that key workers are good predictors of outcome is perhaps surprising in the light of early research (e.g. Luborsky et al., 1978), but is consistent with Goldbeck et al.’s (1997) findings with problem drinkers.

In contrast, all clients were confident on admission for detoxification that they would be abstinent at 3-month follow-up, and there were no significant differences between admission ratings on the SEQ and the DTCQ-8 between those who successfully achieved abstinence and those who relapsed. However, analysing data for the smaller subset of individuals who completed self-efficacy ratings at all three time points revealed some interesting findings. The SEQ at admission confirmed no significant differences, but the DTCQ-8 measures became significant at all three time points. Although scores on the SEQ and DTCQ-8 correlated significantly at all three time points, the fact that the DTCQ-8 successfully differentiated abstainers and relapers, even at the point of admission, suggests that the DTCQ-8 is a more reliable and sensitive measure of self-efficacy.

These findings support those of Goldbeck et al. (1997, page 319) who found that “the SEQ confidence item did not perform as well as the Situational Confidence Questionnaire (Annis, 1982) total score as a single predictor of abstinence status at follow-up”. There are no other published studies using the SEQ, but a number of studies using the DTCQ, or questionnaires based closely on the SCQ, found it to be predictive of outcome with problem drinkers and drug users.
The SEQ, particularly when used at admission, may lack validity. Goldbeck et al. (1997) describe the confidence item on the SEQ as a measure of abstinence self-efficacy. The DTCQ-8 is considered to be a measure of coping self-efficacy. This study calls into question whether the SEQ, particularly when used at admission, is actually a measure of self-efficacy. When clients were asked in this study for the reasons behind their confidence ratings, at admission, comments included, “I want to do it so much”, “I’ve worked hard to get here”, “I need to do this”. It may be that the SEQ, when used at admission, is more a measure of clients perceived importance at succeeding, as opposed to a measure of their belief that they can succeed. No measure of motivation or importance was included in the study. If the SEQ is to be used in future research, the reliability and validity of this scale needs to be examined.

The DTCQ-8 has been demonstrated to be a reliable and valid measure of coping self-efficacy (Sklar & Turner, 1999). Because it asks about client’s confidence in their ability to use opiates in a variety of specific situations, it may challenge the individual to more realistically assess their ability to organise and execute alternatives to drug use in high risk situations.

At the point of discharge from the Unit, both client confidence at abstinence and DTCQ-8 measures significantly differentiated between those that achieved abstinence at three months and those that relapsed. Given that 42% of individuals left the Unit prior to completing the detoxification, and given that only 56% went on to achieve their planned outcome of residential treatment or naltrexone, it is perhaps not surprising that at discharge clients may more realistically and accurately predict future outcome. However, even controlling for completion of detoxification, the differences on the self-efficacy questionnaires between the eventual abstainers and the relapsers was significant. Therefore, these differences are likely to reflect beliefs rather than just current experience.

The finding that self-efficacy ratings taken at discharge from the Unit predict outcome at three months is consistent with Goldbeck et al.’s (1997) finding with drinkers, but contradicts the findings of Rychtarik et al. (1992). Most studies measure either admission or discharge ratings as opposed to both, and are therefore not comparable. There are no such comparable studies with in-patient opiate users undergoing detoxification.

At 3-month follow-up, client self-efficacy and confidence ratings significantly differentiated between those who were abstinent and those who had relapsed. This is perhaps less surprising. At this point, ratings are likely to be a reflection of their current drug use rather than a belief influencing subsequent behaviour change.
Why is it that key workers are good at predicting outcome? When asked for their reasons behind their confidence ratings, key workers often included comments about their client’s level of engagement with the Specialist Drug Service and with other services, family support, previous experience of detoxing and abstinence, and aftercare arrangements, particularly residential treatment. No attempt was made to measure some of these factors in this study e.g. social support, level of engagement and amount and type of preparatory work. However, stability of drug use was looked at, and no significant differences in outcome were found between the small subgroup of individuals who were using either methadone only or heroin only prior to admission, nor on problem severity scores on the CISS.

It is possible that key workers have expectations from past experience that clients going on to residential treatment centre are more likely to complete their detoxification and to be abstinent at follow-up. But interestingly, key workers were also significantly more confident at admission, for those clients that went on to be successfully inducted on to naltrexone. It is not clear what key workers base their accurate predictions on, and this would be an area worthy of further research.

49% successful induction onto naltrexone is a favourable outcome. Tucker and Ritter (2000), in a review of naltrexone, reported successful induction rates from 3% to 49%. It is unclear why some people in this study chose not to go onto naltrexone, having agreed on this at pre-admission. The only significant baseline variable in those successfully inducted on to naltrexone was in the number of days drugs were used intravenously prior to their admission. Those successfully inducted had used intravenously on significantly more days, and although there were no significant differences in confidence ratings on admission, it is possible that those successfully inducted were more realistic in their appraisal of the risk of relapse because of their higher level of intravenous use. Another possible explanation is that there may be a group of clients who agree to go onto naltrexone in order to meet the criteria for admission to the Unit, but in reality have no intention of going on to it once admitted. Some clients readily admit to this once on the ward; but others change their mind during their admission, particularly as induction onto naltrexone requires the client to stay on the ward for up to four days after their withdrawal regimen has finished. In this study, those leaving prior to induction spent an average of 10 as opposed to 14 days on the ward. More rapidly initiating naltrexone may increase induction rates (see implications for practice).

Tucker and Ritter (2000) reported attrition rates of between 22.5% and 58% within the first week of starting naltrexone. In this study, 44% took naltrexone for a week or less. Three individuals stopped taking their naltrexone within 24 hours due to acute and severe
withdrawal symptoms, and five reported other longer-term side effects up to three weeks (e.g. migraine, diarrhoea, stomach cramps etc.). Three clients stated that they stopped taking naltrexone because they forgot to take it, or forgot to renew their prescription. Ways of improving compliance with naltrexone need to be explored (see implications for practice).

In this study, individuals going onto a residential treatment centre following detoxification had the highest rates of abstinence at three months. Given that 70% of participants were still attending the residential treatment centre at three months, it would be interesting to look at longer-term outcome rates to see if this difference is sustained over time. Findings from NTORS (National Treatment Outcome Research Study) suggested 90 days to be the critical time in treatment for longer-stay residential programmes, with clients who remained in treatment for these critical times achieving better 1-year outcomes in terms of abstinence from opiates, stimulants, reduction in injecting drug use and criminal behaviour (Gossop, Marsden, Stewart & Rolfe, 1999).

It was hypothesised that those planning on going to a residential treatment centre would be more likely to complete their detoxification, given the clients significant investment in preparing for and organising funding for residential treatment. Contrary to expectation, these individuals were not more likely to complete their detoxification. There were, however, interesting differences in those planning to go to a residential treatment centre, in that they were significantly younger, more likely to be single and to have shorter periods of abstinence than those choosing a community option. It may well be that older clients had had prior experience of residential treatment centre, but they may also have relationship, family, work or accommodation commitments, making residential treatment less of a viable or realistic option. The sample going to residential treatment did not, contrary to expectation, display a higher level of dysfunction as measured on the YSQ-S. This is surprising in the light of the Task Force Review (Department of Health, 1996), which found higher levels of psychological problems in those individuals going to a residential treatment centre. This may be a reflection of the different measures used and/or reflect local differences in selection criteria for residential treatment.

Shiffman (1989), in his model for understanding relapse, suggests that distal and intermediate factors together can predict who will relapse. In this study, none of the distal factors were predictive of completion of detoxification, although there was a trend for the non-completers to have a higher “Failure to Achieve” schema.

None of the distal or intermediate factors predicted outcome at three months. Although there was some evidence for client coping self-efficacy to relate to outcome at three months (in a
select group), this did not significantly predict relapse. Going to a residential treatment centre and key worker confidence ratings of abstinence, taken at discharge, were significantly predictive of outcome, suggesting that when looking at factors relating to relapse, other factors need to be taken into account. Shiffman’s (1989) model should therefore be considered within the context of situational and treatment variables.

Limitations of the Current Study

Outcome Measures

This study used a simplistic definition of abstinence and relapse at three months: use of heroin or methadone at the point of follow-up. Some individuals reported having used heroin at some point since leaving the unit, but they were classified as abstinent if they had not used in the previous week at follow-up. Similarly, those clients using heroin intermittently (but not daily), but had used within the previous week at follow-up were classified as having relapsed. In defence of this system of categorisation, the majority of individuals were clearly either using or not using, with only a handful needing to be fitted into one or other category.

The study did not look at psychosocial outcomes, which are arguably at least, if not more significant. It would have been interesting to have included a measure of employment status, forensic status, physical and mental health etc. The Maudsley Addiction Profile (Marsden et al., 1998), completed at admission and at follow-up, would have provided useful self-report data on which to evaluate changes in these areas, as well as actual drug use.

Drug using status at follow-up was determined by client self-report in 65% of cases. Urinalysis, carried out in 35% of cases, verified self reported outcomes. However, it is arguably a flaw in this study not to have had corroborative evidence in all cases.

It was also unfortunate that not more participants could be interviewed at three months, and that outcome had to be ascertained from significant others in 35% of cases. Whilst every possible attempt was made to contact individuals, including letters, telephone calls, "cold" calls etc., some individuals were non contactable, the most common reason being that they had moved away or had unconnected mobile telephones. Interestingly, the sample not able to be contacted for interview scoring higher on the CISS at baseline, which could seen as an indication of problem severity. Those who were interviewed were, perhaps inevitably, a self-selecting sample. Although those that provided interviews did not differ from those that did not on age, gender, length of problematic use or periods of abstinence, they were a more
successful group i.e. they were more likely to complete the detoxification, more likely to have an outcome as planned, and were more likely to be abstinent at three months. Interestingly, they were also less confident on admission that they would be abstinent. This self-selecting sample were therefore generally better engaged with services throughout their treatment episode. Given that it had been possible to ascertain drug status for a significant number of participants through contact with family members or professionals, in retrospect it may have been possible to use this person more to facilitate contact with the client, or to forward copies of a self-completion questionnaire.

Study Design

The study only looked at outcome at three months. Apart from time constraints, the justification for using a short follow-up period related to the prospective design of the study, with the emphasis on distal and intermediate factors as predictors of outcome. This study examined predictors rather than causes of relapse. With longer periods of follow-up, proximal and transitional factors are likely to play an increasingly important part in the relapse process.

Choice of Predictor Variables

An important distal variable that was not included in this study is psychiatric diagnosis and psychopathology. Specific disorders such as depression or personality disorder, as well as global estimates of psychiatric severity, have been documented predictors of poorer treatment outcome amongst substance misusers (e.g. Beck, Shekim, Fraps, Borgmeyer & Whitt, 1983, O'Leary, Calsyn, Chaney & Freeman, 1977, Project Match, 1997, and Rounsaville et al., 1985). Residential treatment centres often exclude individuals with co-morbid mental health problems, and yet these individuals are prioritised for in-patient detoxification because of the very nature of their difficulties. Psychiatric severity, had this been included, may well have been identified as a significant predictor of outcome.

Implications for Clinical Practice

This study demonstrated that it is possible to identify individuals at risk of non-completion of in-patient detoxification, and of relapse.

The best predictor of completion of in-patient detoxification was key worker admission ratings of confidence that their client would complete the detoxification. The fact that key workers are good at predicting which clients will successfully complete in-patient
detoxification suggests that key workers should perhaps pay more attention to their judgements. Poor prognosis clients could be offered more intensive preparatory work and support, prior to and during their admission.

The best predictors of abstinence at 3-month follow-up were going to a residential treatment centre, and key worker discharge ratings of confidence that their client would remain abstinent.

Residential treatment should perhaps be more actively explored with all clients. It is not clear from this study whether it is actually going to a treatment centre, the preparation, or indeed other factors that are important. Nevertheless, given the high abstinence rates, some might suggest that individuals should only be admitted for in-patient detoxification if followed by residential treatment.

However, client choice is important, and residential treatment may not be a practicable option for some individuals, particularly those with work or family commitments. Therefore, ways of increasing uptake and compliance with naltrexone need also to be considered. Partly poor uptake is due to premature discharge from the ward. Umbricht et al. (1999) reported on a rapid detoxification regimen involving buprenorphine, naltrexone and clonidine, which shortens the length of the detoxification to 5 days, and has the advantage of initiating naltrexone maintenance as early as the second day of treatment.

Initiating naltrexone early on in the withdrawal process may circumvent one of the reasons for poor compliance; withdrawal symptoms within 24 hours of initiating naltrexone and returning home. An increase in withdrawal symptoms on returning home is universally attributed by the client to the medication, but could be the result of conditioned withdrawal or increased anxiety. With rapid detoxification and induction on to naltrexone, clients will have been on naltrexone for at least three days prior to being discharged home.

Increasing compliance with naltrexone longer-term is likely to involve more intensive input and follow-up from the Specialist Drug Service. For those clients who experience longer-term withdrawals, advice can be given to halve the dose. This advice was given in only one case. Involving family members or significant others may be another way of improving compliance. Tucker and Ritter (2000) reported on a variety of psychosocial treatments that have been used successfully with naltrexone, including variations of supportive counselling (individual, group and family). These adjunctive therapies have been found to potentiate the effectiveness of naltrexone treatments. At the Specialist Drug Service, naltrexone prescribing
is undertaken by the service for up to six weeks. Thereafter it is dependent on the G.P. being willing to prescribe. Formal Community Relapse Prevention programmes do not operate from the Specialist Drug Service and therefore require the client to make contact with a different agency. A more intensive and integrated aftercare programme may improve outcomes.

Of the client self-efficacy measures, the DTCQ-8 was the most successful admission measure at differentiating between the eventual abstainers and the relapers. The DTCQ-8 is purported by Sklar et al. (1999) to be a global measure of coping self-efficacy. Unlike the SEQ, which asks about the likelihood of remaining abstinent in the future, the DTCQ-8 relates to current confidence.

The role of self-efficacy in the relapse process has been the source of much debate. Marlatt and Gordon (1985) postulated self-efficacy as a moderator variable in the process of relapse. They proposed that if individuals can successfully perform adaptive coping behaviours in high-risk situations, perceived self-efficacy increases which in turn reduces vulnerability to relapse. Therefore the goal of relapse prevention interventions is to teach individuals adaptive coping skills. The decision to engage in a particular behaviour will ultimately depend on whether the individual believes that their behaviour in a given situation will produce a particular outcome.

The finding that the DTCQ-8 successfully differentiated between the eventual abstainers and relapers, suggests that cognitive-behavioural relapse prevention interventions should be offered to individuals with low coping self-efficacy, both prior to and during their admission, particularly if they are planning to return to the community and not planning to go to a residential treatment centre. If coping skills could be increased, it is anticipated that coping self-efficacy would similarly increase, and the client would stand a better chance of achieving and sustaining abstinence on discharge.

**Implications for Future Research**

This study concentrated on distal and intermediate factors as predictors of outcome, and made no attempt to measure proximal or transitional factors.

A more ambitious and comprehensive study of predictors of relapse with opiate users is required, with ongoing monitoring of proximal and transitional factors over a longer time frame. Miller et al. (1996) carried out such a prospective study with drinkers. They found a number of variables to be positively associated with relapse, but the two factors most
predictive of relapse were absence of coping resources and presence of disease model beliefs. Self-efficacy, and positive and negative expectancies did not contribute unique variance in the prediction of relapse. Miller et al. (1996) hypothesised that self-efficacy and alcohol expectancies may be passive reflections of clients’ coping skills. These findings have important implications for relapse prevention interventions, as it suggests that the focus should be on teaching coping resources.

There is a need for such a study to be replicated with opiate users. In addition to pre-treatment characteristics (including psychiatric severity and disease model beliefs), variables such as negative life events, client’s coping skills, social support, motivation, self-efficacy, mood, craving experiences, and positive and negative heroin expectancies should be included. There is generally a paucity of research in the area of relapse amongst opiate users. Research has been piece-meal, and without a comprehensive prospective study it is impossible to identify the relative contribution of variables to the relapse process. Researchers in the opiate field should learn from research in the alcohol field and attempt to replicate these findings.
References


Appendix 1

Client Data

CLIENT NAME.................................................. IDENTIFIER ..........................................

D.O.B: .................................   AGE: ..........   GENDER M/F

BSDS KEYWORKER NAME ..................................................

DATE ADMITTED TO OAKWOOD HOUSE ..........................

PLANNED OUTCOME:  
Residential rehabilitation □  
Abstinence based hostel/secondary care/day hospital □  
Home plus naltrexone □  
Home □

Other........................................................................

URINE RESULT ON ADMISSION..................................................

AGE FIRST STARTED USING OPIOIDS ............................

TOTAL LENGTH OF PROBLEMATIC OPIOID USE.............

OTHER PROBLEMATIC DRUG USE ON ADMISSION (i.e. requiring withdrawal medication)? Y/N
If yes, what?.....................

NUMBER OF TIMES ABSTINENT FROM OPIOIDS (voluntarily)...(enforced)....

LONGEST PERIOD OF ABSTINENCE...................

STATUS:  
Single, living alone □  
Single, living with parent(s) □  
Single, living with other users □  
Single, living with non-users □  
married/cohabiting with non-user □  
married/cohabiting with user □

DATE LEFT O/H .................................   NO. OF DAYS ON WARD .....................

TYPE OF DISCHARGE:  
PLANNED DISCHARGE, i.e. left ward at intended  
time at admission and withdrawal medication completed □

PREMATURE DISCHARGE  
Self discharge, whilst still in receipt of withdrawal medication □  
Disciplinary discharge □

REASON FOR DISCHARGE:..........................................................

OUTCOME  
Residential rehabilitation □  
Abstinence based hostel/secondary care/day hospital □  
Home on Naltrexone □  
Home □

Other ........................................................

URINE RESULT ON DISCHARGE:........................................
Appendix 2

Drug Taking Confidence Questionnaire (DTCQ-8)

Listed below are a number of situations or events in which some people experience a desire to use heroin.

Imagine you as you are right now in each of these situations. Indicate on the scale provided how confident you are that you would be able to resist the urge to use heroin in that situation.

Circle 100 if you are 100% confident right now that you could resist the urge to use heroin or other opiates; 80 if you are 80% confident; 60 if you are 60% confident. If you are more unconfident than confident, circle 40 to indicate that you are only 40% confident that you could resist the urge to use heroin or other opiates; 20 for 20% confident; 0 if you have no confidence at all about the situation.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>I would be able to resist the urge to use heroin or other opiates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If I were angry at the ways things had turned out</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>2. If I had trouble sleeping</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>3. If I remembered something good that had happened</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>4. If I wanted to find out whether I could use heroin occasionally without getting a habit</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>5. If I unexpectedly found some heroin or happened to see something that reminded me of using</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>6. If other people treated me unfairly or interfered with my plans</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>7. If I were out with friends and they kept suggesting we go somewhere and use heroin</td>
<td>0 20 40 60 80 100</td>
</tr>
<tr>
<td>8. If I wanted to celebrate with a friend</td>
<td>0 20 40 60 80 100</td>
</tr>
</tbody>
</table>
Appendix 3

Self-efficacy Questionnaire, Client Version 1 (SEQ-1)

Following discharge, which of the goals below would you most like to achieve? (Please tick only one box)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Ticks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence from heroin</td>
<td></td>
</tr>
<tr>
<td>Abstinence for at least 3 months</td>
<td></td>
</tr>
<tr>
<td>Occasional heroin use</td>
<td></td>
</tr>
</tbody>
</table>

At present, how confident are you that you will complete your 2 week detoxification programme on the ward?

Not at all confident  1  2  3  4  5  6  7  Very confident

At present, how confident are you that you will remain abstinent from heroin over the next 3 months?

Not at all confident  1  2  3  4  5  6  7  Very confident

Over the next 3 months, how difficult do you think it will be for you to remain abstinent from heroin?

Very difficult  1  2  3  4  5  6  7  Not difficult at all

Over the next 3 months, how much help do you think you will need to remain abstinent?

A lot of help  1  2  3  4  5  6  7  No help at all

At present, how strong is your desire to remain abstinent from heroin over the next 3 months?

Not very strong at all  1  2  3  4  5  6  7  Very strong

At present, how confident are you that following discharge you could use heroin once or twice without starting to use heavily again?

Very confident  1  2  3  4  5  6  7  Not at all confident
## Appendix 4

### Christo Inventory for Substance-misuse Services (CISS)

**Assessor**

<table>
<thead>
<tr>
<th>Date</th>
</tr>
</thead>
</table>

**Client**

<table>
<thead>
<tr>
<th>DOB</th>
<th>M</th>
<th>F</th>
<th>Intake assessment</th>
</tr>
</thead>
</table>

**Drugs of choice**

(e.g., alcohol, opiates, etc.)

<table>
<thead>
<tr>
<th>Follow-up assessment</th>
</tr>
</thead>
</table>

**Residence**

(e.g., hostel, prison, residential treatment, home, hospital, NFA)

<table>
<thead>
<tr>
<th>Service Provision: Name</th>
<th>Date in</th>
<th>Date out</th>
<th>Reason left</th>
</tr>
</thead>
</table>

**First**

**Second**

This form is for evaluation/clinical audit purposes only and is a rough indicator of professional impression of recent drug/alcohol related problems in the past month. Specific situations/behaviours are listed only as guiding examples and may not reflect the exact situations/behaviours of the client. (Please ring a number under each heading)

### Social functioning

| 0... | e.g., client has a stable place to live and supportive friends or relatives who are drug/alcohol free. |
| 1... | e.g., client’s living situation may not be stable, or they may associate with drug users/heavy drinkers (Tick one) |
| 2... | e.g., client’s situation not stable, and they either claim to have no friends or their friends are drug users/heavy drinkers. |

### General health

| 0... | e.g., client has reported no significant health problems. |
| 1... | moderate health problems e.g., teeth/sleep problems, occasional stomach pain, collapsed vein, asymptomatic hep B/C/HIV. |
| 2... | major problems e.g., extreme weight loss, jaundice, abscesses/infections, coughing up blood, fever, overdoses, blackouts, seizures, significant memory loss, neurological damage, HIV symptoms. |

### Sexual/injecting risk behaviour

| 0... | e.g., client claims not to inject, or have unsafe sex (except in monogamous relationship with longstanding partner, spouse). |
| 1... | e.g., may admit to occasional "unsafe" sexual encounters, or suspected to be injecting but denies sharing injecting equipment. |
| 2... | e.g., client may admit to regular "unsafe" sexual encounters, or has recently been injecting and sharing injecting equipment. |

### Psychological

| 0... | e.g., client appears well adjusted and relatively satisfied with the way their life is going. |
| 1... | e.g., client may have low self-esteem, general anxiety, poor sleep, may be unhappy or dissatisfied with their lot. |
| 2... | client has a neurotic disorder e.g., panic attacks, phobias, OCD, bulimia, recently attempted or seriously considered suicide, self-harm, overdose or may be clinically depressed. Or client may have psychotic disorders, paranoia (e.g., everybody is plotting against them), deluded beliefs or hallucinations (e.g., hearing voices). |

### Occupation

| 0... | e.g., client is in full time occupation e.g., homemaker, parent, employed, or student. |
| 1... | e.g., client has some part time parenting, occupation or voluntary work. |
| 2... | e.g., client is largely unoccupied with any socially acceptable pastime. |

### Criminal involvement

| 0... | e.g., no criminal involvement (apart from possible possession of illicit drugs for personal use). |
| 1... | e.g., client suspected of irregular criminal involvement, perhaps petty fraud, petty theft, drunk driving, small scale dealing. |
| 2... | e.g., suspected of regular criminal involvement, or breaking and entering, car theft, robbery, violence, assault. |

### Drug/alcohol use

| 0... | e.g., no recent drug/alcohol use. |
| 1... | e.g., client suspected of periodic drug/alcohol use, or else may be socially using drugs that are not considered a problem, or may be on prescribed drugs but not supplementing from other sources. |
| 2... | e.g., client suspected of bingeing or regular drug/alcohol use. |

### Ongoing support

| 0... | e.g., regular attendance of AA/NA, drug free drop in centre, day centre, counselling, or treatment aftercare. |
| 1... | e.g., patchy attendance i.e., less than once a week contact with at least one of the above. |
| 2... | e.g., client not known to be using any type of structured support. |

### Compliance

| 0... | e.g., attends all appointments and meetings on time, follows suggestions, or complies with treatment requirements. |
| 1... | e.g., not very reliable, or may have been reported as having an “attitude” problem or other difficulty with staff. |
| 2... | e.g., chaotic, may have left treatment against staff advice or been ejected for non-compliance e.g. drug use, attitude problem. |

### Working Relationship

| 0... | relatively easy going e.g., interviews easily, not time consuming or stressful to work with. |
| 1... | moderately challenging e.g., a bit demanding or time consuming, but not excessively so. |
| 2... | quite challenging e.g., very demanding, hard work, time consuming, emotionally draining or stressful to see. |

CISS Total Score - @1998 George Christo PhD, PsychD.
Appendix 5

Self-efficacy Confidence Questionnaire, Key Worker Version 1

Following discharge, which of the goals listed below would you recommend to your client? (Please tick only one box)

<table>
<thead>
<tr>
<th>Goal</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total abstinence from heroin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstinence for at least 3 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasional heroin use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At present, how confident are you that your client will complete the 2 week detoxification programme on the ward?

Not at all confident 1 2 3 4 5 6 7 Very confident

At present, how confident are you that your client will remain abstinent from heroin over the next 3 months?

Not at all confident 1 2 3 4 5 6 7 Very confident

Over the next 3 months, how difficult do you think it will be for your client to remain abstinent from heroin?

Very difficult 1 2 3 4 5 6 7 Not difficult at all

Over the next 3 months, how much help do you think your client will need to remain abstinent from heroin?

A lot of help 1 2 3 4 5 6 7 No help at all

How motivated do you think your client is at present to remain abstinent from heroin over the next 3 months?

Not motivated at all 1 2 3 4 5 6 7 Very motivated

At present, how confident are you that following discharge your client could use heroin once or twice without starting to use heavily again?

Very confident 1 2 3 4 5 6 7 Not at all confident

How confident are you that your client will stay in contact with BSDS over the next 3 months?

Not at all confident 1 2 3 4 5 6 7 Very confident
Appendix 6

The Entrapment Scale

For each of the following statements indicate the extent to which you think it represents your own view of yourself. Read each item carefully and circle the number to the right of the statement that best describes the degree to which each statement is like you. Use the scale below. Please do not omit any item.

0 = not at all like me  1 = a little bit like me  2 = moderately like me  3 = quite a bit like me  4 = extremely like me

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am in a situation I feel trapped in</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>I have a strong desire to escape from things in my life</td>
<td></td>
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<tr>
<td>3</td>
<td>I am in a relationship I can't get out of</td>
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<tr>
<td>4</td>
<td>I often have the feeling that I would just like to run away</td>
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<tr>
<td>5</td>
<td>I am happy with my current situation</td>
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<tr>
<td>6</td>
<td>I feel powerless to change things</td>
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<tr>
<td>7</td>
<td>I feel trapped by my obligations</td>
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<tr>
<td>8</td>
<td>I can see no way out of my current obligation</td>
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<td></td>
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<tr>
<td>9</td>
<td>I would like to get away from other more powerful people in life</td>
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<tr>
<td>10</td>
<td>I have a strong desire to get away and stay away from where I am now</td>
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<tr>
<td>11</td>
<td>I feel trapped by other people</td>
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<tr>
<td>12</td>
<td>I want to get away from myself</td>
<td></td>
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<tr>
<td>13</td>
<td>I feel powerless to change myself</td>
<td></td>
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<tr>
<td>14</td>
<td>I would like to escape from my thoughts and feelings</td>
<td></td>
<td></td>
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<tr>
<td>15</td>
<td>I feel trapped inside myself</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>I would like to get away from who I am and start again</td>
<td></td>
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<tr>
<td>17</td>
<td>On the whole I like being me</td>
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<td></td>
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<tr>
<td>18</td>
<td>I feel I'm in a deep hole I can't get out of</td>
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</table>
Appendix 7

Young Schema Questionnaire (YSQ-S)

INSTRUCTIONS: Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When you are not sure, base your answer on what you feel, not on what you think to be true. Choose the highest rating from 1 to 6 that describes you and write the number in the space before the statement.

RATING SCALE:

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. ____ Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.

2. ____ In general, people have not been there to give me warmth, holding, and affection.

3. ____ For much of my life, I haven't felt that I am special to someone.

4. ____ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. ____ I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.

6. ____ I find myself clinging to people I'm close to because I'm afraid they'll leave me.

7. ____ I need other people so much that I worry about losing them.

8. ____ I worry that people I feel close to will leave me or abandon me.

9. ____ When I feel someone I care for pulling away from me, I get desperate.

10. ____ Sometimes I am so worried about people leaving me that I drive them away.

11. ____ I feel that people will take advantage of me.

12. ____ I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13. ____ It is only a matter of time before someone betrays me.

14. ____ I am quite suspicious of other people's motives.

15. ____ I'm usually on the look out for other people's motives.

16. ____ I don't fit in.

17. ____ I'm fundamentally different from other people.
18. I don't belong; I'm a loner.
19. I feel alienated from other people.
20. I always feel on the outside of groups.
21. No man/woman I desire could love me once he/she saw my defects.
22. No one I desire would want to stay close to me if he/she knew the real me.
23. I'm unworthy of the love, attention and respect of others.
24. I feel that I'm not loveable.
25. I am too unacceptable in very basic ways to reveal myself to other people.
26. Almost nothing I do at work (or school) is as good as other people can do.
27. I'm incompetent when it comes to achievement.
28. Most other people are more capable than I am in areas of work and achievement.
29. I'm not as talented as most people are at their work.
30. I'm not as intelligent as most people when it comes to work (or school).
31. I do not feel capable of getting by on my own in everyday life.
32. I think of myself as dependent person when it comes to everyday functioning.
33. I lack common sense.
34. My judgement cannot be relied upon in everyday situations.
35. I don't feel confident about my ability to solve everyday problems that come up.
36. I can't seem to escape the feeling that something bad is about to happen.
37. I feel that a disaster (natural, criminal, financial or medical) could strike at any moment.
38. I worry about being attacked.
39. I worry that I'll lose all my money and become destitute.
40. I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.
41. I have not been able to separate myself from my parent(s), the way other people my age seem to.
42. My parent(s) and I tend to be overinvolved in each other's lives and problems.
43. It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.
44. I often feel as though my parents are living through me - I don't have a life of my own.
45. I often feel that I do not have a separate identity from my parents or my partner.
46. I think that if I do what I want I am only asking for trouble.
47. I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.
48. ____ In relationships, I let the other person have the upper hand.
49. ____ I've always let others make choices for me, so I really don't know what I want for myself.
50. ____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
51. ____ I'm the one who usually ends up taking care of the people I'm close to.
52. ____ I am a good person because I think of others more than of myself.
53. ____ I'm so busy doing for the people that I care about that I have little time for myself.
54. ____ I've always been the one who listens to everyone else's problems.
55. ____ Other people see me as doing too much for others and not enough for myself.
56. ____ I am too self-conscious to show positive feelings to others (e.g. affection, showing I care).
57. ____ I find it embarrassing to express my feelings to others.
58. ____ I find it hard to be warm and spontaneous.
59. ____ I control myself so much that people think I am unemotional.
60. ____ People see me as tight emotionally.
61. ____ I must be the best at most of what I do; I can't accept second best.
62. ____ I try to do my best; I can't settle for "good enough".
63. ____ I must meet all my responsibilities.
64. ____ I feel there is constant pressure for me to achieve and get things done.
65. ____ I can't let myself off the hook easily or make excuses for my mistakes.
66. ____ I have a lot of trouble accepting "no" for an answer when I want something from other people.
67. ____ I'm special and shouldn't have to accept many of the restrictions placed on other people.
68. ____ I hate to be constrained or kept from doing what I want.
69. ____ I feel that I shouldn't have to follow the normal rules and conventions other people do.
70. ____ I feel that what I have to offer is of greater value than the contributions of others.
71. ____ I can't seem to discipline myself to complete routine or boring tasks.
72. ____ If I can't reach a goal, I become easily frustrated and give up.
73. ____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.
74. ____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.
75. ____ I have rarely been able to stick to my resolutions.
Appendix 8

Opiate Withdrawal Scale

Instructions
Complete daily before midday at approximately the same time. For each symptom observed and reported, use the following scale
0 = none/not at all
1 = slightly/little/occasionally
2 = moderately
3 = very much/a great deal/continuously

<table>
<thead>
<tr>
<th>Symptom</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yawning</td>
<td></td>
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<tr>
<td>Runny Eyes</td>
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<tr>
<td>Runny Nose</td>
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<tr>
<td>Sweating</td>
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<tr>
<td>Tremor or Shaking</td>
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<tr>
<td>Goosebumps</td>
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<td></td>
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<tr>
<td>Vomitting</td>
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<td></td>
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<td></td>
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<tr>
<td>Diarrhoea</td>
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<tr>
<td>Poor Sleep</td>
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<tr>
<td>Sneezing</td>
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<tr>
<td>Irritable/Bad tempered</td>
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<tr>
<td>Restlessness</td>
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<tr>
<td>Muscle Cramps/Aches</td>
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<tr>
<td>Poor Appetite</td>
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<tr>
<td>Drug Craving</td>
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<tr>
<td>Pounding Heart</td>
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<tr>
<td>Pins and Needles</td>
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<tr>
<td>Stomach Cramps</td>
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<tr>
<td>Hot/Cold Flashes</td>
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<tr>
<td>Pulse Rate</td>
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<tr>
<td>Blood Pressure</td>
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</table>
Appendix 9

3 month follow-up interview

NAME..............................................  DATE..............................................
ADDRESS........................................  TEL.NO..............................................


DRUG USAGE OVER PAST 3 MONTHS

<table>
<thead>
<tr>
<th>DRUG</th>
<th>PAST 3 MONTHS</th>
<th>PAST 30 DAYS</th>
<th>PAST 7 DAYS</th>
<th>AVERAGE AMOUNT</th>
<th>ROUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHADONE</td>
<td></td>
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<tr>
<td>HEROIN</td>
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</tr>
<tr>
<td>OTHER OPIATES</td>
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<tr>
<td>AMPHETAMINES</td>
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<tr>
<td>CRACK/COCAIN</td>
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<td>ALCOHOL</td>
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<tr>
<td>CANNABIS</td>
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<tr>
<td>OTHER DRUGS</td>
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STORY SINCE LEAVING BLACKBERRY HILL HOSPITAL:
REHABILITATION TREATMENT CENTRE:

NAME: ______________

SATISFACTION ________________________________ LENGTH OF STAY ________________________________

1 5 10

VIEWS:

NALTREXONE

HOW LONG FOR?

SATISFACTION ________________________________

1 5 10

VIEWS:

BLACKBERRY HILL DETOXIFICATION

SATISFACTION ________________________________

1 5 10

VIEWS?

ANYTHING YOU WOULD HAVE LIKED BSDS TO PROVIDE OR TO HAVE DONE DIFFERENTLY, BEFORE OR AFTER THE DETOX?
Academic Dossier (Critical Review One): Is there a role for Eye Movement Desensitization and Reprocessing (EMDR) in the Treatment of Substance Misuse?

Introduction

EMDR (Eye Movement Desensitization and Reprocessing) has been described as “a complex, multifaceted intervention, heralded as a major breakthrough in the field of mental health” (Shapiro & Forest, 1997). Shapiro first introduced EMDR in 1989 as a new treatment for traumatic memories, particularly for the treatment of PTSD. More recently it has gained in popularity as a treatment for a diversity of anxiety disorders including panic disorder (e.g. Feske & Goldstein, 1997), claustrophobia (e.g. Lohr, Tolin & Kleinknecht, 1996), blood and injection phobia (e.g. Kleinknecht, 1993) etc. It has also been advocated as having a role in the treatment of complicated bereavement (Lazrove, 1996), excessive grief (Shapiro, 2001), body dysmorphic disorder (Hassard, 1993), pain (Hekmat, Groth & Rogers, 1994), dissociative disorders (Paulsen, 1995), personality disorders (Fensterheim, 1996), gambling (Henry, 1996) and substance misuse (Omaha, 1998, 2000, Popky, 1998, Shapiro, Vogelmann-Sine & Sine, 1994, and Vogelmann-Sine, Sine & Smyth, 1999). However, whilst the techniques and applications have expanded in a rapid fashion, it remains controversial in terms of its efficacy and its mechanism of action, and concerns have been raised about its promotion and dissemination (Muris & Merckelbach, 1999).

This critique will review what EMDR is, and its effectiveness, with a view to examining its applicability to working with substance misusers.

What is EMDR?

EMDR (or EMD as it was originally called), was first discovered in 1987 by a psychologist, Dr. Francine Shapiro. She invented EMD after a chance finding whilst out for a walk in the park. She noticed that some disturbing thoughts she had been having suddenly disappeared. On closer examination she noticed that when disturbing thoughts came into her mind, her eyes spontaneously shifted rapidly back and forth in an upward diagonal. Given that the thoughts disappeared and the negative affect associated with them was greatly reduced, Shapiro postulated that induced eye movements might be an effective treatment for traumatic memories.
Over the next few years, Shapiro went on to develop a standard EMDR treatment protocol for trauma, which involves a three-pronged approach:

1) Working on the past – These are the past experiences that are thought to set the groundwork for the presenting dysfunction.

2) Working on the present – Present situations or triggers that currently stimulate the disturbing dysfunctional material.

3) Working on the future – Installation of positive templates to enable the client to respond differently and more appropriately in the future.

EMDR treatment for trauma employs both imaginal exposure and cognitive processing of traumatic events. In a standard EMDR treatment session, individuals are asked to identify a single image that represents the entire incident or the most traumatic part of the incident. Individuals are then asked to identify a negative cognition associated with the incident and a desired positive cognition. As the client focuses on the image and the negative thoughts, feelings and body sensations related to the trauma, the therapist induces smooth pursuit eye movements (or in later studies, alternative forms of bilateral stimulation), while the client is instructed to “notice” what happens. The metaphor of a train is often used, with the client instructed to notice the scenery passing by. The client provides ongoing feedback of what is going through their mind, and these spontaneously generated associations become the content for further reprocessing cycles. The procedure continues until the client reports low levels of distress. Once completed, the procedure is again repeated, but this time the client keeps an alternative positive cognition in mind in conjunction with the now emotionally neutral traumatic images and current pleasant bodily sensations. This installation phase continues until the client reports a high level of belief in the new cognition.

This standard EMDR procedure has been applied to various clinical problems by means of a number of specific protocols. These protocols follow the basic 3 pronged approach outlined above, but the targeted memories vary e.g. with excessive grief, the actual suffering or death is targeted and reprocessed first, in the case of a phobia, antecedent events contributing to the phobia are targeted. More sophisticated variations using “cognitive interweave” have been developed for use with highly disturbed clients where “blocked processing” may occur.

An Information Processing Model of Trauma

Shapiro (2001) proposed an adaptive and accelerated information-processing model as a way of thinking about the mechanism of action of EMDR. She advocated that this model should be modified on the basis of laboratory and clinical observation.

An information-processing model of trauma is not new. However, Shapiro proposes that an information model can explain not only PTSD, but also other psychopathology, including phobias, dissociation and personality disorders. Shapiro proposes that early memories are the primary basis for many present pathologies, and that EMDR works by changing the impact of these memories. Shapiro’s adaptive model proposes that in the event of disturbing events, extreme emotional arousal leads to a failure of the Central Nervous System to synthesise the sensations related to the trauma as an integrated whole. Early explanations of trauma suggested that adrenaline (the “flight and fight” hormone), interfered with normal information processing. More recent research using imaging and other neuropsychological techniques have implicated neuronal networks and the role of neurotransmitters (Levin, Lazrove & Van der Kolk, 1999, Stickgold, 2002). Van der Kolk, Burbridge and Suzuki (1997) argue that it is the fragmentation or disorganisation of memory that interferes with the evaluation, classification and conceptualisation of the experience into semantic memory. Therefore, images, sounds, affect and physical sensations are hypothesised to be maintained in their relatively unprocessed original state neurologically. Present day stimuli (internal and external) are thought to elicit negative affect and beliefs embodied in these memories, resulting in nightmares, flashbacks and intrusive thoughts, which cause the client to continue acting in ways consistent with these earlier memories. Shapiro (2001) proposes that eye movements, or other bilateral, rhythmical stimulation such as auditory or tactile stimuli, trigger a physiological state that facilitates the processing of memories and information surrounding the event.

Is EMDR an Effective Treatment?

Shapiro (1989) carried out a randomised controlled trial of EMD with 22 individuals with PTSD (either combat or sexually related trauma). The treatment group received one session of EMD. The control group received a modified flooding procedure, and subsequently EMD treatment. Results suggested a greater positive effect for those receiving EMD, in comparison to those receiving flooding. The EMD treated group experienced a decrease or elimination in anxiety symptoms associated with the memories of the traumas in 100% of cases, and an
increase in positive beliefs, after a single treatment session. Improvements were maintained at 1 and 3 month follow-up. The control group went on to receive EMD and reported a similar decrease in symptoms to the first group.

In this early study, Shapiro (1989) concluded that eye movements were an integral ingredient in bringing about an accelerated information-processing mechanism, and that EMD was more than a simple desensitisation treatment effect. In 1990 Shapiro advocated a change in name from EMD to EMDR to reflect this shift.

Despite Shapiro's (1989) early claims of success, the efficacy of EMDR has been, and continues to be, a source of controversy. The most frequently debated question is whether EMDR is superior to other exposure-based therapies. In what Salkovskis (2002) described as “a well done meta-analysis”, Davidson and Parker (2001) analysed 34 studies of EMDR using only published studies from 1988 to April 2000; 33 were randomised controlled trials, and one was non-randomised, but included because there was unsystematic allocation of individuals. They included studies using populations diagnosed with PTSD, those with traumatic memories (but which did not meet DSM criteria), other anxiety disorder (e.g. specific phobia, panic disorder) and normal controls (e.g. with induction of a contrived trauma). The meta-analysis demonstrated EMDR as an effective treatment using pre-post measures (14 studies, effect size $r=0.64$, 95% CI=0.55 to 0.72), compared to a no treatment/waiting list control (13 studies, $r=0.44$, 95% CI=0.31 to 0.55), and compared to non-specific treatments (e.g. relaxation training, biofeedback and active listening, five studies, $r=0.40$, 95% CI=0.18 to 0.58). However, EMDR was no more effective than other specific treatments, such as exposure therapy and/or CBT (six studies, $r=0.19$, 95% CI=-0.12 to 0.47, to $r=-0.28$, 95% CI=-0.54 to 0.02). On the basis of limited evidence, the eye movement component of EMDR was not found to be integral to the effectiveness of the treatment (9 studies used EMDR with fixed eye movements, $r=0.10$, 95% CI=-0.08 to 0.27). Salkovskis (2002, page 13) rather scathingly concludes that “This meta-analysis....firmly establishes that what is novel is not effective, and what is effective is not novel”.

However, there are a number of limitations of the meta-analysis. Firstly, the number of treatment sessions was not reported. A frequently cited advantage of EMDR is the rapidity of results with a small number of therapy sessions. Van Etten and Taylor (1998) conducted a meta-analysis of 61 treatment outcome trials for PTSD, including a variety of drug therapies, psychological therapies and controls. They found that behaviour therapy (imaginal exposure interventions) and EMDR were equally effective, but EMDR tended to relieve symptoms
more rapidly than behaviour therapy (mean length of treatment 3.7 vs 10.1 weeks respectively), and consisted of fewer therapy sessions (mean 4.6 vs 14.8 respectively).

Identifying length of treatment is important for a second reason. Despite Shapiro's (1989) early claims of success in treating PTSD in a single session, there is some evidence that EMDR is an effective treatment for civilian, but not combat PTSD (Feske, 1998). Although EMDR may prove beneficial with only a few treatment sessions in the treatment of single civilian PTSD, more research is needed with a larger number of treatment sessions in the treatment of more complex and chronic cases e.g. multiply traumatised individuals. Davidson and Parker (2001) did not differentiate between different types of PTSD. Further research is needed in this area, as it is possible that some studies may have used too few sessions to adequately test EMDR's potential benefits.

Finally, there is some evidence that EMDR may be better tolerated than prolonged exposure. For example, Ironson, Freund, Strauss and Williams (2002), in a comparison of EMDR and prolonged exposure in the treatment of PTSD, reported drop out rates of 0 out of 10, and 3 out of 10 respectively. Davidson and Parker (2001) did not report on drop out rates, but client acceptability is clearly important and warrants further research.

Despite the widely publicised debates and arguments between those in favour and those not in favour of EMDR, it is now widely accepted that EMDR is an efficacious treatment for PTSD (e.g. Department of Health, 2001). However, the debate continues as to whether it is better than other standard psychological interventions.

Most controversial is the proposed mechanism by which it works, and a search for the active ingredient(s). More dismantling studies are required, particularly comparing induced eye movements with either fixed or alternating bilateral stimuli.

**EMDR and Substance Misuse**

A number of EMDR protocols have been developed for the treatment of substance misuse (e.g. Omaha, 1998, 2000, Popky, 1998, Shapiro, Vogelmann-Sine & Sine, 1994, and Vogelmann-Sine, Sine, Smyth & Popky, 1998). All advocate that the client should be abstinent from substances; Vogelmann-Sine et al. (1998) suggest a minimum of one month prior to commencement of EMDR. Although no formal studies of EMDR and substance
misuse have yet been completed, Shapiro and Forrest (1999), report in detail two case studies where EMDR was successfully utilised.

What distinguishes these modified protocols from the standard EMDR protocol is the ordering of targeted material. Whilst standard EMDR treatment for traumatic memories and PTSD involves first of all targeting the traumatic memory, there is consensus in the various substance misuse protocols that EMDR should not \textit{begin} with targeting trauma, but rather first of all work on increasing a client's ego strength and internal resource management. Present triggers to use can then be addressed. Vogelmann et al. (1998, page 3) argue that “While current disturbances and urges are the target for EMDR, traumatic material is resolved as it arises in the course of working with these targets. Over time, as clients become more capable of managing day to day events in recovery, underlying trauma can be targeted utilising the standard EMDR protocol”. Co-morbid mental health problems can also be addressed using the standard EMDR protocols.

These four potential applications of EMDR with substance misusers will now be described in more detail.

1) Installing a Positive State

EMDR can be used to increase a client’s ego strength and internal resource management

All EMDR and substance misuse protocols emphasise the need to assess and address ego strength as the first target for EMDR treatment. Leeds and Shapiro (2000) suggest using a technique called RDI (Resource Development and Installation), which aims to enhance access to a variety of positive affects. In clients with already existing resources, resource installation is used to build on these in a relatively rapid process. The basic procedure involves asking the client to access a time when they felt powerful and resourceful, and identifying a positive affect associated with this memory. The client is then instructed to identify a treatment goal, incompatible with using substances. EMDR is used to “strengthened the experience”. In clients with limited resources and a long history of past failures, resource development can take several months.
2) Desensitisation of Triggers and Urge Reprocessing

EMDR can be used as a relapse prevention intervention, specifically addressing urges and cravings to use.

There is widespread agreement that relapse to substance misuse following treatment is high. Hunt, Barnett and Branch (1971) reported relapse rates amongst treated drinkers and heroin users as 58% and 66% respectively at 3-month-follow-up and 69% and 79% at six months.

There has been a wealth of research in the area of determining relapse precipitants, ranging from the identification of background factors, to identification of immediate relapse precipitants. Cummings, Gordon and Marlatt’s (1980) widely quoted study sought to determine immediate lapse precipitants using content analysis of lapse accounts. They identified social pressure as the greatest cause of relapse in those with substance misuse, and negative emotional states and interpersonal conflict being the second and third commonest causes. There has been much recent criticism of Cumming et al.’s (1980) relapse taxonomy (e.g. Longabaugh, Rubin, Stout, Zywiak & Lowman, 1996). Heather and Stallard (1989) claim that events themselves cannot lead to a lapse, and argue that emotional states act as the mediator, which lead to cravings in the presence of particular situations. Miller, Westerberg, Harris and Tonnigan (1996) hypothesised that developing coping skills is likely to be the key to preventing relapse.

In the various EMDR and substance misuse protocols, client’s are taught ways of handling overwhelming negative feelings. A number of strategies are described e.g. deep breathing, relaxation, meditation, support from a sponsor, and specific techniques developed within Dialectical Behaviour Therapy (Linehan, 1993).

EMDR can also be used at this stage to install a “safe place”, which clients can use both during and between sessions to help them cope.

EMDR can then be used to specifically target current triggers and urges to use in combination with the installation of a positive state, in a manner similar to the standard EMDR approach. This process is essentially similar to a cognitive behavioural relapse prevention intervention, except that only imaginal exposure is involved. This could be a potential advantage of EMDR over standard cognitive behavioural approaches, where in-vivo exposure is seen as an important component of treatment, but is a high-risk strategy. EMDR may prove to be a more acceptable and/or efficacious treatment.
3) Trauma and Substance Misuse

EMDR is efficacious in the treatment of PTSD and traumatic memories.

It is widely recognised that substance misuse is frequently co-morbid with PTSD.

Estimates of PTSD in general population samples have ranged from approximately 1% to 9% (Breslau, Davis, Andreski & Peterson, 1991, Cottler, Crompton III, Mager, Spitznagel & Janca, 1992, Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Rates of co-morbidity of PTSD and substance abuse vary widely from study to study, but amongst opiate users in receipt of methadone treatment, PTSD rates range from 14.2% (Villagomez, Meyer, Lin & Brown, 1995), to 20% (Hien, Nunes, Levin & Fraser, 2000) and 29% (Westley Clark, Masson, Delucchi, Hall & Sees, 2001). Brown, Stout and Mueller (1999) reported even higher rates of 51% amongst individuals receiving in-patient substance abuse treatment.

Regarding the type of traumatic events, Hien et al. (2000), found that two thirds of opiate users (male and female) had been exposed to at least one, and in many cases, multiple and chronic violent traumatic events. 23% of males and 56% of females had experienced childhood physical or sexual assault, 59% had experienced exposure to at least one violent traumatic event in adulthood, and 56% to at least one non-violent traumatic event.

Recognising and addressing PTSD in substance misuse clients is important for a number of reasons. Firstly, research has shown that individuals with co-morbid substance misuse and PTSD are a more complex group; they are more likely to be diagnosed with depression, dysthymia and to have a higher rate of suicide attempts, compared to those without PTSD (Villagomez et al., 1995, Westley Clark et al., 2001). Brown et al. (1999) also reported a greater likelihood of meeting diagnostic criteria for bipolar disorder, panic disorder and personality disorder. A history of violent trauma is also associated with more severe drug use and riskier drug use and sexual behaviours (Miller, Paone & Friedman, 1995). But also, co-morbid PTSD is associated with poorer treatment outcome. Hien et al. (2000), found that clients with PTSD showed significantly poorer treatment adherence to methadone maintenance during the first three months of treatment, when measured by ongoing multiple substance use (especially cocaine use). Other studies have shown PTSD to be associated with earlier onset of substance relapse (Brown et al., 1996).

The link between PTSD and substance abuse appears to be particularly complex, with cause and effect relationships difficult to disentangle and determine (Brown & Wolfe, 1994). Some
hypothesise a self-medication model, with PTSD developing first and substances being used as a means of achieving symptom relief. Alternatively, substance use may precede the onset of PTSD. Individuals using from an early age may be more susceptible to developing PTSD following a traumatic event, because they have historically relied on substances as a way of coping with stress, and they may have failed to develop effective non-drug using coping strategies. But also, substance use may occur in the context of other high risk behaviours, such as prostitution, dealing etc., which in themselves increases the likelihood of exposure to potentially traumatising events such as sexual and physical assaults, which in turn may increase the risk of PTSD and related symptomatology (e.g. Zweben, Westley Clark & Smith, 1994). Others have suggested that experiences of childhood abuse may make adults more susceptible to adult victimisation, and thus to the development of PTSD (Astin, Ogland-Hand, Coleman & Foy, 1995, Bremner, Southwick, Johnson, Yehuda & Charney, 1993, Davies & Frawley, 1994).

Whatever the nature of the relationship, research has demonstrated that PTSD, if left untreated, leads to poorer outcomes in individuals undergoing substance misuse treatment, whether the treatment is methadone maintenance or abstinence.

EMDR can be used to treat trauma and stress attributed directly to substance use itself.

Vogelmann-Sine et al. (1999) suggest that recovery from substance use in itself can constitute a stressful life experience. Likewise, Christo (1997) has argued that protracted subjective abnormalities e.g. high levels of anxiety and low self esteem among recovering addicts may be caused by the unmasking of a type of “complex PTSD”, which could be seen as the product of chronic dependent substance use. He found that the specific subject matter of dreams, intrusive thoughts, cue reactivity and avoidance were directly related to aspects of substance misuse rather than other traumatic events, and he advocated that therapeutic approaches developed for the treatment of PTSD, such as EMDR, could be adopted to augment relapse prevention amongst abstinent drug users.

The implications are that regardless of underlying trauma, substance misuse itself can be viewed as a type of trauma, and this in itself can be the focus of treatment.
4) Psychopathology and Substance Misuse

EMDR has a role to play in the treatment of anxiety disorders and other co-morbid psychopathology.

Research has consistently shown co-morbidity of mental health problems and substance misuse. Rounsaville, Weissman, Kleber and Wilber, (1982) reported current psychiatric disorder rates of 70.3% (excluding substance dependence) amongst a sample of in-treatment opioid users. The Epidemiologic Catchment Area (ECA) study, (Regier et al., 1990) found that 53% of individuals with a diagnosis of drug misuse (other than alcohol), had a current or previous mental health problem; most commonly anxiety disorder, affective disorder, or antisocial personality disorder.

Psychopathology has repeatedly been found to be predictive of poor treatment outcome amongst substance misusers (e.g. Kosten, Rounsaville & Kleber, 1986, McLellan, Luborsky, O’Brien, Barr & Evans, 1986). EMDR could be used to treat co-morbid psychopathology, with the aim of increasing the prognosis for such individuals in treatment.

Factors to Consider in the Use of EMDR with Substance Misuse clients

At What Point should Trauma Treatment be Considered?

A fundamental concern in treating individuals with concomitant substance misuse and PTSD is when to treat the trauma. There are some who advocate an immediate approach to treating the trauma, in the belief that by not addressing the symptoms early, relapse and drop out are a risk as trauma associated symptoms occur and the individual struggles to deal with them. However, there are also those that advocate a later approach (often after six months of abstinence), suggesting that individuals may not be able to withstand the often powerful and conflicting affects and cognitions arising out of experiencing the trauma until later on in treatment. For further discussion of these issues, refer to Brown, Recupero and Stout (1995) and Ouimette, Ahrens and Moos (1997).

Many have argued for simultaneous treatment approaches to co-morbid substance misuse and PTSD. Research has shown that in clients with co-morbid substance use and PTSD, remission from PTSD is associated with better substance use outcomes, but remission from substance use is not associated with improved PTSD (Ouinette, Brown & Najavits, 1998).
Triffleman, Carroll and Kellogg’s (1999) work suggests that it is possible to successfully integrate relapse prevention training and PTSD treatment in a substance misuse population. They used an adaptation and integration of cognitive-behavioural and coping skills treatment, which incorporates stress inoculation training and in vivo exposure to treat PTSD. Phase one of treatment focussed on the induction of abstinence but incorporates understanding and education about PTSD symptoms as part of this phase, and phase two focussed on continued work on substance-related abstinence, whilst primarily targeting PTSD symptoms. They advise pacing the PTSD interventions, with appropriate slowing, as needed, in the event of relapse or destabilising cravings.

Is it possible to use EMDR with individuals still using substances?

This debate is not specific to EMDR, but to psychological interventions in general. There appears to be unanimous agreement in the literature that current benzodiazepine use is a contraindication for psychological therapy. Triffleman et al. (1999) advised against “current nontherapeutic benzodiazepine dependence”, and Wardle (1990) also postulated that long-term benzodiazepine use might be associated with poorer outcome in individuals with generalised anxiety disorder treated with behaviour therapy.

Rothbaum (1992) reported no benefit from EMDR treatment for clients recently addicted to cocaine, and suggested a possible metabolic abnormality to account for this. In addition, Shapiro (2001) report on a client who was a daily abuser of amphetamines for the previous 25 years becoming highly agitated from an EMDR session and requiring hospitalisation. She advised that, “Clinicians should proceed with caution with long-term amphetamine abusers (Shapiro, 2001, page 98).

Although there are currently no published studies using EMDR with clients in methadone maintenance programmes, there is a growing body of literature indicating that additional psychological treatment improves patient outcome in methadone programmes. For example, Woody et al. (1984) found that methadone maintained individuals with a high severity of psychiatric symptoms had little treatment improvement with counselling alone, but improved significantly with added psychotherapy. Specifically relevant to the treatment of trauma, Hien and Levin (1994) report on their experience of providing a psycho-educational trauma group and a psychotherapy group for women on a methadone maintenance programme. Although the article is qualitative rather than quantitative in nature, their experience nevertheless suggests that addressing trauma is an important component of treatment for those clients with concomitant problems resulting from trauma and substance misuse.
If EMDR is undertaken whilst individuals are taking medication, Shapiro (2001) suggests that the presenting traumas should be reprocessed again once the medication is stopped. This is thought to be due to better access to memories when off the medication, and is therefore applicable to any types of psychotherapeutic interventions carried out whilst the person is still using psychoactive substances.

**Conclusion**

EMDR has been described as “among the fastest growing interventions in the annals of psychotherapy” (McNally, 1999). In 1997, the EMDR Institute Inc. reported that over 22,000 licensed clinicians had been trained since the initial published study of EMDR in 1989. Despite the popularity in the approach, the superiority of EMDR over traditional exposure therapy for PTSD and anxiety disorders has yet to be demonstrated.

There has been no systematic evaluation of the efficacy of EMDR in the treatment of clients with substance misuse, although there have been a number of standardised protocols developed for this population. In theory, EMDR can be seen as having a role in increasing a client’s ego strength and resource management, in managing urges and cravings to use, and in the specific treatment of co-morbid PTSD and other psychopathology. Psychological interventions have been successfully used with clients on methadone maintenance programmes, and also as part of relapse prevention programmes. EMDR may improve retention in methadone programmes and improve treatment outcomes. Clearly, much has yet to be learnt about the usefulness and efficacy of EMDR in the treatment of substance misuse, but a review of the current literature suggests that EMDR may have an important role.
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Academic Dossier (Critical Review Two): The Efficacy of Relapse Prevention in the Treatment of Substance Misuse, with Particular Reference to Opiate Users

Introduction

One of the most challenging problems in addiction treatment is prevention of relapse. It is widely recognised that the majority of those that give up abusing a drug will relapse within a relatively short period of time. In a classic study by Hunt, Barnett and Branch (1971), they reported cumulative relapse rates amongst treated drinkers and heroin users as 58% and 66% respectively at 3-month follow-up, and 69% and 79% at six months.

Reported relapse rates vary widely according to the definition used. For example, Armor, Polich and Stambul (1978) reported relapse rates of 50% over a 12 month post-treatment period based on a return to pre-treatment drinking levels, but Orford and Edwards (1977) reported rates of 90%, based on the consumption of a single drink. Similarly, Gossop, Green, Phillips and Bradley (1987) reported 51% abstinence rates for detoxed opiate users at 6-month follow-up, but 60% of this sample had used opiates at some point since leaving the Unit. There is no consensus in the field as to what constitutes an optimal definition of relapse. Does any alcohol or drug use at all constitute a relapse? How long a period of abstinence is required before a person is no longer drinking/using? Is it use of the main drug only that constitutes a relapse, or does the use of other psychoactive drugs also count? Does anything else matter besides alcohol/drug use e.g. employment, legal status etc? Miller (1996, page S24) concludes, “The possible choices in each of these (six) domains can in combination yield literally hundreds of different definitions of what constitutes a relapse, and there appears to be no consensus in the field as to which is optimal”.

However, whilst relapse rates vary depending on the definition, there is nevertheless widespread agreement that relapse rates are high, and a recognition that many individuals will re-enter treatment several times over the course of their addiction. The fundamental goal of aftercare treatment is to prevent relapse. The question that clinicians, commissioners of services, politicians and drugs users themselves want the answer to is: “What is the most effective intervention in reducing the high relapse rates?”

This critique will examine the evidence, to date, of the efficacy of cognitive-behavioural relapse prevention interventions in the treatment of substance misuse, with particular
reference to the treatment of opiate misuse. Evaluating the efficacy of psychological interventions is a highly complex area. Various research methodologies are used for evaluating interventions, ranging from single case studies to randomised controlled trials. Each has strengths and weaknesses. In Roth and Fonagy’s book (1996) which critically reviews psychotherapy research, they advocate four distinct phases in formal research evaluation, and these phases will be used as a framework for evaluating the evidence for the efficacy of relapse prevention.

What is Relapse Prevention?

Up until the mid to late 1980s, relapse prevention was used as a generic term, referring to a wide range of drug-free treatment interventions designed to prevent relapse. These included “a wide range of idiosyncratic application of some collection of “therapy” techniques...”, (Rawson, Obert, McCann & Marinelli-Casey, 1993, page 85), e.g. various schools of psychotherapy and family therapy, case management and crisis intervention, adapted 12-step and therapeutic community techniques. However, in the last 20 years there has been a proliferation of research in the area of relapse, which has led to an increased understanding of the determinants, precipitants and correlates of relapse. As a result, specific relapse prevention strategies have developed; and arguably the most well constructed and researched of these is Marlatt and Gordon’s (1985) model of Relapse Prevention.

Grounded in social learning theory (Bandura, 1977) and utilising a cognitive-behavioural framework, Marlatt and Gordon’s (1985) model conceptualises addiction as stemming from maladaptive habit patterns. Central to the cognitive-behavioural model of relapse is the view that substance abusers have maladaptive coping skills when placed in high-risk situations, and that learning new responses will increase self-efficacy, viewed as critical to long-term abstinence. In the event of a lapse, clients are taught cognitive reframing to view lapse as an opportunity to learn new skills rather than as a catastrophe. These beliefs are in stark contrast to a disease model, which views lapse as the re-emergence of a physical illness, and sees addiction as a chronic and relapsing illness from which the addict is “recovering”, and is never “recovered”.

Cognitive-behavioural relapse prevention interventions use a highly structured and individualised therapy format, where clients focus on immediate precipitants of the relapse process i.e. they learn to identify, prepare and cope with high-risk situations. In addition, global self-control strategies are taught, as well as modification of lifestyle. The relapse prevention model hypothesises that there are common cognitive, behavioural and affective
mechanisms underlying the process of relapse, regardless of the particular problem behaviour, and relapse prevention should thus be efficacious in preventing relapse across the spectrum of addictive behaviours. Marlatt and Gordon’s (1985) work provided a foundation for much of the later theoretical and empirical writings on relapse prevention e.g. Annis (1986), Gorski (1990), Roffman (1990) and Wallace (1990).

However, although this approach has been widely adopted as an approach for the treatment of substance misuse, the evidence base from which to evaluate its efficacy is comparatively small. In particular, most of the research has been conducted on smokers and problem drinkers, with little research on cocaine, marijuana or polydrug users, and almost none specifically relating to heroin users.

Efficacy of Cognitive-Behavioural Relapse Prevention Interventions

Comparative efficacy of Relapse Prevention Interventions

Roth and Fonagy (1996), suggest that the first stage in formal research evaluation is a comparison of the new treatment with an established treatment or a no-treatment control group. There have been a number of studies utilising these designs in evaluating the efficacy of relapse prevention with substance misusers, and two review articles have summarised the major findings in this area.

Carroll (1996) reviewed 24 studies of controlled clinical trials, and Irvin, Bowers, Dunn and Wang (1999) performed a meta-analysis of 26 published and unpublished studies. The inclusion criteria for both reviews was similar in that only randomised controlled trials were included, and substance use was required to be a primary outcome variable. Only studies using a treatment approach that specifically identified a relapse prevention component or were clearly consistent with Marlatt and Gordon’s (1985) approach were included.

There was an approximate 60% overlap of studies included in the two reviews (for details of the studies, see Appendix 1). Irvin et al. (1999) included two more recent 1995 studies, and also unpublished work. However, they omitted a number of studies which Carroll (1996) included, including the one study specific to opiate users. This study by McAuliffe, Ch’ien, Launer, Friedman and Feldman (1985), was probably excluded by Irvin et al. (1999) because it evaluated a multi-modal treatment package, of which cognitive-behavioural relapse prevention was one component. McAuliffe et al.’s (1985) work will be referred to in more detail later.
The major difference between these reviews was in the method of analysis. Carroll (1996) reported on the number of studies demonstrating significant differences, whilst Irvin et al. (1999) used statistical meta-analysis, which is a more rigorous evaluation of efficacy. In meta-analysis, results of the different trials are grouped, and an effect size (r) and 95% confidence intervals are calculated. These figures determine whether or not there is a statistically reliable effect when the results are pooled together. An effect size of zero indicates no effect for relapse prevention, a positive “r” and a 95% confidence interval above zero indicates relapse prevention to be more effective than the comparison group, and a negative “r” and 95% confidence interval below zero indicates the comparison group to be more effective.

Overall Efficacy of Relapse Prevention
Both Irvin et al. (1999) and Carroll (1996) reported overall positive treatment effects for relapse prevention interventions in a number of studies. Carroll (1996) found 13 out of 24 studies reporting significant main effects for relapse prevention at either post treatment or at follow-up. Irvin et al. (1999) reported an overall effect size (r) of 0.14 (95% CI=0.10 to 0.17, n=22) on reducing substance use, and an even larger effect size of 0.48 (95% CI=0.42 to 0.53, n=10) on improving psychosocial outcomes.

Relapse Prevention versus No-Treatments or Minimal Treatment Controls
Carroll (1996) reported four out of five studies with significant post treatment effects for relapse prevention compared to no-treatment or “very minimal control treatments”. Irvin et al. (1999) reported an effect size of 0.11 (95% CI=0.06 to 0.15, n=7), comparing relapse prevention to a no-treatment control group e.g. waiting list or no additional treatment.

Compared to minimal treatment e.g. discussion and attention controls, Carroll (1996) reported four out of ten studies with significant post-treatment effects for relapse prevention, and seven studies indicating sustained effects, continuing improvement or less relapse at follow-up. Irvin et al. (1999) reported relapse prevention to “fare better” against minimal treatment e.g. physician advice (r=0.33, 95% CI=0.02 to 0.58, n=1), psycho-educational control groups (r=0.20, 95% CI=0.06 to 0.35, n=3), and discussion controls (r=0.17, 95% CI=0.08 to 0.26, n=6).
Relapse Prevention versus Alternative Active Interventions

A more stringent evaluation of efficacy is a comparison of relapse prevention with an alternative treatment. Compared to other more active interventions e.g. problem solving, interpersonal psychotherapy and 12-step recovery, Irvin et al. (1999) reported relapse prevention to “fare less well”, \( r=-0.19, \) 95% CI= -0.34 to -0.03, \( n=4 \), suggesting that these other active interventions were more effective. However, three of the studies were with cocaine users and smokers, where relapse prevention was found to be less effective generally.

Methodological Limitations and Considerations for Future Research

There are a number of methodological problems with Irvin et al.’s (1999) meta-analysis. The main problem was in the variability in the use of relapse prevention with widely differing populations, and the validity of grouping such diverse studies. Specific problems included:

1) In a number of studies, relapse prevention followed some other primary treatment, and therefore the relative benefits of relapse prevention may have been masked. For example, Sobell, Sobell and Gavin (1995) found no added value for relapse prevention following guided self-change treatment, and Hawkins, Catalona, Gillmore and Wells (1989) found no added value for relapse prevention following residential treatment. O’Farrell, Choquette, Cutter, Brown and McCourt (1993) found a significant effect for relapse prevention following behavioural marital therapy with drinkers, but Maisto, McKay and O’Farrell (1995) found no significant overall added value with relapse prevention in numbers of relapse episodes, but relapses tended to last fewer days.

More research is needed in order to examine the relative benefits of relapse prevention as a primary treatment in itself, or as an “add on” to other treatments. In the treatment of opiate misuse, relapse prevention could be used in combination with “standard” methadone treatment, with the aim of addressing abstinence from illicit opiates or other problematic drug use, but it could also be used in the maintenance of abstinence as a primary intervention following detoxification.

2) There was wide variability across studies in what relapse prevention actually consisted of, including the length and intensity of treatment, ranging from 20 minutes with smokers (Stevens, Glasgow, Hollis, Lichtenstein and Vogt 1993), 24 weeks with cocaine users (Wells, Peterson, Gainey, Hawkins and Catalona, 1994) and up to one year with drinkers (Maisto et al., 1995).
The optimal dose of relapse prevention treatment and the extent to which dose may be associated with robustness or durability of change has yet to be determined. This may vary according to the class of substance use and the severity or complexity of the individuals problems.

3) Length of follow-up varied, from immediately post treatment to 12-month follow-up. Irvin et al.'s (1999) paper did not always specify the point of outcome. Longer-term follow-up is vital, given that an important aspect of relapse prevention is the implementation of generalisable coping skills, which, it is anticipated, should lead to sustained or continuing improvement. This was evident in Carroll et al.'s (1994) study with cocaine users, which found no significant differences between relapse prevention and interpersonal psychotherapy immediately post-treatment, but positive benefits for relapse prevention were apparent at 1-year follow-up, suggesting a possible delayed benefit for relapse prevention.

More qualitative research up to 12 months and beyond is needed, although the relative impact of treatment, other factors, and the general passage of time will be hard to tease out. With the passage of time, other factors may become more salient e.g. social support, employment, self-efficacy, life events etc. The question of analysing variables over the course of time has been a subject of debate in itself. (see Hedeker & Mermelstein, 1996, on the use of random-effects regression models in relapse research, and Velicer, Martin & Collins, 1996, on latent transition analysis).

4) The number of studies within each class of substance was small, and the sample size in some studies was also small, and therefore interpretation of the results for individual classes of substance use needs to be viewed cautiously.

More studies are needed generally, but particularly with opiate users, in order to examine the efficacy of this approach with different classes of substance misuse.

5) Whilst there was consistency across the smoking studies regarding choice of primary outcome measure, primary outcome measures for studies evaluating other types of substance use was variable. Irvin et al. (1999) noted nine different psychosocial outcome variables and 15 different substance use outcomes. The definition of a successful outcome varies according to the definition used, e.g. Maisto et al. (1995), found no significant
difference in number of relapse episodes with relapse prevention, but the relapse prevention group experienced shorter relapse episodes.

Greater consistency in selection of outcome measures would greatly facilitate comparisons across studies.

6) Few studies reported on independent assessment of therapist adherence to treatment, and no studies reported on therapist competence or the effect of therapist skill on outcome.

Greater consideration to these issues in future research is needed.

7) More studies are needed on different modalities of treatment, e.g. out-patient versus in-patient, group versus individual. Also, on the use of medication to enhance treatment effectiveness (see next section).

Evaluation of Essential and "Added Value" Components of Relapse Prevention

Roth and Fonagy (1996) suggest that the second phase of research evaluation involves a more refined analysis, for example, varying the components of treatment to see which are necessary and sufficient, examining what new components may be added to enhance the likelihood of change, or exploring how much of any particular component is optimally required (such as number of sessions or intensity).

Examination of Effective Components of Treatment

One area of study that has attempted to address the issue of the relative efficacy of a particular component of relapse prevention treatment is cue exposure. Although the basis for this intervention comes from a psychobiological model of relapse, with an emphasis on conditioned withdrawal and craving, Marlatt and Gordon (1985) also place a large emphasis on in-vivo exposure to cues (internal or external). Whilst the results of early studies using cue exposure to drug related cues with opiate users were promising (e.g. O'Brien, Chaddock, Woody & Greenstein, 1974), later results were disappointing (e.g. Childress, McLellan & O'Brien, 1986). Bradley and Moorey (1988) reported positive results in three single case studies, where longer-duration exposure to drug related cues produced habituation. However, there has been only one notable recent study looking at the effect of cue exposure on opiate users and outcome (Dawe et al., 1993). Dawe et al. (1993) carried out a controlled trial looking at whether cue exposure prevented relapse in opiate addiction. Subjects were randomly allocated to either a drug dependence unit
(DDU) with a special 10-week programme, or to four weeks in a behavioural/general treatment unit (BGW) without such a programme. In each setting, following drug withdrawal, subjects were randomly allocated to either cue exposure or a control condition. All those in the DDU also had individual and group treatment focussed on issues surrounding drug use and relapse prevention. Subjects were followed up at six weeks and at six months.

In terms of outcome, at 6-month follow-up there were significantly more opiate free clients in the DDU than the BGW group, but there were no significant differences in outcomes between the cue exposure and the control groups. Both groups, independent of cue exposure, showed a significant decline in cue reactivity. Dawe et al. (1993) suggested that this unexpected finding could be interpreted in a number of ways. Firstly, the decline in cue reactivity could be a result of the passage of time and independent of exposure. Secondly, the control group could have inadvertently been exposed to drug related cues, albeit delivered in an unstructured and informal nature. Thirdly, the cue exposure treatment could have been inadequate in its intensity or design.

These studies do not support the particular use of cue exposure as a component of relapse prevention for opiate users. However, more research is needed to determine the effective components of treatment, given that those individuals on the DDU had better outcomes that those on the BGW.

"Added Value" Components in Relapse Prevention

The use of medication to enhance treatment effectiveness is not limited to the treatment of substance misuse. In the treatment of depression and anxiety, for example, there has been much research on finding the optimum combinations of the most effective forms of psychotherapy and pharmacotherapy.

Medication may enhance treatment in a number of ways. Firstly, certain types of medication may reduce the intensity of craving, and thus enhance the client's ability to cope with high-risk situations. Naltrexone, an opioid antagonist, has been used both in the treatment of alcohol and opioids. Naltrexone acts by attenuating or completely blocking the effects of exogenous opioids by binding competitively to the opioid receptors. The rationale for using naltrexone for the maintenance of abstinence from opioids, is that prolonged use of naltrexone enables the extinction of the conditioned response. Over time, being exposed to drug-related cues without the positive reinforcement of euphoria, would be expected to extinguish craving. O'Malley et al. (1992) found that naltrexone and relapse prevention combined, produced significantly lower relapse rates at six months amongst drinkers. Tucker and Ritter (2000), in
a review of 37 naltrexone outcome studies in the treatment of heroin dependence, found that naltrexone combined with behaviour therapy (e.g. Callahan et al., 1980) or family therapy (e.g. Anton, Hogan, Jalali, Riordan & Kleber, 1981) to be more effective than either naltrexone or psychosocial therapy alone. Including contingency payments has also improved naltrexone compliance and outcome (Meyer, Mirin, Altman & McNamee, 1976).

Second, some medications produce an aversive reaction when taken in combination with substances e.g. antabuse (disulfiram) and calcium carbimide, block the mechanism of alcohol and produce an aversive physiological reaction when taken in combination with alcohol. Higgins et al. (1991) reported improved outcomes combining disulfiram and a behavioural intervention (contingency payments) with cocaine users who drink heavily. Annis and Peachey (1992) found that calcium carbimide with relapse prevention, compared to calcium carbimide and physician advice, improved a clients growth in internal attribution for change, and resulted in less alcohol consumption, although the latter was not statistically significant.

Third, there may be a role for the use of medication in those with co-morbid mood disorders. For example, Kranzler et al. (1995) found that fluoxetine did not add value to relapse prevention outcomes in terms of alcohol consumption, but it reduced depression scores amongst those with current major depression. However, Carroll et al. (1994) found that desipramine did not add value to relapse prevention for cocaine users.

Irvin et al. (1999) found a large effect size for those studies combining relapse prevention and adjunctive medication ($r=0.48$, 95% CI=0.38 to 0.56, $n=4$). Three studies were with drinkers and used calcium carbimide, fluoxetine, or naltrexone. One was with cocaine users and desipramine. However, given the variety of medications used and the small number of studies, it was not possible for Irvin et al. (1999) assess the relative efficacy of particular medications using meta-analysis, without further research.

**Comparative Efficacy of Relapse Prevention for Particular Populations**

Roth and Fonagy (1996) suggest that the third phase in research evaluation involves the question, “Which of two reasonably well-optimised treatments is more effective for particular populations?” This is of particular relevance in working with substance misusers, given the high levels of co-morbidity of psychiatric diagnosis in this client group.

It has been suggested in the literature that relapse prevention treatment may be differentially effective for different types of clients, particularly those with more impairment. Annis, Davis,
Graham and Levinson (1989), for example, found that individuals with specific deficits in coping did better with relapse prevention than those with a uniform profile. There is also some evidence for relapse prevention to be associated with significantly better outcomes than alternative approaches for participants with greater impairment along several dimensions e.g. psychopathology and sociopathy (Kadden, Cooney, Getter & Litt, 1989) and substance use severity (Carroll, Rounsaville & Gawin, 1991).

The most ambitious study to be conducted in this area of client-treatment matching is Project MATCH (1997), a large, multi-site study carried out in the USA with dependent drinkers. The study aimed to determine whether specific treatments, if prescribed according to particular individual characteristics and needs, would improve treatment outcomes compared to simply offering the same treatment to all individuals with a similar diagnosis.

A total of 1726 subjects were recruited, over a two year period, across a wide range of alcohol agencies, and randomly allocated to either Cognitive-Behavioral Coping Skills Therapy (CBT), Motivational Enhancement Therapy (MET), or Twelve-Step Facilitation Therapy (TSF). Treatment was delivered individually over a 12-week period and follow-up was up to 15 months after the first therapy session. Project MATCH consisted of two parallel but independent treatment matching studies; subjects recruited at out-patient sites, and subjects recruited following an episode of in-patient or intensive day hospital treatment. This provided a basis for simultaneous replication and allowed an evaluation in two major settings.

Two primary dependent variables were chosen for analysis; percent days abstinence (PDA), which provided a measure of drinking frequency, and drinks per drinking day (DDD), constituting a measure of drinking intensity. Project MATCH found that there were substantial positive changes in PDA and DDD for all subjects and no clinically significant outcome differences among the three treatments for either of the two sample populations. However, they found two matching effects. Out-patients without a psychopathology had significantly higher rates of abstinence when treated in twelve-step facilitation than those treated in CBT, but as psychiatric severity increased, the TSF advantage over CBT disappeared.

Again in the out-patient arm, the relationship between CBT and MET treatments for the less motivated subjects began with the less motivated subjects initially doing better in CBT, but this effect reversed over time, so that by the end of follow-up, the less motivated subjects treated in MET had a greater percentage of abstinent days compared with CBT clients. This
could possibly indicate a delayed effect. There was no significant difference between treatments over the follow-up period for subjects with high motivation to change.

Many opiate addicts come into treatment with evidence of substantial psychopathology coexisting with addiction. Rounsaville, Weissman, Kleber and Wilber (1982) reported that 70.3% of opiate addicts seeking treatment had a concurrent psychiatric disorder, most commonly, major depression, anti-social personality and alcoholism. Research in the alcohol field is much further advanced than the opiate filed. However, there are many common issues, which have yet to be addressed in the treatment of opiate misuse.

Client or Therapist Characteristics

Roth and Fonagy (1996) suggest that the final phase in research evaluation involves questions about client or therapist characteristics (or other individual-difference factors) which significantly moderate the effectiveness of an approach.

Irvin et al. (1999), in their meta-analysis, found no statistically significant difference overall between relapse prevention delivered in an individual format (five studies), and those delivered in a group format (19 studies). They also found no significant difference between studies conducted in an out-patient (18 studies) as opposed to an in-patient setting (eight studies). There were not enough studies to conduct analyses separately for each type of substance, and therefore the question remains unanswered as to whether the format and setting is of differential importance for different classes of substance use.

Is Relapse Prevention an Effective Intervention with Opiate Users?

The two review articles by Carroll (1996) and Irvin et al. (1999) were unable to address the specific question of efficacy of relapse prevention with opiate users, because of the paucity of research with this particular client group (one study in Carroll’s review, none in Irvin et al.’s).

Research evaluation on the efficacy of relapse prevention with opiate users is at a less mature stage than in the alcohol field. Whereas in the alcohol field there has been some research in all four of Roth and Fonagy’s (1996) developmental phases, in the opiate field, efficacy of relapse prevention is still at the first stage, i.e. comparison of the new treatment with an established treatment or a no-treatment control group.
There have been two significant studies addressing this area, and these will be considered in some detail, before concluding with comments on directions for future research.

McAuliffe et al. (1985) and McAuliffe (1990), reported on a randomised controlled trial of a group relapse prevention programme, Recovery Training and Self Help (RTSH) and Gruber, Chutuape and Stitzer (2000) carried out a randomised controlled trial of “a new relapse prevention behavior therapy”, Reinforcement-based intensive out-patient treatment (RBT). Both programmes provided standard cognitive behavioural relapse prevention interventions and recreational activities. RTSH also combined self-help meetings, and RBT incorporated individual counselling and a contingency-based monetary incentive programme. The control groups were referral to another community-based aftercare programme in McAuliffe et al.’s (1985) study and “normal” aftercare in Gruber et al.’s (2000) study.

McAuliffe et al. (1985, 1990) found that clients attending the RTSH showed significantly higher levels of opioid abstinence at 12-month follow-up (32% vs 15%). In addition, the treatment group demonstrated significantly more employment activity and less criminal activity at 12-month follow-up. However, abstinence rates for the treatment group were still low at twelve months, and McAuliffe et al. (1985, 1990) suggested that the outcome might be improved if pharmacological treatment such as naltrexone was combined with this approach.

Gruber et al. (2000) found significant differences in abstinence from heroin between the two groups at 1-month (57% RBT vs 21% controls). However, these differences in abstinence from heroin were no longer significant at 3-month follow-up (32% RBT vs 21% controls). Interestingly, the contingency-based monetary incentive programme was in effect for the first month of treatment only, and this may therefore have had an effect on the outcome.

Methodological Considerations and Future Research

There are a number of methodological considerations in these multi-component designs:

First, such studies are valuable in demonstrating overall efficacy of a particular approach. However, the design is such that they are unable to address the question of what aspects of the complex treatment package are useful in producing the positive outcome effects. Gruber et al.’s (2000) study is interesting, in that they included a contingency-based monetary incentive programme. This included abstinent-contingent housing provision for those that chose this. The authors note that additional research using random assignment of those in need of
housing is needed “to unravel the specific efficacy of this portion of the programme, particularly since those in the recovery houses had to observe various rules and regulations, including abstinence from all drugs, observe a curfew, and attend NA or AA meetings in the house”. A methodologically more sophisticated study would be a comparison of RBT, to the same package minus the contingency package, with the contingency package alone, with random allocation to those in need of housing.

Second, deciding on appropriate control groups is complicated. In McAuliffe et al.’s (1985 1990) study, the control groups were referred to other community-based aftercare programmes. Likewise, in Gruber et al.’s (2000) study, the control group received “normal” aftercare i.e. referral to alternative community out patient clinics, and in addition, information on housing, recovery houses etc. In Gruber et al.’s study, 17% of the control group clients were engaged in treatment elsewhere. However, none of the control group who were abstinent at 1-month follow-up were engaged in formal treatment, suggesting that treatment per se was not the critical determinant of abstinence outcomes.

Further research is needed to address which specific elements of these relapse prevention packages are essential. Also, a comparison of RBT, RTSH, or alternative relapse prevention interventions is needed in order to compare their relative efficacy. In future, large-scale studies are also needed to address the issue of client-treatment matching.

Why so Little Research on Relapse Prevention with Opiate Users?

There are a number of possible explanations for the paucity of research with opiate users in this area. One possible explanation lies in the popularity of methadone. Numerous studies have demonstrated positive outcomes in terms of improved retention in treatment with methadone. However, as Kleber (1977) pointed out, “methadone is a drug, not a treatment”. Opiate misusers often present with multiple problems, including impaired occupational functioning, legal problems, drug-related medical illnesses, impaired family and social relations and psychopathology. Many of these problems are both severe and chronic. Primary opiate users presenting for treatment have also been found to report high levels of stimulant, benzodiazepine and alcohol use (Department of Health, 1997). This multidimensionality of problems has led to a range of ancillary services being offered as an adjunct to methadone maintenance. However, Marlatt and Gordon’s (1985) cognitive-behavioural relapse prevention has not been systematically applied to this client group. It may be because Marlatt and Gordon (1985) describe their intervention as predominantly a tertiary prevention
programme, i.e. one designed to maintain abstinence, but they also describe its application in secondary prevention. In theory, therefore, relapse prevention could be integrated early into methadone maintenance treatment, aimed at reducing or stopping not only illicit opiate use, but also other problematic drug use. It could also be applied, more traditionally, following detoxification.

Conclusion

There have only been two studies of note using relapse prevention with opiate users post detoxification, both favourable, at least in the short term. As they both involved relapse prevention packages, it is not possible to draw any conclusions about the relative efficacy of the cognitive-behavioural aspects or other components of treatment. Studies with substance misuse populations in general have shown cognitive behavioural-relapse prevention approaches to be a promising intervention, although there is no evidence that it is better than other psychological interventions.

The lack of studies with opiate users leaves the question of efficacy of relapse prevention with this particular client group unanswered. Researchers should follow the precedent laid down by the alcohol field, continuing with randomised controlled trials of relapse prevention, and only once efficacy has been established, look at the more complex issues of maximising treatment outcomes.
References


APPENDIX 1


N.B. Authors names in italics indicated inclusion in Carroll’s (1996) review
Where “r” is reported, these studies were included in Irvin et al.’s (1999) review
(r = effect size, CI = 95% confidence intervals)

ALCOHOL STUDIES

<table>
<thead>
<tr>
<th>STUDY AUTHOR</th>
<th>NUMBER OF SUBJECTS</th>
<th>STANDARD TREATMENT</th>
<th>TREATMENT COMPARISONS?</th>
<th>OUTCOME IMMEDIATELY POST-TREATMENT</th>
<th>OUTCOME AT 6 MONTHS</th>
<th>OUTCOME AT 1 YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaney et al. (1978)</td>
<td>40</td>
<td>-</td>
<td>R.P. Skills Training Discussion control No treatment</td>
<td>Increased coping skills for R.P.</td>
<td></td>
<td>No significant differences in relapse rates, but some significant effect on some outcomes for R.P.</td>
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<td>r=.29 (CI=-.02 to .56)</td>
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<td>Ito et al. (1988)</td>
<td>39</td>
<td>-</td>
<td>Cognitive Behavioural R.P. Interpersonal process aftercare groups</td>
<td>No significant difference</td>
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<td>Annis et al. (1989)</td>
<td>83</td>
<td>R.P. Counselling</td>
<td>No significant difference (but R.P. better for those with specific deficits in coping versus uniform profile for specific high risk situations)</td>
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<td>Kadden et al. (1989)</td>
<td>96</td>
<td>Cognitive behavioural coping skills Interactional groups</td>
<td>No significant differences, but patients with higher sociopathy did better with CBT, and patients higher in psychopathy did better with CBT. Patients higher in neuropsychological impairment did better with interactional groups</td>
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<td>O'Farrell et al. (1993)</td>
<td>59</td>
<td>Behavioural Marital therapy</td>
<td>R.P. with partners Nothing added Significant difference with R.P. added</td>
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<tr>
<td>Annis and Peachey (1992)</td>
<td>43</td>
<td>Calcium carbinide</td>
<td>R.P. and calcium carbinide showed significant growth in internal attribution for change, and less alcohol consumption (but not statistically significant)</td>
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<td>O'Malley et al. (1992)</td>
<td>97</td>
<td>R.P. coping and naltrexone R.P. and placebo Supportive therapy and naltrexone Supportive therapy and placebo</td>
<td>S.T. and naltrexone = highest rates of abstinence R.P. and naltrexone = significant fewer drinks and drinking days</td>
<td>Naltrexone and R.P., least likely to relapse</td>
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<tr>
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<td>Comparator</td>
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<td>Kranzler et al. (1995)</td>
<td>95</td>
<td>R.P. psychotherapy</td>
<td>Placebo</td>
<td>Comparing pre and post outcomes, significantly less alcohol consumption in both groups. Although fluoxetine had no significant effect on alcohol consumption, it reduced depression scores more than placebo treatment among subjects with current major depression.</td>
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<td>Maisto et al. (1995)</td>
<td>24</td>
<td>Behavioural marital therapy</td>
<td>R.P. (for 1 year) No additional treatment</td>
<td>Equal numbers of relapse episodes, but R.P. subjects relapses tended to last fewer days than did no R.P. subjects.</td>
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<td>Sandahl and Ronnberg (1990)</td>
<td>35</td>
<td>Brief group psychotherapy in R.P.</td>
<td>No additional treatment</td>
<td>Improvements pre and post outcomes with R.P., and when compared to no additional treatment subjects</td>
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<td>Sobell et al. (1995)</td>
<td>69</td>
<td>Guided self-change treatment</td>
<td>R.P.</td>
<td>Improvements in both groups. No evidence for added value with R.P.</td>
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<td>O'Connell (1987)</td>
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<td>R.P.</td>
<td>No additional treatment control</td>
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<td>R.P. alone</td>
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<td>Nicotine fading alone</td>
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<td>Killen et al. (1984)</td>
<td>64</td>
<td>Intensive 4 day aversion and sills training</td>
<td>R.P. skills training and nicotine gum</td>
<td>At 6 weeks, outcomes better for R.P. and nicotine gum only</td>
<td>No significant difference at 15 weeks</td>
<td>No significant difference at 10 1/2 weeks</td>
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<td>R.P. Skills training alone</td>
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<td>Nicotine gum alone</td>
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<td>Hall et al. (1984)</td>
<td>135</td>
<td>Aversive smoking sessions</td>
<td>Skills training</td>
<td>Better outcome for skills training</td>
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<td>r=.06 (CI=-.12 to .24)</td>
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<td>Discussion control</td>
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<td>Davis and Glaros (1986)</td>
<td>45</td>
<td>R.P. – multicomponent</td>
<td>No significant Differences</td>
<td>But R.P. group indicated increased competence in coping skills post treatment, but not at longer follow-up. R.P. group also smoked fewer cigarettes when they did relapse and slightly longer periods to relapse.</td>
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<td>Study</td>
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<td>Follow-up</td>
<td>Outcomes</td>
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<td>Stevens and Hollis (1989)</td>
<td>744</td>
<td>Intensive cognitive-behavioural smoking cessation programme</td>
<td>R.P. skills training Discussion group No treatment control</td>
<td>1 month – better for R.P.</td>
<td>Better outcomes for R.P.</td>
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<td>Goldstein et al. (1989)</td>
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<td>R.P. alone</td>
<td>Educational support alone</td>
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<td>Higher abstinence in R.P. compared to educational support</td>
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<td>Educational support and gum</td>
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<td>Supnick and Colletti (1984)</td>
<td>33</td>
<td>7 week smoking cessation programme</td>
<td>Relapse coping with problem solving Relapse coping with attention placebo Abstinence message with problem solving Abstinence message with attention placebo</td>
<td>Fewer cigarettes smoked in the abstinence message than relapse coping (but those who achieved abstinence prior to maintenance treatments did better with problem solving)</td>
<td>Abstinence message better outcomes at 5 months</td>
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<td>Conclusion</td>
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<td>Zelman et al. (1992)</td>
<td>126</td>
<td>-</td>
<td>Coping skills and gum</td>
<td>Better outcome for coping skills (Also those with lower affect had better outcomes in skills training, higher affect did better with supportive counselling)</td>
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<td></td>
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<td>-</td>
<td>Coping skills and rapid smoking</td>
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<td>-</td>
<td>Supportive counselling and gum</td>
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<td></td>
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<td>-</td>
<td>Supportive counselling and rapid smoking</td>
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<td></td>
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<td>-</td>
<td>Better outcome for coping skills (Also those with lower affect had better outcomes in skills training, higher affect did better with supportive counselling)</td>
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<td>No significant difference between group</td>
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<td>Stevens et al. (1993)</td>
<td>1119</td>
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<td>R.P. (1 session)</td>
<td>Better outcomes at 3 months for R.P.</td>
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<td>No intervention</td>
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<td>-</td>
<td>Better outcomes at 1 year for R.P.</td>
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<td>Hill et al. (1993)</td>
<td>82</td>
<td>-</td>
<td>Behavioural skills training (R.P.)</td>
<td>No significant differences</td>
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<td></td>
<td>-</td>
<td>Skills training and gum</td>
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<td></td>
<td></td>
<td>-</td>
<td>Skills training and exercise</td>
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<td></td>
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<td>Exercise alone</td>
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<td></td>
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<td>-</td>
<td>All 3 behavioural skills training had better outcomes than exercise alone</td>
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<td>Cinciripini et al. (1994)</td>
<td>34</td>
<td>-</td>
<td>R.P. and smoking schedule</td>
<td>Better outcomes for R.P. and smoking schedule</td>
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<td>Education (control)</td>
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<td>Intervention 2</td>
<td>Findings</td>
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<td>Hall et al. (1994)</td>
<td>149</td>
<td>Standard treatment</td>
<td>CBT for mood management</td>
<td>No significant Difference</td>
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<td></td>
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<td>Standard treatment</td>
<td>But, for patients with history of major depressive disorders, significantly higher abstinence in CBT than standard treatment.</td>
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<td>r=.20 (CI=-.02 to .40)</td>
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## COCAINE STUDIES

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<tr>
<th>STUDY AUTHOR</th>
<th>NUMBER OF SUBJECTS</th>
<th>STANDARD TREATMENT</th>
<th>TREATMENT COMPARISONS?</th>
<th>OUTCOME IMMEDIATELY POST-TREATMENT</th>
<th>OUTCOME AT 6 MONTHS</th>
<th>OUTCOME AT 1 YEAR</th>
</tr>
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<tbody>
<tr>
<td><em>Carroll et al.</em> (1991)</td>
<td>42</td>
<td></td>
<td>R.P.</td>
<td>No significant difference (But the more severe cocaine users achieved more days abstinence with R.P. then I.P.)</td>
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<td><em>Carroll et al.</em> (1994)</td>
<td>139</td>
<td>R.P. and desipramine</td>
<td>No significant differences</td>
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<td>Significant effects for R.P. at 1 year</td>
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<td>Supportive therapy and desipramine</td>
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<td><em>Wells et al.</em> (1994)</td>
<td>110</td>
<td>R.P. group</td>
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<td>12-step recovery support group</td>
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<td>r=2.6 (CI=.45 to -.05)</td>
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</tr>
</tbody>
</table>
### MARIJUANA STUDIES

<table>
<thead>
<tr>
<th>STUDY AUTHOR</th>
<th>NUMBER OF SUBJECTS</th>
<th>STANDARD TREATMENT</th>
<th>TREATMENT COMPARISONS?</th>
<th>OUTCOME IMMEDIATELY POST-TREATMENT</th>
<th>OUTCOME AT 6 MONTHS</th>
<th>OUTCOME AT 1 YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephens et al. (1994)</td>
<td>212</td>
<td>R.P.</td>
<td>Social support group</td>
<td>No significant difference</td>
<td></td>
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</tr>
</tbody>
</table>

### OTHER DRUG USE STUDIES

<table>
<thead>
<tr>
<th>STUDY AUTHOR</th>
<th>NUMBER OF SUBJECTS</th>
<th>STANDARD TREATMENT</th>
<th>TREATMENT COMPARISONS?</th>
<th>OUTCOME IMMEDIATELY POST-TREATMENT</th>
<th>OUTCOME AT 6 MONTHS</th>
<th>OUTCOME AT 1 YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkins et al. (1989)</td>
<td>130</td>
<td>Residential treatment programme</td>
<td>R.P.</td>
<td>No significant differences, but significantly higher level of skills for R.P. group.</td>
<td></td>
<td></td>
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<tr>
<td>Hawkins et al (1986)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36 (CI=.14 to .54)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Sample Size</td>
<td>Intervention</td>
<td>Outcome Measures</td>
<td>Findings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
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</tr>
<tr>
<td>McAuliffe et al. (1985)</td>
<td>144</td>
<td>Recovery training with self-help aftercare No aftercare</td>
<td>-</td>
<td>Significantly better outcomes for recovery training (R.P.) and self help group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knight et al. (1994)</td>
<td>95</td>
<td>R.P. training in probation clients Knowledge maps No knowledge maps</td>
<td>Significantly less positive drug tests for R.P. and knowledge maps at 1 month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashkanazi (1990)</td>
<td>55</td>
<td>R.P. Drug education program</td>
<td>Unpublished study</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peters et al. (1993)</td>
<td>268</td>
<td>6 week jail treatment programme No additional treatment</td>
<td>Better criminal outcomes and in coping skills and confidence in treatment group</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Professional Dossier: An Audit of Clinical Supervision in a Statutory Specialist Drug Service

Introduction

In 1998, the term Clinical Governance was introduced into the NHS. In the NHS White Paper: A First Class Service (Department of Health, 1998), Clinical Governance was described as: “A framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish”.

One of the key elements underpinning Clinical Governance and outlined in the White Paper, is “modernised professional self-regulation and extended life-long learning”, to ensure that “the NHS workforce is trained to acquire and maintain the relevant skills, and that professional bodies exercise adequate control over professional practice” (Hall & Firth-Cozens, 2000).

In light of these developments, professional bodies have produced guidance to their members on continuing professional development (e.g. British Psychological Society, 2001, Royal College of Psychiatrists, 1999, and United Kingdom Central Council for Nursing, Midwifery and Health Visiting, 2001). Included within these is guidance on clinical supervision. The Royal College of Psychiatrists (1999, page 10) statement on approval of training schemes for basic training for MRCPsych Doctors, states, “probably the most important ingredient of clinical training is regular direct supervision…”. Within the Clinical Psychology profession, the B.P.S.’s Division of Clinical Psychology (2001, page 8) advocates that “…all qualified clinical psychologists whatever their level of experience, should have access to and be prepared to make constructive use of some appropriate supervisory facility to support their work”. Likewise, the UKCC (2001, page 6) “..supports the establishment of clinical supervision as an important part of clinical governance and in the interests of maintaining and improving standards of patient and client care.” Although there is not, as yet, a statutory requirement for nurses and clinical psychologists to receive supervision, both professional bodies have codes of conduct which refer to the individuals responsibility and accountability for maintaining and improving professional knowledge and competence. Effective clinical supervision is one way of ensuring that these issues are addressed.
What is Clinical Supervision?

Clinical supervision can be defined as a formal process of professional support and learning which enables individual practitioners to develop knowledge and competence, assume responsibility for their practice and enhance consumer protection and safety of care in complex clinical situations (Vision for the Future, D.O.H., 1993).

Inskipp and Proctor (1993) state that clinical supervision should serve three functions:

1. A formative function – that is the educational process of developing skills and abilities. It encourages: reflection, self awareness, appreciation of one’s own actions, examination of intervention and outcomes, and exploring other ways of working with clients presenting similar challenges.

2. A restorative function – this provides supportive help for those who work with stress and distress. It encourages awareness of how this affects individuals, maintaining stability, boundaries and emotional distance.

3. A normative function – this includes the managerial and quality control aspects of practice. It encourages the identification of blind spots and prejudices, ensures the highest professional standards of care are upheld, and that policies, practices and procedures are followed.

This report describes the procedure, the process, and the results of a clinical audit of clinical supervision within a statutory Specialist Drug Service (S.D.S.).

Background

The Specialist Drug Service is a tertiary NHS provision. Its primary aim is to assess, advise and treat problematic drug users, either directly, or through shared care arrangements with primary and secondary care voluntary and statutory services. The team is multi-disciplinary, consisting of a Service Manager, Psychiatrists, a Clinical Psychologist, Nurses, Project Workers and Administrative staff.

Each year the service takes two “away days”, with the primary aim of reviewing developments over the past 12 months, and producing a work plan of priorities for the following 12 months. The emphasis is on examining aspects of service delivery, updating staff regarding new initiatives, and team building. All staff were consulted regarding the agenda for
these two days, and clinical supervision was identified as an area of concern by a number of clinical and managerial staff. The S.D.S. has a policy regarding supervision, and a structure is in place for all staff. However, managers within the service were concerned whether the current arrangements met individual needs, particularly given the hierarchical nature of the supervision structure. It was also apparent that some clinicians were dissatisfied with aspects of their supervision. As the Audit Co-ordinator within the Service, I volunteered to conduct a baseline audit of current supervision, which was to be used to stimulate discussion at the “away days”. A structured questionnaire was developed for this purpose, which staff completed anonymously.

Aims of the Audit

1) To establish standards of good practice of clinical supervision based on existing professional and local policies and guidelines.
2) To develop a questionnaire to measure the extent to which certain criteria and standards were being met, and to obtain general feedback on satisfaction with existing supervision arrangements.
3) To feedback the results to the team, and to facilitate discussion on recommendations for improvements to existing arrangements.
4) To carry out a re-audit after six months, to monitor changes arising out of the recommendations.

Audit is not a one-off event. These four stages are based on the notion of audit as a quality improvement process; monitoring and re-audit of practice being vital to ensure that recommendations and improvements are implemented.

The National Institute for Clinical Excellence (2002) defines clinical audit as “a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change. Aspects of the structure, processes, and outcomes of care are selected and systematically evaluated against explicit criteria. Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery” (see figure 1).
What are we trying to achieve?

Have we made things better?

Are we achieving it?

Doing something to make things better

Why are we not achieving it?

*Figure 1: The Clinical Audit Cycle (National Institute for Clinical Excellence, 2002)*

**Establishment of Standards**

A questionnaire was developed (see Appendix 1), based on existing standards or criteria relating to good practice identified in the literature.

**Receipt of Management Supervision**

For the purposes of the audit, management supervision, as described in the S.D.S. policy was used. It covers aspects of management e.g. service development, quality issues etc.; but it also covers staff development e.g. appraisal and training needs, and therefore is appropriate for all clinical staff.

| Standard: All clinical staff should receive management supervision |
| Exceptions: none |
| Criteria: 100% |

The results of the baseline audit indicated that all but two staff i.e. 90% received management supervision. One of the staff who said they did not receive it was a junior member of staff, who may have understood that the question referred to managers only, or it may indeed be true that performance or training issues were not addressed. The other person who indicated the lack of management supervision was the Consultant Psychiatrist, for whom management
arrangements were established within the Trust but formal management supervision was not in operation.

Receipt of Caseload Supervision

Again, the definition as reported in the S.D.S. policy was used in the questionnaire, i.e. a systematic, regular review of the current caseload of an individual practitioner of the team.

| Standard: | All clinical staff should receive caseload supervision |
| Exceptions: | Clinical staff not carrying an individual client caseload |
| Criteria: | 100% |

The results of the baseline audit indicated that all but two staff received caseload supervision. The two staff that did not receive this were both senior managers within the team who held a small client caseload.

Receipt of Clinical Supervision

This was described as specifically focussed on client work.

| Standard: | All clinical staff should receive clinical supervision |
| Exceptions: | none |
| Criteria: | 100% |

All but two members of staff i.e. 89% were in receipt clinical supervision. The two staff members that were not, the Consultant Psychiatrist and a Senior Manager in the team with a small caseload, indicated that they used the clinical team meetings for supervision of their practice.

Familiarity with the S.D.S. Policy on Caseload Supervision

It was decided to audit this policy rather than the supervision policy, as it was hypothesised that this was not well established within the team, and that there was scope for improvement.

| Standard: | All clinical staff to have read the S.D.S. policy on caseload supervision |
| Exceptions: | none |
| Criteria: | 100% |
Results of the baseline audit indicated that 63% of staff had read the caseload supervision policy.

Use of Caseload Supervision Form

There is an established form for recording caseload, details of involvement, review dates, frequency of sessions, client severity etc.

<table>
<thead>
<tr>
<th>Standard:</th>
<th>All clinical staff should use the caseload supervision form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptions:</td>
<td>Clinical staff not carrying an individual client caseload</td>
</tr>
<tr>
<td>Criteria:</td>
<td>100%</td>
</tr>
</tbody>
</table>

At baseline, only 38% of staff indicated that they used the caseload supervision form, but all those that used it agreed that it was helpful.

Frequency of Supervision

The S.D.S. supervision policy states that all clinical staff should receive a minimum of two hours clinical supervision per month (pro rata).

Avon and Wiltshire Mental Health Partnership Trust (AWP, 2001), in their draft supervision policy, state that junior and senior professional staff should receive monthly supervision (duration unspecified) and that Consultants and Specialists should receive six weekly supervision (again duration unspecified).

The Division of Clinical Psychology (DCP, 2001) advocates three and a half hours per month supervision as a minimum for clinical psychologists (but does not specify clinical supervision). The UKCC (2001, page 6) states that “clinical supervision is best developed at a local level in accordance with local needs”, and does not specify frequency. However, the AWP Policy (2001) for clinical supervision for nurses advocates a minimum of two hours per month for nurses.

Given the lack of consensus in the frequency and amount of clinical supervision stipulated in these different policies and guidelines, a “best fit” standard was adopted, which meets nursing requirements, but falls somewhat short of that suggested by the DCP for clinical psychologists. The standard adopted is in line with those contained within the S.D.S. policy on supervision and the Trust’s supervision policy.
Standard: All clinical staff should receive a minimum of two hours per month clinical supervision (pro-rata)

Criteria: 100%

Exceptions: Consultant Psychiatrists, who should receive supervision at a minimum quarterly, but ideally six-weekly.

The baseline audit indicated that of the staff receiving clinical supervision, the majority received it monthly (41%) or fortnightly (29%). Two staff received it weekly (12%), and three staff reported it as ad hoc, variable, or 3-monthly. The majority of staff (82%) reported their supervision sessions as 1½ hours in length. The three staff that reported “less than 1 hour” reported weekly or fortnightly supervision.

It was difficult to determine whether this standard was met, given that many staff worked part-time, and for others direct clinical work was only one aspect of their role. However, it was estimated that the frequency standard was met for between 69% and 81% of the clinical staff who received clinical supervision. Three of the staff who did not meet the standard all worked full-time and fell short of the standard by half an hour per month.

Contract Setting

An essential element of supervision is the formal agreement of the supervisory contract. Langs (1994) suggests that the contract is the foundation on which to build the supervisory relationship. The following standards were derived from the vast literature on supervision.
The majority of staff did not have a written negotiated supervision contract (65%).

76% reported that records of the session were kept by the supervisor, and 47% received a copy (two staff indicated that they did not require a copy). The majority (62%) stated that storage of supervision records had not been discussed or agreed with them. 71% of staff stated that they were clear about confidentiality issues within the supervisory relationship. The majority (88%) reported the supervision venue as appropriate and 94% reported the sessions to be private and uninterrupted. Just under half the staff (47%) said that the supervision was formally reviewed, but did not specify the frequency.

**Agenda Setting**

The literature on supervision state that it is good practice for an agenda to be set at the start of each supervision session.

| Standard: | An agenda should be set at the start of each clinical supervision session |
| Exceptions: | none |
| Criteria: | 100% |

The majority (76%) said that an agenda was set at the onset of each supervision session.

**Models of supervision**

This is a complex area. There has been much written about different models and styles of supervision (Bernard & Goodyear, 1992), and clearly the nature of the supervision will
depend on the particular orientation and training of the supervisor. I wanted to raise staff awareness within the team that models of supervision exist. I chose to look at the style of the supervision received, and as a structure for obtaining this information, the six modes identified by Hawkins and Shohet (2001) were used.

Hawkins and Shohet (2001) advocated 6 modes that they considered important components of good supervision:

- Reflection on the content of the therapy sessions
- Exploration of the strategies and interventions used by the therapist
- Exploration of the therapy process and relationship
- Focus on the supervisee’s counter-transference
- Focus on the here-and-now process as a mirror or parallel of the there-and-then process
- Focus on the supervisor’s counter-transference

It was considered that the first three modes identified by Hawkins and Shohet (2001) were important components of all clinical supervision, if Inskipp and Proctor’s (1993) functions are to be achieved. However, whether or not clinical supervision also includes exploration of the supervisee and supervisor transference and counter-transference was considered an issue for the individuals concerned, their training, style and preferred models. I did not consider the latter three modes to be essential for good supervision.

| Standard: All staff to receive clinical supervision, focusing on the first three modes identified by Hawkins and Shohet (2001) |
| Exceptions: none |
| Criteria: 100% |

In the baseline audit, staff were asked to indicate which of these modes described their current supervision, and which they wished to receive. All staff indicated that strategies and interventions used by them were explored in their clinical supervision sessions. The majority (65%) also reported that they used supervision to reflect on the content of the therapy session, and to explore the therapy process and relationship. Only a minority indicated a focus on the therapy process as it is reflected in the supervision process.
Most staff failed to complete the questions relating to whether or not they wished their supervision to address specific areas, which was probably a flaw in the design of the questionnaire.

**Satisfaction with Clinical Supervision**

Staff were asked to indicate on a scale from 1 to 5, (a) how satisfied they were with the frequency of their clinical supervision, and (b) their satisfaction with the content and style of the supervision sessions. They were also asked to identify ways in which they felt their current supervision arrangements could be improved.

<table>
<thead>
<tr>
<th>Standard:</th>
<th>All staff should be satisfied with the clinical supervision that they receive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptions:</td>
<td>none</td>
</tr>
<tr>
<td>Criteria:</td>
<td>100%</td>
</tr>
</tbody>
</table>

36% of staff reported satisfaction with the frequency of clinical supervision, 18% were dissatisfied, and 47% reported that they were neither satisfied nor dissatisfied.

Regarding the content and style of supervision, 65% were satisfied, 24% were not, and 12% reported to be neither satisfied nor dissatisfied.

Three main themes emerged from the open-ended question regarding improvements:
(a) Frequency: Four staff stated that they would like more regular clinical supervision (fortnightly rather than monthly)
(b) Format: Four staff stated that they would like peer or group supervision.
(c) Venue: One staff member requested a more appropriate setting, away from the work place.
(d) Style and model: various, e.g. more formalised supervision, less management focussed, more client and practice centred, more opportunity to reflect on the process, and supervision for cognitive behaviour therapy.

**Questionnaire Return Rate**

Questionnaires were returned by 21 out of a total of 23 staff (91% return rate).

One staff member did not complete the questionnaire because she was concerned, despite assurances to the contrary, that the information may not remain confidential within the
presentation. She was particularly concerned that if she voiced her negative concerns over her current supervision arrangements, that these may be held against her with regard to her future career development.

Although one member of staff only raised this as an issue, it is potentially a problem for the vast majority of staff who receive supervision from a senior member of their profession, who is also often their line manager. “What distinguishes supervision from most other personal relationships is the formal authority and power vested in the supervisor by their role in the agency. It is a compulsory unequal relationship that has not been chosen by either person. It can also have a significant influence on the supervisee’s future career” (Brown & Bourne, 1996, regarding supervision for social workers).

It was not known why the other member of staff failed to return the questionnaire.

S.D.S. “away days”

The results of the questionnaires were collated prior to the away days, and presented in a similar format to Table 1 in a one and a half hour session. Staff were invited to ask questions or to comment on any aspects of the presentation. Following this, staff were invited to brainstorm ways they felt that current supervision arrangements could generally be improved and these were written up on a flip chart. Finally, an action plan was drawn up, with individuals from the team nominated to take forward the various suggestions.

Main Recommendations Arising out of the Audit

- All staff to review their current supervision arrangements with their clinical supervisor and/or their line manager, as appropriate.  
  *Action: All staff.*

- Establishment of a working party to assess the feasibility of a peer support group for clinical staff.  
  *Action: An identified team member to co-ordinate.*
• Staff with particular specialist roles to investigate the feasibility of receiving additional supervision from a staff member outside of the service e.g. specialist in infectious diseases, hypnotherapy etc.
  
  *Action*: Individual staff members, in discussion with their clinical supervisor and/or line manager, as appropriate.

• A more appropriate venue for supervision of staff to be investigated.
  
  *Action*: Service Manager.

• All supervisors to write a supervision contract, as negotiated with their supervisee.
  
  *Action*: A supervision contract pro forma to be circulated to all staff (Jefferies, 1998).

• All supervisees should systematically record and review their clients on an individual basis at least 3-monthly, either with their clinical supervisor or their line manager.
  
  *Action*: The S.D.S. caseload supervision policy and form to be copied to all staff.

• Supervision should not necessarily be hierarchical. Supervisees should be able to choose their clinical supervisor, who may or may not be their line manager.
  
  *Action*: Individual staff, unhappy with their current arrangements, should explore and discuss alternative options with their clinical supervisor and/or line manager.

• Staff should be able to access other staff for out of hours support, if required.
  
  *Action*: Staff to be provided with a list of managers and supervisors home telephone numbers.

• Clinical supervision arrangements should be re-audited in six months.
  
  *Action*: Consultant Clinical Psychologist.

**Results of Re-audit at Six months (see Table 1)**

Questionnaires were returned by 17 out of a total of 21 clinical staff (81% return rate). This was slightly lower than the baseline return rate, and is largely accounted for by new staff joining the team, who perhaps did not see the importance or relevance of completing the questionnaire, having not been involved in the baseline audit.
There was little change in the number of staff receiving management, caseload or clinical supervision. The percentage of staff receiving caseload and clinical supervision was slightly lower than previously, due to the two staff identified at baseline still not receiving this type of supervision, and a key member of the management team leaving, resulting in an additional member of staff without supervision.

The most notable improvements were with satisfaction with clinical supervision; 71% at re-audit vs 36% at baseline, were satisfied with the frequency of clinical supervision. The major change was the increase in numbers of staff receiving fortnightly (43% vs 29%), as opposed to monthly supervision (29% vs 41%); a consequence of a change in supervisor for some staff.

For those that received clinical supervision, the frequency standard was met in all but two cases (86%). No staff were dissatisfied with the content and style of supervision at re-audit, compared to four at baseline; 86% (vs 65%) were satisfied.

88% of staff (vs 63%) indicated that they had read the S.D.S. policy on caseload supervision, and 67% (vs 38%) indicated that they used the caseload supervision form. Again, all those that used the form found it useful. However, 33% (vs 62%) were not using the form.

The re-audit also highlighted improvements in the formal set-up of clinical supervision. 71% (vs 35%) indicated that they had a written negotiated supervision contract, and 86% (vs 53%) said that there was agreement as to what to bring to supervision. 86% (vs 76%) indicated that their supervisor kept records and 58% (vs 47%) received a copy. Storage of records had been discussed with 71% of supervisees (vs 38%) and 93% (vs 71%) were clear about confidentiality. All staff felt the venue to be appropriate (vs 88%).

There were no major differences in the content and style of supervision from baseline.
### Table 1: Results of baseline audit and re-audit at six months of clinical supervision within S.D.S.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Baseline audit (n=21)</th>
<th>6 month re-audit (n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. (%) of staff</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. (%) of staff</td>
</tr>
<tr>
<td>Receive management supervision (standard 100%)</td>
<td>18 (90%)</td>
<td>1</td>
</tr>
<tr>
<td>Receive caseload supervision (standard 100%)</td>
<td>16 (89%)</td>
<td>3</td>
</tr>
<tr>
<td>Receive clinical supervision (standard 100%)</td>
<td>17 (89%)</td>
<td>2</td>
</tr>
<tr>
<td>Read the S.D.S. policy on caseload supervision (standard 100%)</td>
<td>12 (63%)</td>
<td>2</td>
</tr>
<tr>
<td>Use the caseload supervision form (standard 100%)</td>
<td>6 (38%)</td>
<td>3</td>
</tr>
<tr>
<td>Report the caseload supervision form as useful (standard 100%)</td>
<td>6 (100%)</td>
<td>15</td>
</tr>
<tr>
<td>Written negotiated supervision contract in place (standard 100%)</td>
<td>6 (35%)</td>
<td>10</td>
</tr>
<tr>
<td>Agreement about what to bring to clinical supervision (standard 100%)</td>
<td>9 (53%)</td>
<td>12</td>
</tr>
<tr>
<td>Written records kept by supervisor (standard 100%)</td>
<td>13 (76%)</td>
<td>D/k 2</td>
</tr>
<tr>
<td>Copy of supervision records given to supervisee (standard 100%)</td>
<td>7 (47%)</td>
<td>2</td>
</tr>
<tr>
<td>Storage of supervision records discussed and agreed with supervisee (standard 100%)</td>
<td>6 (38%)</td>
<td>1</td>
</tr>
<tr>
<td>Agenda set at the start of each supervision session (standard 100%)</td>
<td>13 (76%)</td>
<td>9</td>
</tr>
<tr>
<td>Arrangements for formal review of supervision (standard 100%)</td>
<td>8 (47%)</td>
<td>7</td>
</tr>
<tr>
<td>Confidentiality issues within the supervisory relationship addressed (standard 100%)</td>
<td>12 (71%)</td>
<td>13</td>
</tr>
<tr>
<td>Appropriate venue (standard 100%)</td>
<td>15 (88%)</td>
<td>14</td>
</tr>
<tr>
<td>Private and uninterrupted supervision sessions (standard 100%)</td>
<td>16 (94%)</td>
<td>13</td>
</tr>
<tr>
<td>Opportunity to reflect on the content of the therapy session (standard 100%)</td>
<td>11 (65%)</td>
<td>10</td>
</tr>
<tr>
<td>Opportunity to explore strategies and interventions used (standard 100%)</td>
<td>17 (100%)</td>
<td>12</td>
</tr>
<tr>
<td>Opportunity to explore the therapy process and relationship (standard 100%)</td>
<td>11 (65%)</td>
<td>11</td>
</tr>
<tr>
<td>Opportunity to focus on the therapist’s counter-transference</td>
<td>4 (24%)</td>
<td>5</td>
</tr>
<tr>
<td>Opportunity to focus on the here-and-now process as a mirror or parallel of the then-and-then process?</td>
<td>4 (24%)</td>
<td>2 (14%)</td>
</tr>
<tr>
<td>Opportunity to focus on the supervisor’s counter-transference?</td>
<td>1 (6%)</td>
<td>1 (7%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of supervision</th>
<th>Baseline audit</th>
<th>6 month re-audit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Weekly – 2 (12%)</td>
<td>Weekly – 2 (14%)</td>
</tr>
<tr>
<td></td>
<td>Fortnightly – 5 (29%)</td>
<td>Fortnightly – 6 (43%)</td>
</tr>
<tr>
<td></td>
<td>Monthly – 7 (41%)</td>
<td>Monthly – 4 (29%)</td>
</tr>
<tr>
<td></td>
<td>Other – 3 (18%)</td>
<td>Other – 2 (14%)</td>
</tr>
<tr>
<td>Satisfaction with the frequency of clinical supervision (1=not at all satisfied, 5=extremely satisfied)</td>
<td>1 = 1 (6%)</td>
<td>1 = 0 (0%)</td>
</tr>
<tr>
<td></td>
<td>2 = 2 (12%)</td>
<td>2 = 2 (14%)</td>
</tr>
<tr>
<td></td>
<td>3 = 8 (47%)</td>
<td>3 = 2 (14%)</td>
</tr>
<tr>
<td></td>
<td>4 = 4 (24%)</td>
<td>4 = 2 (14%)</td>
</tr>
<tr>
<td></td>
<td>5 = 2 (12%)</td>
<td>5 = 8 (57%)</td>
</tr>
<tr>
<td>Satisfaction with the content and style of clinical supervision sessions (1=not at all satisfied, 5 = extremely satisfied)</td>
<td>1 = 0 (0%)</td>
<td>1 = 0 (0%)</td>
</tr>
<tr>
<td></td>
<td>2 = 4 (24%)</td>
<td>2 = 0 (0%)</td>
</tr>
<tr>
<td></td>
<td>3 = 2 (12%)</td>
<td>3 = 2 (14%)</td>
</tr>
<tr>
<td></td>
<td>4 = 10 (59%)</td>
<td>4 = 8 (57%)</td>
</tr>
<tr>
<td></td>
<td>5 = 1 (6%)</td>
<td>5 = 4 (29%)</td>
</tr>
</tbody>
</table>
Changes in Service at Re-audit

- One of the sites had moved to new premises, resulting in 100% satisfaction with the supervision venue.

- A regular peer supervision group was established for clinical staff (excluding those with managerial responsibilities), and was meeting fortnightly. Staff attended these on a voluntary basis, in addition to their individual supervision sessions. Informal feedback from staff indicated that they valued the opportunity to reflect on their practice with their peer group in a setting separate from discussion of management or performance issues.

- One member of staff, who at baseline was dissatisfied with supervision but did not feel able to complete the questionnaire, subsequently raised her concerns with her supervisor following the “away days”. This resulted in a change of supervisor and an increase in satisfaction.

Discussion

Whilst the re-audit of clinical supervision highlighted important areas of improvement with regard to supervisee’s satisfaction, it was of concern that a minority of staff were (still) not in receipt of clinical and/or caseload supervision, or were dissatisfied with some aspects. Since the re-audit, a process for appraisal of Consultant staff within the Trust has began, and in addition the senior Manager has set up a regular, quarterly supervision session to discuss his small client caseload.

Although the majority of staff were happy with the frequency, content and style of their supervision, there is room for improvement in satisfaction for a minority of staff. Because of the confidentiality of the results, this will be addressed individually with the staff members concerned, who will be encouraged to raise their concerns with their supervisor. The need for specialist supervision around particular therapeutic skills continued to be identified by a minority of team members, and again this will be raised on an individual basis with the individuals concerned, to identify the best way forward.

Contract setting improved, with the majority of supervisees now having an agreed negotiated contract. However, again there is still room for improvement. Ways of improving this will
also be raised at the S.D.S. management meeting, but suggestions might include giving all new staff a copy of the S.D.S. supervision and caseload policy and the caseload supervision form in their induction pack. In addition, training of supervisors in supervision needs to be included in the annual appraisal, to identify particular training needs in this area. This is an area in which some professionals have received little training, and in recognition of this most Trusts and professional institutions now offer formal training and supervision for supervisors.

The questionnaire, in retrospect, was not a perfect tool. The inclusion of management supervision may have confused some staff, and the section on styles of supervision, particularly those asking about supervisor/supervisee transference and counter transference was probably too complicated for some staff. Nevertheless, the aim of the audit was partly to educate individuals about the nature of supervision, and hopefully this was achieved. The fact that one individual felt empowered to ask for a change of supervisor, and that others requested changes in the frequency and/or content of their supervision, was probably the single most important change resulting from the audit.

Limitations of the Current Audit

1) The audit focussed on clinical as opposed to administrative staff. This was because the majority of administrative staff opted not to attend the “away days”. However, administrative staff often have to deal with difficult and challenging behaviour from this client group. An audit of administrative staff’s satisfaction with their current supervision arrangements might highlight support or training needs amongst this particular staff group.

2) The audit looked at clinical supervision from the supervisee and not the supervisor’s perspective. If supervisors are to be effective, they need to receive adequate training and ongoing supervision of their own supervisory practice. This was not addressed in the current audit.
References


Healthcare Quality Quest (1999). Getting Audit right to benefit patients. Hampshire: Healthcare Quality Quest Ltd.


The Royal College of Psychiatrists (March 1999). Statement on approval of training schemes for basic specialist training for the MRCPsych. London.

APPENDIX 1

Supervision Questionnaire

Name: _________________________________ Profession/position: _________________________________
Wte: _________________________________

Although there is some overlap between management and clinical supervision, please refer to the following definitions as outlined in the BSDS supervision policy when answering these questions:

**Management Supervision**
Can be roughly divided into management (e.g. service development, quality etc.), client work (e.g. caseload supervision) and staff development (e.g. appraisal and training)

**Caseload Supervision**
Systematic, regular review of the current caseload of an individual practitioner of the Team.

**Clinical Supervision**
Focused specifically on work with clients. Possible areas that might be appropriate to explore in clinical supervision are the client’s life and experience; interventions and techniques to use in the client’s treatment; the process and relationship between the worker and the client; the internal experience of the worker; the process and relationship between worker and supervisor; and the internal experience of the supervisor.

Please circle the appropriate response to the following questions.

**General Supervision Experience**

Do you receive management supervision? Yes/No
Do you receive caseload supervision? Yes/No
Do you receive clinical supervision? Yes/No
Are these sessions combined or separate?

Have you read the BSDS policy on caseload supervision? Yes/No
Do you use the caseload supervision form? Yes/No
Do you find it useful? Yes/No

If you do not receive clinical supervision, why not? (you have now finished the questionnaire)

**Clinical Supervision**
(This excludes clinical supervision received within the Team as part of the weekly clinical meeting.)

How often do you receive clinical supervision? Weekly/Fortnightly/Monthly/Other
If other, please specify.................................................................

Length of supervision session? Less than 1 hour/1-1½ hours/More
Is your supervision: one to one/ facilitated group /peer/other
If other, please specify.................................................................

Do you have a written negotiated supervision contract? Yes/No
Is there an agreement as to what to bring to clinical supervision? Yes/No
Are records kept by your supervisor? Yes/No
If yes, do you receive a copy? Yes/No
Has storage of supervision records been discussed and agreed with you? Yes/No
Is an agenda set at the outset of each supervision session? Yes/No
Do you and your supervisor formally review your supervision? Yes/No
If yes, how often? Fortnightly/Monthly/Quarterly/Other
If other, please specify ........................................................................
Are you clear about confidentiality issues within the supervisory relations Yes/No
Is the supervision venue appropriate? Yes/No
Are the sessions private and uninterrupted? Yes/No

There are different models and styles of supervision. Below are some examples of different levels of clinical supervision. Please indicate those which you feel apply to the clinical supervision that you currently receive, and indicate those that you would like to receive or would like to continue to receive (from Hawkins and Shohet, 2001).

<table>
<thead>
<tr>
<th>Reflection on the content of the therapy session</th>
<th>Currently receive?</th>
<th>Would like to receive?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration of the strategies and interventions used by the therapist</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Exploration of the therapy process and relationship</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Focus on the therapist’s counter-transference</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Focus on the here-and-now process as a mirror or parallel of the there-and-then process</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Focus on the supervisor’s counter-transference</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
</tbody>
</table>

On a scale of 1-5, where 1 is not at all satisfied and 5 is extremely satisfied, how satisfied would you say you were with your:

Current frequency of clinical supervision?

<table>
<thead>
<tr>
<th>Not at all satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Content and style of clinical supervision sessions?

<table>
<thead>
<tr>
<th>Not at all satisfied</th>
<th>Extremely satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

How do you think your current clinical supervision arrangements could be improved?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
RELEVANT POST-QUALIFICATION TRAINING

1986 Hypnosis training (2 days)  
Rosalind Hinton

1986-1987 Gestalt Therapy (Two, one week residential courses)  
Malcolm Parlett

1988-1989 Cognitive Therapy training  
Institute of Psychiatry, London

1990 Motivational Interviewing training (2 days)  
Henk Van Bilsen

1999 Motivational Interviewing – Training the Trainers (3 days)

2000 Schema Focused Therapy for Borderline Personality Disorders (2 days)  
Jeff Young

2001 EMDR, level 1 training (3 days)  
EMDR Institute

RELEVANT TEACHING/SUPERVISION EXPERIENCE

Organising and chairing two 12 week "Introduction to Psychotherapies" course, Bristol Psychotherapy Association (1987 & 1988)

Tutor (part-time), Behavioural Sciences course for 2nd year medical students, Bristol University (Jan. 1988 to March 1989)

Convene and participate in training on "Addictive Behaviours" to Clinical Psychology Trainees, University of Plymouth and University of Exeter (1990 to date)

Teaching on "Psychology and Addiction", to undergraduate Psychology students, Social work students, trainee Psychiatrists etc. (1990 to date)

Training in Motivational Interviewing and Relapse Prevention to specialist drug and alcohol workers and mental health staff, both locally within the Trust and across the South West region (1990 to date)

Supervision of Clinical Psychology Trainees on specialist placement from University of Plymouth, University of Southampton, University of Birmingham etc. (1998 to date)

Supervision of 3rd year undergraduate psychologists on 1 year placement, University of Bath, University of Surrey (1989 to date)

PUBLICATIONS


PROFESSIONAL DUTIES AND MANAGEMENT EXPERIENCE

Training


Chair, Supervisor’s Committee, University of Plymouth Clinical Psychology training course (1990 to 1992)

Organiser of 1 day national PSIGA conference "Recent developments in the Psychology of Addiction", Bristol, June 1997

Co-organiser of 2 day national PSIGA conference "Early trauma and substance misuse", Sutton Coldfield, June 1999

Liaison Tutor (S. Glos.), University of Exeter, Plymouth and Bristol Clinical Psychology Training courses (2001 to date)

Clinical Psychology

Committee member of the S.W. Branch of the Division of Clinical Psychology (1987 - 1990)


Chair, Frenchay Psychologists Group (1996 to 1999)

Committee member, Non-pharmacological interventions working party, Specialist Drug and Alcohol Services, AWP

Management

Manager, S.W. Drug Database (1993 to 1997)

Deputy Manager, Bristol Specialist Drug Service (1993 to date)

Manager, S.W. Audit Project, (1996 to 1997)

Audit lead, Bristol Specialist Drug Service (1996 to date)

Head of Psychology, Specialist Drug and Alcohol Service, AWP (1999 to date)

Audit Convenor, Specialist Drug and Alcohol Service, AWP (2000 to date)

Chair, Specialist Drug and Alcohol Audit Committee, AWP (2001 to date)

Independent Chair for the Trust's Multi-disciplinary audits of suicides, homicides and unexpected deaths (2001 to date)
MEMBERSHIP OF PROFESSIONAL BODIES AND SOCIETIES

British Association of Experimental and Clinical Hypnosis (1986 - 1987)

Committee member and Treasurer of the Bristol Psychotherapy Association (1986 - 1991)

Associate Fellow of the British Psychological Society

Division of Clinical Psychology

Psychology Special Interest Group in Addiction

British Association of Behavioural Psychotherapy
UNIVERSITY OF SOUTHAMPTON

This is to certify that

HELEN ELISABETH COTTEE

was admitted to the degree of

Bachelor of Science in the Social Sciences

on 11 July 1980 having been awarded

Second Class Honours (Upper Division)

in PSYCHOLOGY

VICE-CHANCELLOR 

REGISTRAR
We
The President and Council of
The British Psychological Society
have awarded this
Diploma in Clinical Psychology
to Helen Elisabeth Cottle
who has satisfied the Examiners of
her proficiency in this subject

The President of the British Psychological Society  Chairman of the Board of Examiners