Substance dependence: a search for security?

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SUBSTANCE DEPENDENCE:  
a search for security?

A thesis submitted in partial fulfilment of the 
requirements for the award of the degree

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I certify that the thesis, *Substance dependence: a search for security*, submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy (Clinical Psychology) in September, 1998, is the result of my own research unless otherwise acknowledged and has not been submitted to any other university or institution for a degree.

Mary Carmel Carse
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ABSTRACT

The social learning and psychodynamic perspectives on substance dependence have argued that intrapsychic variables are crucial in its development. They have also found that substance-dependent people have considerable difficulties in interpersonal relationships, particularly partner relationships. One account of the connection between a person's internal reality and behaviour in interpersonal relationships is provided by attachment theory. Experiences with primary caregivers in childhood are argued to form the basis of a person's security in the sense of self and in relation to others. Damaging experiences with such attachment figures can result in insecure attachment which may place the person at risk of developing psychopathology in adult life. A model of substance dependence is proposed which views substance-dependent people as having severe disturbance of attachment organisation, and, secondary to this, impairment of mood and of functioning in close interpersonal relationships. It is proposed that the substance provides attachment-related security and comfort for such people.

Sixty substance-dependent people in six residential rehabilitation centres in Australia were interviewed about their experience of substance use and compared with 32 non-substance-dependent participants on substance use, attachment, mood and the experience of close relationship. Approximately half the substance-dependent group was judged to have experienced an attachment relationship with the substance. On two measures of attachment, the Attachment Style Questionnaire (Feeney, Noller & Hanrahan, 1994) and the Reciprocal Attachment Questionnaire (West & Sheldon-Keller, 1994), substance-dependent people reported greater attachment insecurity than the control group. They also reported greater problems with intimacy and more loneliness in close interpersonal relationships when measured using the Miller Social Intimacy Scale (Miller & Lefcourt, 1986) and the Social and Emotional Loneliness Scale for Adults (DiTommaso & Spinner, 1993). Mood consistent with the loss of an
attachment relationship with the substance and underlying attachment insecurity was found to a greater extent in the substance-dependent group, that is, greater depression and anxiety respectively, indicated on the *Beck Depression Inventory (BDI)* (Beck, 1978) and the *Beck Anxiety Inventory (BAI)* (Beck, 1987).

All components of the proposed model of substance dependence were supported, the attachment relationship with the substance by about half of the substance-dependent group. The model, therefore, is argued to have considerable clinical utility. It should assist the comprehension of substance-dependent people and the difficulties many of them experience in attempting to recover from their dependence. Where an attachment relationship with the substance is thought to be involved in the dependence, it indicates the appropriate method of treatment.
CHAPTER ONE
Theories of Substance Dependence

This chapter begins by defining substance dependence according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition) (*DSM-IV*) (American Psychiatric Association, 1994), and introducing key concepts and terms used in the discussion of substance dependence. Substance dependence includes both dependence on alcohol and dependence on other drugs. Historically, however, alcohol and other drugs have been considered separately. Many of the findings discussed in this chapter are drawn from the literature on alcoholism, which is the better researched.

Substance dependence is generally considered to be caused by the interaction of a complex array of biological, psychological and social variables, and these are briefly mentioned. Models of substance dependence from two influential theoretical schools of thought, the social learning/cognitive-behavioural perspective and the psychoanalytic, are then presented. The chapter concludes with a summary of the contribution of these theoretical standpoints to an understanding of substance dependence and the person who becomes dependent on substances.

Substance dependence is defined in the *DSM-IV* (1994) as:

A cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug-taking behavior (*DSM-IV*, 1994, p.176).
Compulsive use of the substance is identified as: taking the substance in larger amounts or over a longer period of time than was originally intended; a persistent desire or unsuccessful efforts to decrease or discontinue use; spending a great deal of time obtaining, using or recovering from the effects of the substance; giving up or reducing important social, occupational or recreational activities because of the substance use; continued use despite the recognition of persistent or recurrent physical or psychological problems, caused or exacerbated by the substance (DSM-IV, 1994, p. 178).

Factors considered to contribute to the development of substance dependence are generally considered to include: genetic predisposition, the physiological constitution of the individual, the dispositional characteristics of the individual, developmental history, family background and parenting, the past and present social and physical environment of the individual, and the wider sociocultural context and mores within which the person lives, and has lived (Marlatt, Baer, Donovan, & Kivlahan, 1988). Each of these domains has produced its share of research relating to substance dependence.

Following the historical trend in psychology, the earliest psychological formulations of the causes of substance dependence were psychoanalytic in origin, implicating intrapsychic drives and conflicts. Subsequently, a medical model was developed which viewed the condition as a disease (Jellinek, 1960). Behaviourism contributed an analysis in terms of conditioned stimuli triggering a drinking or drug using response, and the development of social learning and cognitive-behavioural analyses resulted in an emphasis on factors such as the observational learning of substance use and the effect of cognitive variables, for example, the individual's expectancies and attributions. Family and systems models, sociological and sociocultural analyses of problematic substance use have also been developed. All these schools of thought, as well as the earlier disease model, are represented at the present time in the drug and
alcohol field in different models and theories of substance dependence, a multitude of research results, and a variety of suggested treatments (see Chaudron & Wilkinson, 1988; Thombs, 1994).

Psychologists usually acknowledge and discuss a role for genetic inheritance, the pharmacological effect of the substance on the physical constitution of the individual, and sociocultural considerations, but emphasise and investigate factors that assist the comprehension of the psychological makeup of the individual, the experience of substance use for that person, its consequences, and the most appropriate treatment to employ.

In psychological formulations of substance dependence, two influential schools of thought are the psychoanalytic and the social-learning models, the latter providing the basis of the cognitive-behavioural analysis of the disorder. These schools vary in the way they see the internal and external determinants of substance dependence. Social-learning models place a strong emphasis on situational and cognitive factors in the use and abuse of substances. Internal factors such as cognitions are considered to have been learned from the individual's environment, at any age. Psychoanalytic approaches emphasise childhood development, and particularly the experience of significant relationships in this period, and how these have contributed to the development of the person's "self," the capacity to function effectively as an adult, and the capacity for interpersonal relationships. The relative emphasis is on the internal determinants of the substance dependence rather than on external or situational factors.

1.1. The social learning/cognitive-behavioural analysis of substance dependence

Over the last 20 years, many practitioners and researchers have observed commonalities between various forms of behaviour that have been termed addictions, from alcoholism and substance dependence to smoking, pathological gambling,
obesity, and, in some literature, sexual or relationship patterns (e.g. Peele & Brodsky, 1975). The social learning school of thought has termed these "addictive behaviours" (Miller, W.R., 1980). Much theoretical development relevant to the understanding of substance dependence has occurred in the wider context of the analysis of addictive behaviour. The social learning analysis presented below is therefore drawn from current theory and models of addictive behaviour, many of which are based on the analysis of substance dependence, as well as other addictive disorders.

The social learning perspective was proposed as an alternative to existing moral or disease models of addiction which are considered to hold the person responsible for the addiction and unable to recover on his or her own efforts (Brickman et al., 1982). Social learning analyses postulate instead that addictive behaviours are acquired, overlearned patterns of behaviour or "habits;" that they lie on a continuum based on frequency of use, and are not to be defined according to categories such as "excessive use" or "abstinent;" and that they can be analysed and modified. As the behaviours provide immediate gratification and are often practised in situations perceived as stressful, they are considered to be coping strategies that are, however, maladaptive because of their long-term consequences. Social factors, particularly observational learning - the observation of substance use in others - are considered to be involved in the initial learning of the habit and the subsequent performance of it, once established (Marlatt & Gordon, 1985).

These analyses acknowledge the contribution of the risk factors listed above but the chief determinants are considered to be social learning, conditioning processes, and cognitive variables such as attributions and expectancies, which are argued to mediate a person's behaviour (e.g. Donovan, 1988; Marlatt et al., 1988; Miller & Brown, 1991). Addictive behaviour is considered to be the result of a three-way interaction between physiological changes resulting from the addictive behaviour or substance, the "psychological set" of the individual (personality, attitudes, mood states, and
expectations about the effect of the behaviour or substance) and the social and physical setting in which the behaviour is enacted (Donovan, 1988; Marlatt et al., 1988; Zinberg, 1984).

Addictive behaviour is therefore defined as:

A total experience involving physiological changes in individuals (many of whom may be genetically and/or psychologically predisposed) as these are interpreted and given meaning by the individual within the sociocultural context in which the addictive behaviour occurs (Donovan, 1988, p. 13).

A defining characteristic of addictive behaviors is the pursuit of short-term gratification at the cost of long-term harm: "Often the person is quite aware of damaging consequences, and has resolved to control or abandon the addictive behavior, yet time and again returns to the old familiar pattern" (Miller & Rollnick, 1991, p. ix).

Addictive behaviours are often experienced subjectively as loss of control (Marlatt et al., 1988). The destructive intensity of the behaviour is captured in Donovan's (1988) description of the addicted individual's "overwhelmingly pathological involvement in or attachment to it, subjective compulsion to continue it, and reduced ability to exert personal control over it" (p. 6).

As the person moves towards dependence, other characteristics of the behaviour may be observed:

There appears to be a dependence on the behavior or experience, either on a physiological or a psychological level, that may lead to withdrawal distress when the individual is prevented from engaging in the behavior. There may be an increasingly high need for a given experience or behavior, representing a form of
tolerance. "Craving" having both physiological and cognitive underpinnings, may be experienced as the powerfully strong desire and perceived need for the experience. The strength of the craving may be gauged by how willing the person is to sacrifice other sources of reward or well-being in life to continue engaging in the addictive behavior. Finally, the power of the addictive experience promotes a tendency for rapid reinstatement of the behavior pattern following a period of noninvolvement with it (Donovan, 1988, p. 6).

As the addictive process is observed to be similar across different objects of addiction, addictive behaviour is concluded to be a property of the person, rather than a substance or activity (Peele, 1985).

1.1.1. Features of addictive behaviour

Donovan (1988) has drawn on the findings in social learning research to identify several features of addictive behaviour common to many different objects of addiction, including substance dependence. The emphasis is on cognitive variables, and addictive behaviour is viewed as a coping response, as indicated above.

Addictive behaviour is considered to be a powerful and rapid means of changing mood and sensations, as a result of the physiological response to the behaviour and learned expectations. In substance dependence, the pharmacological effects of the substance on the person's physiology are considered to be mediated by genetic predisposition and physical constitution (Marlatt et al., 1988; Miller & Brown, 1991). Learned expectations of the effects of the substance arise both from observational learning, and the personal experience of the consequences of use, including the pharmacological effect.
The likelihood of engaging in the addictive behaviour is influenced by general arousal, stress, pain or negative moods. Relief of these is argued to be a primary motivation for engaging in the behaviour (Peele, 1985).

Classical and operant conditioning are considered to contribute to the addiction. Repeated association leads to many stimuli acquiring the power to provoke a response, for example, provoking use of the substance (classical conditioning). The stimuli may elicit changes in the person that are interpreted as craving. Conditioned stimuli can include the person's mood at the time, the expectations the person has of himself or herself, the expectations of the effects of the addictive behaviour or substance, the person's physiological state of arousal, and specific features of the social and physical environment where the behaviour occurs.

Operant conditioning occurs from the reinforcing effect of the changes of state which result from the behaviour. Reinforcement may occur because of an enhancement of positive affect, an improvement in negative emotions (Marlatt et al., 1988), or a reinstatement of a preferred level of arousal, involving either reduction or elevation of the existing level (Miller, P.M., 1980).

In substance use, the short-term gratification provided by the substance has been found to be reinforcing (Barrett, 1985). Haertzen and colleagues (1983) concluded that the degree of perceived reinforcement associated with the first experience of the substance was directly related to the magnitude of the subsequent habit (Marlatt et al., 1988). Barrett (1985) found that substance users did not have to feel good, or to experience euphoria, to be motivated to continue substance use. They only had to feel better shortly after taking it than they did immediately before (Barrett, 1985). Thus the achievement of an absolute state is not necessary to motivate continued use, the relative mood-enhancing properties of the substance appear to be sufficient (Marlatt et al., 1988).
The "paradox of control" is observed in addictive behaviour (Donovan, 1988, p. 8; Marlatt & Gordon, 1985). The addictive behaviour is perceived as making the person's life more manageable. However, it is also often experienced as being excessive, or out of control. Wills and Shiffman (1985) suggest that the behaviour represents an individual's attempt to: (a) manage his or her mood state by enhancing positive or reducing negative affect; (b) maintain physiological or biochemical balance, especially in substance dependence where tolerance and withdrawal occur; (c) maintain a positive sense of self; (d) solve practical problems. Thus the social learning perspective views the behaviour as an attempt to exert control over, or to cope with, other aspects of life (Donovan & O'Leary, 1983; Peele, 1985).

Another feature characteristic of addictive behaviour is the high rate of relapse following attempts to abstain from or moderate it. Relapse has been found to be associated with: (a) negative emotional states, such as anxiety, depression, boredom and loneliness; (b) interpersonal conflict resulting in feelings of frustration, anger and resentment; and (c) social pressure associated with being in the physical, emotional or social context in which the behaviour has occurred. These are termed high-risk situations (Donovan, 1988; Marlatt & Gordon, 1985). Attempts to moderate or abstain from the behaviour increase the likelihood of engaging in an alternative behaviour, for example, changing from one substance to another (e.g. from heroin to alcohol), or to another process such as gambling. Behaviour towards the substitute object can then become addictive.

Attempts to change addictive behaviour have been observed to follow certain stages. People are observed to engage in initial contemplation of change, active modification of the behaviour, and maintenance of the change (Prochaska & DiClemente, 1985, 1986). Progression is rarely linear, as relapse often occurs, and repeat of previous stages is common.
As intimated above, physiological, cognitive and behavioural factors are argued to contribute to the development and maintenance of addictive behaviour. These are now considered in more detail.

1.1.2. Factors involved in addictive behaviour

Physiological factors can be antecedents (e.g. family risk for alcoholism) or consequences of the behaviour (e.g. physiological changes). The person often reports a physical craving which appears to have a physiological basis. However, cognitive factors have been found to exert a strong influence on the experienced effect. Particularly powerful are the individual's expectations of the effects of the behaviour or substance (Marlatt & Gordon, 1985).

Higher-order cognitive processes such as beliefs, expectancies, and attributions are argued to be fundamental in the initiation and maintenance of addictive behaviour (Marlatt & Gordon, 1985). Associated with addictive behaviour are: (a) "outcome" expectancies and (b) expectancies related to self-efficacy (Marlatt et al., 1988; Miller, P. M., 1980).

Outcome expectancies are expectations that the behaviour or substance will have a certain effect, or outcome, on feeling, thinking or behaviour. In people who frequently use substances, they have been found to include: (a) enhanced positive mood and reduced negative emotional states, (b) enhanced physical or social pleasure, (c) increased social interaction, (d) increased interpersonal intimacy and sexual arousal, (e) heightened cognitive function and creativity, (f) reduced levels of tension and increased relaxation, and (g) increased feelings of arousal and aggression (Brown, Goldman, Inn, & Anderson, 1980; Connors, O'Farrell, Cutter, & Thompson, 1986). Negative states that can motivate substance use include tension (Miller, P.M., 1980), self-consciousness, stress, cognitive dissonance, and perceived powerlessness (Miller
Despite long-term negative consequences, outcome expectancies appear to be stronger, and to exert more influence on continued use, the longer the person has been involved with the substance (Donovan, 1988).

Expectancies about self-efficacy (Bandura, 1977) are related to the individual's belief about his or her competence, specifically, about the ability to generate a behaviour necessary to achieve a certain outcome (Marlatt et al., 1988). These expectancies are argued to affect substance dependence in that an individual who feels unable to cope with stress or negative mood states is more likely to use a substance to cope. Negative perceptions of self-efficacy, especially if attributed to stable, global factors within the self, are considered to increase the sense of lack of control, depression and helplessness. The addictive behaviour may be considered by the individual as one of the few means of coping available (Donovan, 1988). Substance dependence can therefore be maintained by the individual's belief that he or she cannot stop using the substance, or has no control over his or her behaviour (Marlatt et al., 1988).

It has been demonstrated that cognitive appraisals of a situation determine behaviour, rather than the situation itself (Marlatt & Gordon, 1985). The social learning view argues that when individuals deficient in self-efficacy or the skills to cope perceive a situation as potentially threatening, they react with stress and negative emotions. The increased arousal may be interpreted as craving. Then, it is argued, distorted beliefs, unrealistic expectations of the self and others, and defensive strategies, such as rationalisation, minimisation and intellectualisation, may contribute to enactment of and support for the addictive behaviour (Donovan, 1988).

An adequate behavioural repertoire is seen as necessary for social competence. When people lack such a repertoire, their sense of self-efficacy is found to be reduced and they are likely to appraise situations as more threatening. Deficits in behavioural
coping skills are therefore considered to place individuals at increased risk of resorting to addictive behaviour, as a means of coping with threat (Donovan, 1988).

According to the social learning view, the cognitive distortions and behavioural deficits implicated in addictive behaviour need to be addressed in order to counteract it. Several cognitive and behavioural competencies have been identified that may deter involvement, or reinvolvement, in substance use and, by implication, other addictive behaviours (DeNelsky & Boat, 1986; Donovan, 1988).

1.1.3. Cognitive and behavioural competencies protective against addictive behaviour

The various competencies identified by DeNelsky and Boat (1986) are as follows:

1. Interpersonal and emotional problem-solving skills.
2. An awareness of, and ability to recognise, emotions, and to accurately label, experience, and appropriately express them.
3. An ability to generate, maintain, and modulate appropriate levels of arousal.
5. An ability to sustain goal-directed effort.
6. An ability to experience healthy pleasure and satisfaction.
7. Social and interpersonal communication skills.
8. Assertiveness.
9. Decision-making and the ability to take direct action.
10. Active avoidance of, or withdrawal from, problematic situations.
11. The ability to seek out help and social support.
12. The ability to relax.
13. The ability to gain positive experiences through entertainment or social and leisure activities.
Treatment of addictive behaviour, therefore, is aimed at increasing awareness of its conditioned aspects and the cognitive factors which maintain it, and instilling the competencies required in order to provide individuals with an adequate repertoire of cognitive and behavioural responses to the situations they may meet.

An influential model of substance dependence which draws on much of the social learning analysis is the cognitive-behavioural model (Beck, 1967). This model of psychopathology particularly emphasises the role of dysfunctional beliefs in creating negative emotional states and generating maladaptive behaviour. The application of this model to substance dependence (Beck, Wright, Newman, & Liese, 1993) is outlined below.

1.1.4. The cognitive-behavioural model of substance dependence

Initial substance use is argued, in this analysis, to be motivated by the desire to get pleasure, experience exhilaration, and share that excitement with one's companions (Stimmel, 1991). Progression to ongoing use is seen as the result of the experience of temporary relief from such feelings as anxiety, tension, boredom, or low self-confidence, and increasingly turning to the substance "for a period of escape or oblivion" (Beck et al., 1993, p. 23). People with adverse life circumstances are considered to be particularly at risk (Peele, 1985).

A major difference between casual and dependent substance users identified in this model is that casual users are found to prize such things as family, friends, occupation, economic security, and recreation above substance use, whereas substance-dependent individuals subordinate important values to the use of the substance (Peele, 1985).
Beck and his colleagues (1993) propose that certain predispositional characteristics appear to be common in people who are dependent on substances. These are: (a) general sensitivity to unpleasant feeling or emotions, for example, low tolerance for normal changes in mood; (b) deficient motivation to control behaviour, valuing instant satisfaction over control; (c) inadequate techniques for controlling behaviour and coping with problems; (d) a pattern of automatic, non-reflective yielding to impulses; (e) excitement-seeking or low tolerance for boredom; (f) low frustration tolerance; and (g) relatively diminished time perspectives, that is, a focus on present emotional states, cravings, urges, and the actions to relieve them, and little focus on the consequences of the actions (Beck et al., 1993).

Beck and his colleagues define "craving" as a desire or want, and "urge" as the internal pressure to act on the craving. Craving is argued to be instigated by an unpleasant state or event, and the goal of the urge is to reduce the instigating state. Both cravings and urges may become automatic, that is, continue in the face of efforts to suppress or control them, leading to the person's subjective sense of being out of control (Beck et al., 1993).

The person prone to substance dependence is argued to develop addictive beliefs which play a role in the generation of urges. Beck and his associates have identified several such beliefs:

1. That one needs the substance for psychological or emotional balance.
2. That the substance will improve social and intellectual functioning.
3. That one will find pleasure and excitement from using the substance.
4. That the substance will provide increased energy and power.
5. That the substance will soothe.
6. That the substance will relieve boredom, anxiety, tension, and depression.
7. That, unless something is done to satisfy the craving or neutralise the distress, it will continue indefinitely and, possibly, get worse.

These addictive beliefs are considered to arise from dysfunctional core beliefs held by the individual. Two core aspects of the self are considered to generate core beliefs. The first is concerned with personal survival, achievement, freedom and autonomy. Maladaptive core beliefs are such assumptions as "I am helpless, inferior, weak, a failure." The second aspect of the self is concerned with beliefs relating to bonds with other individuals, or groups, and whether one is lovable or acceptable. Beliefs such as "I am unlovable, rejected, repulsive, different" are characteristic of the dysfunctional core beliefs of this aspect of self (Beck et al., 1993).

Maladaptive core beliefs about the self are considered to interact with life stressors to lead to unpleasant feelings, such as anger, anxiety and hopelessness, and to activate substance-related beliefs which lead to craving and urges. Other facilitating beliefs justify the substance use: "It's okay this time."

The substance dependence is considered to be maintained by the relief provided by the substance, the network of addictive beliefs surrounding the substance use, and the substance user avoiding a true assessment of the disadvantages of using the substance.

This avoidance, which facilitates the individual ignoring the long-term consequences of substance dependence, is explained by the concept of "cognitive blockade" (Beck et al., 1993, p. 51). Material congruent with the person's current condition is easily processed and congruent memories recalled, and access to incongruent memories becomes more difficult (Beck, 1991). Once substance-taking beliefs are activated, all the attention is effectively focused on obtaining the substance, the reasons for doing so are salient, and the reasons for not using it become inaccessible or insignificant.
Awareness of the long-term consequences, or attention to them, is therefore inhibited (Beck et al., 1993).

Relapse from abstinence or moderation of use is considered to occur because of insufficient "inoculation" to high-risk situations. These can be (a) positive or negative emotional states, (b) interpersonal conflicts, (c) social pressure, (d) exposure to substance-related cues. This, in turn, occurs because the person has not significantly modified the dysfunctional beliefs considered to fuel the craving.

The cognitive-behavioural therapy recommended by Beck and his colleagues is directed towards: (a) identification and modification of addictive beliefs; (b) amelioration of the negative emotional states that can trigger substance use, such as anger, anxiety and hopelessness; (c) the development of cognitive and behavioural skills to become and stay substance-free (or using moderately if this is the person's goal); and (d) fundamental positive changes in the way the person views himself or herself, life, and the future (Beck et al., 1993).

1.1.5. Recent developments

Recent theoretical developments in this field have elaborated the function of individual variables identified by the analysis above, or confirmed the model. Newcomb and Earleywine (1996) examined the role of personality, cognitive factors, affect, behaviour, genetics, demographic variables and social bonding, to identify those incurring the greatest risk of substance use. In support of Donovan's (1988) biopsychosocial model, presented above, expectancies, attitudes, beliefs, behaviour, modelling and setting were all found to have a role in substance use.

Theoretical elaboration of individual variables has included consideration of the role of motivation (Saunders, Wilkinson, & Towers, 1996), life skills deficits (Botvin,
1996), classical conditioning (Tiffany, 1995), and cue exposure (i.e. treatment by exposure to cues or triggers of addictive behaviour) (Drummond, Tiffany, Glautier, & Remington, 1995). These refinements of particular aspects of the social learning analysis have not been considered in detail, as the purpose of this review is to portray the global model of substance dependence proposed by the social learning perspective.

1.1.6. Summary of the social-learning/cognitive-behavioural analysis

The social-learning analysis, outlined above, views addictive behaviour, including substance dependence, as learned both socially and from the effects of conditioning. Enactment of addictive behaviour is considered to be mediated by cognitive processes within the person, particularly attributions and expectancies. It is seen as an attempt to manage aspects of the person's life, particularly the relief of negative emotions, physiological arousal, and self-esteem. Constitutional (genetic inheritance) factors, family and social environment, the perception of low self-efficacy to deal with some situations, and deficits in adaptive coping skills, either cognitive or behavioural, have been argued to place the person at particular risk of developing addictive behaviour.

Substance dependence therefore occurs in people who have difficulty managing negative emotional states and conceiving of themselves as effective individuals. They expect substances to improve their mood and tension levels, enhance pleasure, and improve their cognitive, sexual and social performance. Moreover, these expectations strengthen over time, facilitated by a low sense of efficacy to deal with different situations, or to control substance use, and this sense of low self-efficacy may increase the sense of powerlessness and depression. Substance dependent people are at risk of relapse when they experience negative emotions or interpersonal conflict, and of substitution of another addiction when they are attempting to control or moderate the behaviour. Attempts at abstinence or alteration of the substance using pattern are rarely smooth or successful at first.
The cognitive-behavioural theory of substance dependence proposed by Beck and his colleagues gives primacy to the cognitive beliefs seen to mediate behaviour. "Addiction-proneness" (predispositional factors) combines with dysfunctional core beliefs and life stressors to generate substance abuse (Beck et al., 1993).

People who are dependent on substances may have pre-existing difficulties with self-control, including a preference for immediate satisfaction, low tolerance of frustration, delay, or boredom, and a relative lack of foresight of the consequences of their actions. They may have deep doubts about their ability to achieve, and about their lovability, or worth to others.

The internal capacities that might protect against substance dependence, or relapse to substance use, are both personal and interpersonal: emotional self-awareness and maturity, emotional self-control, self-esteem and a sense of self-efficacy, the ability to develop and achieve personal goals, the ability to pursue healthy sources of pleasure and relaxation, interpersonal responsibility and maturity, recognition of one's own limitations and the ability to request and enlist support.

As noted above, the social learning/cognitive-behavioural analyses place relatively greater emphasis on factors in the current situation of the person, and the contribution of cognitive variables to the enactment and maintenance of substance dependence. The psychoanalytic view considers that substance dependence is a response deriving from the internal condition of the person which has arisen out of experiences with primary caregivers in infancy and childhood. The psychoanalytic account of substance dependence is next presented, with emphasis on three models of dependence.
1.2. Psychoanalytic formulations of substance dependence

This review is by no means an exhaustive account of psychoanalytic theory concerning substance dependence. Comprehensive understanding of psychoanalytic concepts and models requires extensive training and knowledge, beyond the scope of this thesis. Moreover there are many schools of analytic thought, each with its own emphasis on the origins of the psychological condition being presented, and the appropriate form of therapy. Those with an object relations perspective, for example, are more likely to emphasise interpersonal relationship in the diagnosis and treatment of disorder, those of the Mahler school (1968), separation-individuation issues, and those adopting an ego psychology view, the repair of deficits in the ego or self. This review is therefore necessarily limited in depth of understanding and scope, and has been confined to those psychoanalytic discussions of substance dependence published in the drug and alcohol field.

Psychopathology is considered, in the psychoanalytic view, to arise from the internal consequences of damaging experiences with primary caregivers in infancy. These experiences can impair the person's development, leaving him or her in a state of relative developmental arrest, and vulnerable to regression to this state in situations of internal or external stress. The quality of early interpersonal relationships and its effects on the person interact with the constitutional characteristics of the individual in producing the psychopathology.

Early formulations of substance dependence emphasised the pleasurable aspects of use, considering it a regressive search for infantile satisfactions (Blatt, McDonald, Sugarman, & Wilber, 1984; Frosch, 1985; Khantzian, 1977). However, others, for example Rado (1933, 1957) and Fenichel (1945), proposed, additionally, that alcohol or other drugs had the function of moderating underlying affects, such as depression, tension and anxiety (Khantzian, 1977; Smith, 1990). Glover (1932) proposed that
substance addicts used their substance progressively rather than reggressively, as a defense against primitive sadistic impulses (aggression), so that the pleasure derived from the substance use was the result of its effect on the underlying problem of aggression, rather than a primary motivation in itself, as the regression view would argue. Hartmann (1969), however, placed relatively more emphasis on early experiences of relationship, arguing that substance dependence derives from early relationship deprivation, and that the substance serves to substitute for the lost object (relationship).

Kohut (1971, 1977) challenged the view of substance dependence as a substitute for a lost object. He argued that the substance is not a substitute for loved or loving objects, or a relationship with them, but serves as a replacement for a defect in the psychological structure, in the ego, and that the function of the substance is the regulation of self-esteem.

Other theoretical formulations argue that severe substance dependence is an attempt to compensate for deficits in defense against internal conflicts or drives, which have left the ego vulnerable to being overwhelmed by massive affects or aggression (Khantzian, 1977; Krystal & Raskin, 1970). According to these views, substances are employed pharmacogenically to manage internal equilibrium (Wieder & Kaplan, 1969), internal affective states (Wurmser, 1974, 1977) or aggression (Khantzian, 1977).

Three viewpoints in particular, in the drug and alcohol literature, have given an extended account of the psychodynamics of substance dependence, based in their authors' theoretical understanding and clinical experience. The models of substance dependence developed by Kohut, Khantzian and Wurmser are presented below.
1.2.1 Kohut's theory of substance dependence

In the course of normal development, frustration is experienced by the infant or child and this is considered necessary for optimum development (Kohut, 1971; Mahler, 1968; Winnicott, 1953). If confronted with enough tolerable disappointment, a child learns to deal with it and builds a capacity to tolerate emotional distress and pain. The child achieves this by internalising the parents' protective function which has allowed the experience of a certain level of distress in the child but taken appropriate action to relieve it before it has become too intense or intolerable. For this capacity to develop, extremes of deprivation or indulgence need to be avoided. In extreme deprivation of appropriate parenting, where the child's distress is not moderated, the child is overwhelmed and does not learn to manage its own distress. Extreme indulgence, where the parent intervenes too early in the child's distress, does not allow the child to experience enough distress, so that its capacity for tolerance is not developed.

One function of the parents or primary caregivers is to provide the psychological function of self-esteem regulation when the child is unable to do this for himself or herself (Kohut, 1971). What the child needs, according to Kohut, is "to have his presence confirmed by the glow of parental pleasure," and "to merge into the reassuring calmness of the powerful adult" (described as phase-appropriate narcissism) (Kohut, 1977, p. ix). Initially the child is unable to discriminate the parent as the source of these needed qualities, separate from him or herself. Kohut's term for the child's internal representation of the parents is the "self-object" to draw attention to the fact that the child is not distinguishing between itself and others (Kohut, 1971). Gradually the external sources of self sustenance (termed narcissistic sustenance) become transformed into endopsychic resources, that is, capacities of the self: specifically, into "sustaining self-esteem and into a sustaining relationship to internal ideals" (Kohut, 1977, p. ix).
Disruptions to this process, narcissistic disturbances, arise from the mother's [sic] lack of empathy for the child in infancy, her failure to act as an adequate stimulus barrier, that is, failing to protect the child from being overwhelmed by internal or external stimuli, or, alternatively, failing to provide enough stimulation. These narcissistic disturbances create defects in the person's internal psychological structure:

The narcissistically disturbed individual yearns for praise and approval or for a merger with an idealized supportive other because he cannot sufficiently supply himself with self-approval or with a sense of strength through his own inner resources (Kohut, 1977, p. vii).

Kohut claims that narcissistic disturbances lie at the root of addictive disorders, including substance dependence (Kohut, 1977). According to Kohut, it appears to the substance addict that the substance can cure a central defect in the psychological structure of the self. The substance functions as a substitute for the self-object which failed the person in infancy. Kohut argues that substance dependence is a symbolic attempt by the person to get a self-object to soothe and accept him or her, or an attempt to merge with a self-object and so partake of its power. This may appear as if Kohut is arguing that the substance is used to replace a lost object. However, it is the effect of the substance on the person's self-esteem which, to Kohut, indicates its purpose.

Through "incorporation" (ingestion), the person who is using the substance feels accepted, and therefore self-confident, or merged with a source of power that makes him or her feel strong and worthwhile. These effects of the substance are argued to increase the person's feelings of being alive, and the certainty that he or she exists in this world. Thus, the real purpose of the substance use, as viewed by Kohut, is the correction of the defect in the ego, the provision of the self-esteem and sense of inner strength that is lacking (Kohut, 1977).
1.2.2. Wurmser's theory of substance dependence

Wurmser defines substance abuse (he uses the term "drug abuse") as "the use of any mind-altering drug for the purpose of inner change, if it leads to any transitory or long-range interference with social, cognitive, or motor functioning or with physical health" (Wurmser, 1974, p. 822). He distinguishes between casual users and the "compulsive drug abuser." In the latter, the substance use is a symptom of "deep underlying problems," and the substance-induced state "relieves [the substance user] of what bothers him and gives him what he is missing" (Wurmser, 1974, p. 822).

There is relatively little emphasis on the physical aspects of compulsive use, or physical dependence as an explanation of the behaviour. Wurmser observes that, if abstinent from the substance for a while, the person dependent on substances tends to substitute other symptoms, which can be depression, anxiety, violent behaviour, or other substances. The compulsive substance use is "the expression of an underlying disturbance, not the illness itself" (Wurmser, 1974, p. 824). Substance-dependent people are, in Wurmser's view, deeply emotionally disturbed and show pervasive psychopathology indicative of narcissistic disturbances. The task of treatment therefore goes beyond withdrawal from substances to the person's emotional need to use the substances or other harmful behaviours to obtain relief.

Wurmser distinguishes four kinds of cause of compulsive substance dependence: preconditions, specific causes, concurrent causes, and precipitating causes. Preconditions are a life history of "massive" narcissistic disturbances and a specific pattern of family pathology, discussed in more detail below. Narcissistic disturbances are conflicts related to the person's sense of omnipotence and limitation, meaning, and trust. They involve "massively overvalued images of self and others .... a host of grandiose expectations, and the abyssmal [sic] sense of frustration and letdown if these hopes are shattered" (Wurmser, 1974, p. 826).
The specific cause of the substance use is argued to be the experience of an overwhelming narcissistic crisis: a perceived extreme wound to the ego which is accompanied by intense emotions, such as disillusionment, rage, depression or anxiety. The crisis has both external and internal causes and is argued to be an actualisation of a lifelong conflict. It leads to enormous emotional disruption and vulnerability to the precipitating causes, discussed below.

The concurrent causes are the factors in the social background of the time. In our time, Wurmser implicates: (a) value conflicts and hypocrisy in the culture, so that substance dependence represents a protest against authority and "inconsistency in the social fabric" (Wurmser, 1974, p. 827); (b) the observed technological mastery of external problems along with the abandonment of past techniques to achieve inner mastery, so that substances provide a sense of domination over one's inner life; (c) changing sexual mores which mean that sex is more easily available and has become routine and tedious so that the emotions contained in sexual yearning are denied and sought in pharmacological experience; and (d) social factors in slum areas, social degradation, lack of family structure, trafficking in illegal substances.

The precipitating causes are "craving" and the "adventitious entrance" of the substance. Craving, or psychological hunger, relates to all behaviours engaged in to provide external relief from the internal urge which is overpoweringly "driven." The adventitious entrance of the substance is its accessibility, and the temptations or invitations by peers or substance dealers to use it.

In compulsive substance use, Wurmser argues, the function of the substance is not the satisfaction of unconscious wishes (e.g. desire for reunion with a lost object), it is self-medication. The substance operates as a surrogate defense against overwhelming feelings, an intolerable internal state. In the narcissistically disturbed person, the internal structures fail to defend against overwhelming affects arising from drives or
internal conflicts, but the pharmacogenic effect of the substance provides a barrier. This is consonant with Kohut's view that the substance serves as a replacement for a defect in the psychological structure (Kohut, 1977).

The predisposing internal state is argued by Wurmser to be similar in all people who use substances compulsively, but individuals are seen to differ from each other in the affects which cause them immediate problems. Thus, particular substances are chosen for their specific effect on the underlying feelings. Narcotics and barbiturates are argued to relieve intense feelings of rage, shame, hurt and loneliness; psychedelic drugs are employed for the alleviation of boredom, emptiness and meaninglessness; and amphetamines assist the achievement of aggressive mastery, control, and invincibility (Wurmser, 1974). This is further delineated as outlined below.

In opiate dependence, the person is considered by Wurmser to have the narcissistic desire to establish him or herself in an omnipotent position, where the self is without limitations, or the other person is all-giving and required to live up to the highest ideals. Whenever limitations are experienced in either the self or others, overwhelming, uncontrollable affects appear: rage that the ideal self has collapsed, because the alternative is total devastation; shame as a result of the conflict between the limited, disappointing self and the grandiose, ideal self; and feelings of hurt, loneliness, abandonment and rejection because the other person is not as all-giving, great or redeeming as expected. Anything short of what is desired is experienced as total isolation and rejection. The upsurge of these emotions is considered to constitute the craving experience (when it occurs after physiological detoxification).

The psychedelic drugs are considered, by Wurmser, to be the antidote for pervasive disillusionment with an idealised other person. Wurmser proposes that they confer a sense of the self as boundless, and the world as endowed with unlimited meaning, so
that the substance artificially re-creates ideals and values which have been shattered previously.

Amphetamines are used to eliminate boredom and emptiness but these affects are seen to arise from the repression of rage, rather than the collapse of ideals. Amphetamines are also considered to be an attempt to defend against massive depression, or feelings of unworthiness or weakness.

Extending the argument that the collapse of ideals is part of the narcissistic crisis precipitating the addictive search, Wurmser suggests that substance-dependent people suffer superego pathology, that is, they lack values and ideals which give meaning to life, and guide how it is lived. Family pathology is implicated in this: parents who have not provided the right combination of love and firmness do not provide appropriate models which can be internalised and can become inner guardians of values. When the person's narcissistic ideals have been shattered, or when the need of appropriate ideals has arisen and the absence of them is particularly painful, the affects mentioned above arise. The substance provides relief and this, Wurmser claims, becomes a surrogate ideal.

Wurmser also considers that, in substance-dependent people, the process of symbolisation has become contracted. There is hyposymbolisation: an inability to symbolise the inner life, emotions and self-references. Many people who abuse substances, for example, lack the ability to articulate feelings. The substance serves to take away the discomfort, the "inarticulable sense" of something being wrong.

While Wurmser acknowledges that the substance serves as a replacement for structural ego deficits (cf. Kohut, 1977), he also considers that it plays a role as an object substitute in some instances, and cites the way many substance-dependent people talk of the substance as if it were a partner. In the cases where a person's substance
dependence becomes completely supplanted by a relationship with another person, or with a treatment community, Wurmser is inclined to see the substance as having performed as an object substitute.

To summarise, Wurmser argues that some or all of the following factors converge to predispose someone towards substance abuse:

[the] massive defect of affect defense, the defect in value formation, the hyposymbolization, the desperate search for an object substitute, the intensely self-destructive qualities, and the search for regressive gratification [i.e. the recreation of regressive self-satisfaction] (Wurmser, 1974, p. 840).

The underlying narcissistic conflict, in combination with an immediate narcissistic crisis and the advent of the substance on the scene, accounts for the compulsive substance use. The function of the substance, therefore, is to provide a surrogate defense against overwhelming affects, and a surrogate ideal. The substance compensates for the deficit in the ego structure related to the management of internal states, and for the deficit in the superego, the lack of internal ideals and meaning.

1.2.3. Khantzian’s theory of substance dependence

Where Kohut (1977) identifies the function of self-esteem regulation in substance addiction, and Wurmser (1974) emphasises the use of the substance as a defense in people with massive underlying narcissistic conflict, Khantzian (1977) identifies as the chief problem, massive aggression in people with a defect in their ego structure. His particular contribution, developed in the study of opiate dependence, is that substance-dependent people have a specific deficit in the ego function that is related to self-care.
Khantzian (1977) argues that lifelong problems with aggression, and the rage and depression which derive from it, are the cause of substance dependence. Aggression is argued to have a disorganising effect on an ego which is already impaired or unstable as a result of developmental arrest or regression. Khantzian (1977) concludes that such problems predispose to a dependence on opiates because opiates appear to have a specific anti-aggression, calming action.

Khantzian notes a particular gap in the ego functioning of substance-dependent people, namely in the capacity for self-care or self-regulation. This deficit is shown in the disregard for their own safety shown by opiate addicts, both in relation to use of the substance and in many other situations. Khantzian acknowledges the view that apparent disregard for safety can derive from attempts to ward off feelings, that dangerous behaviour can be used to counteract feelings of helplessness and dependency and is adopted, therefore, against a sense of terror and vulnerability (Wieder & Kaplan, 1969). However, he argues that the lack of self-care may not always be motivated in this way (consciously or unconsciously). He suggests instead that it has arisen from a failure to internalise these functions early in the person's life.

Khantzian suggests that opiate-dependent people simply do not anticipate, perceive or appreciate danger. There is little evidence of fear, anxiety or a realistic assessment of risk in their involvement with the substance. The compulsive use is argued to help the person defend against internal aggression. However, other aspects of the addiction and associated activities indicate that the person's ego is failing to assess, warn and protect him or her appropriately in many external situations including the drug setting. These tendencies continue, then, after involvement with the substance has ceased. Whereas anxiety normally acts as a signal to the individual about his or her internal state (Krystal & Raskin, 1970), the self-care function of the ego is supposed to guide the person in relation to external danger.
Opiate-dependent people are argued to have a narcissistic need to fend off help (not admit limitation) and a tendency to be insufficiently anxious and responsive in situations requiring self-care. He notes that, when abstinent from opiates, such people demonstrate contradictory and unpredictable changes in attitude and great unevenness in function. He argues that they have an inability to acknowledge and actively pursue their needs to be admired, to love and to be loved.

This, he considers, leaves them vulnerable to relapse in two ways. Failure to find outlets for these needs means that opiate-dependent people do not build up networks of the relationships and involvements which are necessary to buffer against boredom, depression and narcissistic withdrawal. If not buffered, these feelings are powerful instigators of substance use. Secondly, if they do not practice risking the expression of their needs, opiate-dependent people can be subject to unpredictable, inappropriate outbreaks of impulses and wishes which often end in frustration and failure. The rage resulting from this disappointment can then compel a reversion to opiate use.

1.2.4. Recent developments

It will be noted that the models reviewed here date back two decades. The theorists discussed have continued to publish but subsequent articles have generally contained further argument for the proposed models, or discussed treatment based on them (e.g. Khantzian, 1995; Khantzian, Halliday, & McAuliffe, 1990; Wurmser, 1985).

Kaufman's (1994) work is one recent development. He has developed an analysis and method of treatment, drawn in part from the models presented above, and partly by "trial and error" from his 30 years of clinical experience with substance-dependent people. His model identifies several factors which can lead to substance dependence, each implicating a different role for the substance. Like Kohut, Wurmser and Khantzian, he sees substance dependence occurring in people with deficits in the
structure of the ego who turn to their substance for temporary resolution of their psychological wound, and for the ability it confers to express affects that they normally find intolerable and overwhelming. However he sees other factors - personal, interpersonal and social - as contributing to substance dependence as well.

People with excessive dependency needs are considered to use the substance to alleviate their anxiety about rejection and failure; people with assertiveness problems derive a needed illusion of adequacy and power from use of the substance. Family systems which are excessively weak or rigid create individuation and boundary problems in offspring which can lead to bonding with substance-using peers and excessive substance use. At the broader social level, gender conditioning socialises men to drink and use hard drugs, and women to treat low self-esteem with prescribed pills and stimulants, which can lead, in combination with other factors, to substance dependence (Kaufman, 1994).

Kaufman's model, however, is an exception in the field. There has been little theoretical development in the psychoanalytic understanding of substance dependence in recent years. In fact, there has been an admission within the field that traditional psychoanalytic approaches have lacked effectiveness (Brickman, 1988). Contemporary psychoanalytic theory has been criticised for failing to keep pace with the advances in the understanding of addictive behaviours over the last 20 years, many of which have occurred in the social learning and cognitive-behavioural fields (Leeds & Morgenstern, 1996). Responses that integrate the strengths of the psychoanalytic view, with its emphasis on the character problems of substance-dependent people, and strategies developed by other perspectives, such as cognitive-behavioural interventions, are recommended as offering the most promise for the future (Leeds & Morgenstern, 1996).
1.3. Conclusion

To attempt a portrait of substance-dependent people from the social-learning/cognitive behavioural perspective, it appears that they have great difficulty managing negative emotional states and stress, have a damaged sense of self-worth and their own abilities, have difficulty coping with interpersonal relationships, and may lack the capacity to relate with others effectively. They may feel essentially unlovable. They are likely to lack emotional maturity, awareness of their limitations, an ability to enlist support, and to set and achieve personal goals.

The picture of the substance-dependent person which emerges from the psychoanalytic viewpoint is a person with a defect in the structure of the ego: someone who has failed to internalise from his or her caregivers in infancy, capacities which would have resulted in an intact ego, adequate self-esteem and inner strength. The lack of inner strength is argued to have affected the capacity to manage powerful internal drives and feelings, to be guided by inner values, and to show a regard for personal safety and well-being in the external world. Kohut acknowledges the soothing, relieving function of the substance, but he primarily emphasises its function in the provision of self-esteem. The substance-dependent person, as described by Wurmser and Khantzian, is driven by extreme internal states, is unable from within to provide an adequate barrier against them, is overwhelmed by them and compelled to find pharmacogenic relief.

The psychoanalytic view describes more extreme phenomena than the social learning or cognitive-behavioural analysis. It places emphasis on the person as greatly damaged internally, subject to extreme suffering, and lacking in capacities which are vital for subjective and objective well-being. The sense of "drivenness" or compulsion about the substance use is given greater emphasis, and the affective state of the individual is considered central, whereas the social learning/cognitive-behavioural school of thought
places relatively more emphasis on the cognitive variables mediating substance dependence.

Nonetheless, though the understanding of the inner dynamics differs, there are some observable commonalities in the two views. Both views identify difficulties in managing affective states, particularly negative states, including frustration and anger. Both schools of thought identify problems in self-esteem or self-worth, and in the capacity for personal effectiveness, though the cognitive emphasis is on self-efficacy, and the psychoanalytic, on a sense of inner strength or direction deriving from an intact ego. Both views imply that people who are dependent on substances have great difficulty in relationships with others, particularly close adult relationships.

The social learning and cognitive-behavioural analyses of partner relationships are, like the analysis of substance dependence, predicated on concepts which have been empirically established, such as attributions and expectancies, and which are brought to bear on the area of focus (O'Leary & Smith, 1991). Cognitive variables, such as the interpretation of the situation, attributions, and cognitive style (interpretation of each partner's behaviour) have been found to have a considerable impact on marital satisfaction and distress (e.g. O'Leary & Smith, 1991; Schmaling, Fruzetti, & Jacobson, 1989). This analysis then proposes that significant problems in people's lives can be explained and treated by attention to underlying cognitive variables, whether those problems are substance dependence, marital distress or other disorders.

Psychoanalytic theories are theories of relationship behaviour as well as psychopathology. Patterns of behaviour with significant others, inappropriate to the person's current situation, are considered to be re-enactments of unresolved conflicts or experience with early caregivers, occurring in the present through the mechanism of transference in an unconscious attempt to seek resolution. Treatment involves resolution of the past conflicts through the relationship provided by the therapist, and
through the process of interpretation of current behaviour in terms of unresolved past issues.

Psychoanalytic formulations of marital relationships have argued that people seek spouses who gratify their narcissistic needs, fulfilling what is lacking in themselves; that marital relationships reflect the level of each person's psychosexual development and the state of his or her early relationships; and that marital adjustment is related to the adjustment to early relationships (O'Leary & Smith, 1991).

Neither of the schools of thought reviewed above has systematically studied the patterns of functioning in the partner relationships of substance-dependent people, particularly in comparison with other populations. Such studies have usually been conducted empirically or from other perspectives, notably the family systems or interactional perspective. The interpersonal problems and patterns that these studies have identified in substance-dependent people are the focus of the next chapter.
In the first chapter, consideration was given to the social-learning, cognitive-behavioural and the psychoanalytic perspectives on the aetiology and maintenance of substance dependence. The chief emphasis was on the intrapsychic and behavioural factors identified in these models. This chapter is directed at furthering the understanding of substance-dependent people through the analysis of their interpersonal functioning, specifically in partner relationships.

There has been comparatively little research into this aspect of the relationships of substance-dependent people and recent studies are particularly scarce. Much of the previous research has focused on the role of the non-substance-dependent spouse in the substance use, the efficacy of involving the spouse in the treatment of the substance-dependent individual, and the effect of marital or couples therapy on substance use in the relationship (Fals-Stewart, Birchler, & O'Farrell, 1996; McCrady, 1990; McCrady & Epstein, 1996; Noel & McCrady, 1993; O'Farrell, 1995; O'Farrell, 1996; O'Farrell & Rotunda, 1997).

The controlled studies of relationship functioning that do exist have principally addressed the relationships where one partner is alcoholic. There is very little information on the partner relationships of people dependent on other substances. A small body of research exists on the relationships of opiate-dependent people, and it appears that, like relationships where one partner is an alcoholic, relationships where one partner is dependent on psychoactive substances are also relatively distressed (Fals-Stewart & Birchler, 1994).
This chapter begins with a review of the research available on relationship functioning in alcoholic relationships (relationships where one partner is alcoholic), followed by that concerning the partner relationships of opiate-dependent people. The implications of these findings are discussed after each review, and summarised in the conclusion.

2.1. Alcoholic partner relationships

The systematic study of alcoholic relationships began in the 1970s (McCrady & Epstein, 1995). The detrimental effect of alcoholism on marital and family functioning is well known, and may include economic difficulties, marital conflict, divorce, child neglect and abuse, and domestic violence. However, although alcoholism often generates enormous stress in a family or marital relationship, many families remain intact and achieve some degree of stability (Leonard, 1990). Alcohol has actually been argued to have an adaptive function in many alcoholic families (Steinglass, 1979, 1981; Steinglass, Bennett, Wolin, & Reiss, 1987; Steinglass, Davis, & Berenson, 1977). Findings concerning the impact of alcohol on the partner relationship of alcoholics are presented below, followed by a review of studies comparing alcoholic partner relationships with relationships where no alcoholism is involved.

2.1.1. Alcohol and marital or family interactions

Marital and family factors are considered to have a considerable role in the development and maintenance of alcohol problems (O'Farrell, 1995). Individuals raised with an alcohol-abusing parent are at risk of developing alcohol problems from genetic factors and observational learning. In adult partner relationships, inability to resolve conflicts and problems can cause abusive drinking and generate severe marital and family tension (Maisto, O'Farrell, Connors, McKay, & Pelcovits, 1988). Family interactions often help to maintain alcohol problems once they have developed
(O'Farrell, 1995) and marital and family conflicts may precipitate renewed drinking by abstinent alcoholics (Maisto et al., 1988; O'Farrell, 1995).

Steinglass and his colleagues (Steinglass, 1979, 1981; Steinglass et al., 1987; Steinglass et al., 1977) have proposed an interaction between alcohol and the family where alcohol plays unique and distinct roles at different stages in the development and evolution of the family. It is argued that alcohol can serve an adaptive function in the family, and where it is of central importance may stabilise family functioning.

In a series of studies conducted both in the laboratory and in homes of alcoholic families, Steinglass and his colleagues observed the interactional behaviour of (a) alcoholics and spouses; (b) alcoholics, spouses and one child; and (c) the family. Variables such as distance-regulation, the range of content of interactions, the affect involved and the outcome of interactions were studied.

Overall, Steinglass and his colleagues concluded that, in the areas of short-term problem solving and the routines of daily living, the organisation of family life around alcoholism did contribute to family stability, but that stability was emphasised at the expense of long-term growth (Steinglass, 1985).

Laboratory studies of the effect of alcohol on marital interactions have produced conflicting results, indicating both positive and negative results from drinking. Billings and his colleagues found on a conflict resolution task, that consumption of alcohol did not differentiate alcoholic couples from non-alcoholic couples (Billings, Kessler, Gomberg, & Weiner, 1979). However, the alcohol manipulation in this study has been criticised for being weak, as not much alcohol was actually drunk in the alcohol-available condition (Leonard 1990).
Increased positive interactions from the consumption of alcohol were found by Frankenstein, Hay and Nathan (1985), though there was observed negative non-verbal behaviour. While engaged in a conflict-resolution task with their spouses, intoxicated alcoholics spoke more and tended to make more problem-describing statements than while sober, and made more problem-solving statements than did their spouses. Both partners, in the alcohol consumption condition, made significantly more positive verbalisations than in the no-alcohol sessions. The non-verbal behaviour of the alcoholics was, however, judged by observers to be significantly more negative than that of their spouses, and this was not reflected in verbal behaviour, or either spouse's report of marital satisfaction.

On the other hand, Jacob, Ritchey, Cvitkovic and Blane (1981) found increased negativity in alcoholic couples when the alcoholic partner consumed alcohol, whereas control group behaviour did not change with the ingestion of alcohol.

Jacob, Dunn and Leonard (1983) discovered that high consumption of alcohol had differing effects on spouses, depending on the pattern of the alcoholic's drinking. Where the alcoholic partner was a steady drinker, high alcohol consumption was associated with higher marital satisfaction and reduced symptomatology in the spouse, whereas in spouses of episodic drinkers, high alcohol consumption produced the reverse.

Jacob and Krahn (1988) compared three kinds of couples' marital interactions: alcoholic couples, couples in which the husband had major depression, and non-distressed couples. When alcohol was consumed, alcoholic couples discussing personally relevant problems were more likely to exhibit negative interactional behaviour (criticism, "putdowns," and disagreement) than couples with a depressed partner or non-distressed couples. However, alcohol consumption also increased the
expression of positive affective behaviour in the alcoholic couples. When not drinking, the alcoholic couples were indistinguishable from the others.

Jacob and Leonard (1988), following up the findings of Jacob, Dunn and Leonard (1983), observed the effect of alcoholic subtype (steady drinker vs episodic) on marital interaction, in drinking and non-drinking conditions. On drinking nights, episodic drinkers were more negative than their wives, and wives of steady drinkers were more negative than their husbands. In the drinking condition, episodic drinkers and their spouses showed less problem-solving and an interactional pattern suggestive of coercive control, but steady drinkers and their spouses showed a high level of problem-solving behaviour.

O'Farrell's (1995) review has argued for an adaptive role for alcohol in the family, that it may facilitate the expression of emotion and affection, or assist the family to regulate the amount of distance and closeness between members.

McCrady and Epstein's (1995) review of the literature concludes that alcohol appears to have a significant impact on the relationship but that it is not uniform across couples, and may depend on the pattern of alcohol consumption (i.e. whether the alcoholic partner drinks steadily or episodically). They also make the point that findings between the different research groups are not consistent with each other.

The inconsistent findings of these studies make a conclusive judgement premature. However, it appears that the consumption of alcohol does make a difference to the mood and functioning of couples in which one partner is alcoholic. More positive mood and behaviours have been observed when alcohol is consumed, but interactions in the conduct of a joint task are more negative.
2.1.2. Alcoholic couples compared with non-alcoholic couples

Gorad (1971), comparing alcoholic and non-alcoholic couples in an interactional task, concluded that alcoholic men were more likely to use responsibility-avoiding communication than their wives, or non-alcoholic men. Alcoholic couples were less able to work cooperatively on the task and exhibited more reciprocal, competitive responses than non-alcoholic couples (McCrady & Epstein, 1995).

Billings and colleagues found that alcoholics and their wives were similar to other distressed couples, with both kinds of couple displaying more hostility and less friendliness than non-distressed couples (Billings, Kessler, Gomberg, & Werner, 1979).

O'Farrell and Birchler (1987) came to a similar conclusion, using self-report measures to compare the interactions of alcoholic couples, maritally conflicted couples, and non-conflicted couples. On measures of marital stability, change desired and positive communication behaviours, alcoholic couples did not differ from other maritally conflicted couples. In communication, alcoholic and maritally conflicted couples resembled each other and contrasted with non-conflicted couples, showing a lower percentage of positive behaviour, more responsibility-avoiding communication on the part of the husbands, and a pattern of wife dominance. Unexpectedly, alcoholic husbands reported themselves to be less unhappy, and expressed less desire for change than their wives or the husbands in maritally conflicted couples, and were less aware of their wives' complaints than maritally conflicted husbands.

Jacob and Krahn (1988) also found no difference between alcoholic couples and distressed couples. Both groups showed lower levels of congeniality and positive behaviour. However, alcoholic couples manifested more negative interactional behaviour than either non-distressed or distressed couples, when a more detailed
analysis of these data was undertaken (Jacob & Leonard, 1992). McCrady and Epstein (1995) suggest that the observed communication patterns indicate that the alcoholic partner is trying to deflect or avoid confrontation, that neither partner cooperates in problem-solving when the other partner initiates it, and that both partners in an alcoholic relationship are sensitive to each other's negative behaviour. Positive behaviour in either spouse was met with reduced problem-solving in the other.

Recent research from India on the nature of family interaction patterns in alcoholic families shows a similar picture. Alcoholic families were found to be characterised by poor communication patterns, lack of mutual warmth and support, spouse abuse and poor role functioning. Spouses expressed greater dissatisfaction in all areas of family functioning than the alcoholic partners (Suman & Nagalakshmi, 1995).

Epstein, McCrady and Hirsch (1997) found significant differences between couples where there was early onset of alcoholism and couples where there was late onset. Couples where there was early onset reported more marital instability and greater distress in the wives than in the alcoholic husbands. Husbands were more satisfied than their wives during treatment and their satisfaction did not increase over the course of treatment. That of their partners did.

McCrady and Epstein (1995) point out that many of the studies in the literature on alcoholic couples have focused on a select sample which is generally white, upper or middle-class, legally married and living together, the husband is the alcoholic, and there is no other psychopathology (including other substance use). The general literature on alcoholism, however, makes it clear that the full range of gender, age, class, and race is represented in the alcoholic population, that there are high levels of comorbid substance use, domestic violence or marital instability, and other comorbid disorders (McCrady & Epstein, 1995).
2.1.3. Summary of findings on alcoholic partner relationships

The relatively small and select literature on alcoholic couples, and the lack of conclusiveness about the impact of alcohol, make any conclusions about alcoholic relationships, compared with non-alcoholic relationships, somewhat tentative. However, in the samples studied, it appears clear that relationships where one partner is alcoholic are similar to other distressed relationships, and that distressed relationships are very different from non-distressed relationships. Like other distressed relationships, in alcoholic relationships there was less congeniality and positive communication, more responsibility-avoiding communication on the part of the husbands, and a greater tendency for wives to dominate. Compared with non-alcoholic relationships, alcoholic relationships were characterised by more competitiveness and less cooperation between partners, and a lack of mutual support and warmth.

It seems also that there may be aspects of alcoholic couple relationships which are unique. The interactions of partners in these relationship are more negative than they are in other relationships, and the distress about the relationship is not felt equally by both partners. Alcoholic husbands seem to be less dissatisfied with the relationship, and to want less change than their wives, and they are less aware of their wives' complaints. This was not the case with husbands in other conflicted relationships, so the alcohol appears to act in some way to buffer the alcoholic from awareness of relationship distress, and the feelings associated with it.

Overall, the partners in alcoholic relationships have been found to have problems communicating or interacting positively and effectively when cooperation is required. The distribution of responsibility in these relationships also seems to be impaired: the communication patterns of the alcoholic partner indicate an avoidance of responsibility, and the spouse tends to be dominant. The spouses in alcoholic relationships appear to
lack trust and confidence in each other, and there is very little sense, in these relationships, of mutual support and well-being.

It appears that the consumption of alcohol may assist, short term, in the expression of positive feeling and behaviours, but the long-term problems, to which alcohol contributes, remain. It also appears that alcohol plays a role buffering the alcoholic partner, but not the spouse, against relationship distress.

2.2. Partner relationships of opiate-dependent people

As reported above, there is even less research on the partner relationships of people who are dependent on other substances, than there is in relation to alcoholics. Some attention has been given, in the past, to the characteristics of opiate-dependent people and their relationships (see Anglin, Kao, Harlow, Peters, & Booth, 1987 for a review; Kosten, Jalali, Steidl, & Kleber, 1987; Kosten, Novak, & Kleber, 1984). However, there appears to be no recent research comparing the relationships of opiate-dependent people with a normative sample, or other distressed couples. A recent study, conducted by Fals-Stewart and his colleagues (Fals-Stewart et al., 1996) measured the effect of treatment on substance-using behaviour and partner relationships, comparing patients who abused substances with a wait-list control group. However, there is no way of establishing from this study how these relationships might compare with a population which is not substance-dependent.

As background to their own study of the impact of relationship variables on opiate abstinence, Anglin and his colleagues summarised a considerable number of studies which indicate the interpersonal style of opiate-dependent people, providing an indirect indication of what their relationships might be like (Anglin et al., 1987). Most of the findings are based on clinical observations and interview data, rather than statistical comparisons with control or other comparison groups. The authors therefore suggest
that the findings should be interpreted with caution. Samples were drawn from addicts in methadone maintenance, other treatments or from "street samples."

2.2.1. The interpersonal style of opiate-dependent people

Opiate-dependent people were judged, by Saxon, Blaine and Dennett (1978), to be cautious about developing intimate personal relationships, not to value them highly, to prefer limited interaction, and to be more comfortable when the other person initiated an intimate relationship with them. Robinson (1973) found that opiate-dependent people were less apt to seek the company of others, and considered them to show less warmth and affection. Opiate-dependent people were argued to have considerable difficulties with trust in relationships (Davidson, 1977; Teasdale, 1972) and to be fearful of emotional contact with others (Davidson, 1977; Rosenbaum, 1981). In couples where one partner was dependent on opiates, often neither partner trusted the other, the relationship was full of conflict (Fram & Hoffman, 1973), and could be highly unstable (Cuskey, Richardson, & Berger, 1979; Taylor, Wilbur, & Osnos, 1966).

Robinson (1973) found opiate-dependent people to have low self-worth and self-concept, and Hoffman (1964) considered this to result in depression, hostility and a loss of meaning in life. Opiate-dependent people have been judged to be weak and dependent (Wellisch, Gay, & McEntee, 1970), easily led (Robinson, 1973), passive-aggressive and dependent (Taylor et al., 1966), and passive, dependent and depressive (Wolk & Diskind, 1961).

Hoffman (1964) considered that opiate-dependent people used sex and their substance as a means to bolster their self-esteem, and Stanton and his colleagues indicated that heroin provided feelings of success even when the person was alone (Stanton et al., 1978). Other writers have pointed out that heroin becomes a substitute for sex or
sexual relationships (Rosenbaum, 1981; Seldin 1972; Stanton et al., 1978), and partner relationships were found often to be utilitarian and organised around the obtaining of the substance (Rosenbaum, 1981; Stern, 1966). Opiate-dependent people have also been considered to be oriented towards immediate gratification (Fram & Hoffman, 1973).

Anglin and his colleagues concluded from the studies they reviewed that the opiate-dependent person is shown as "a withdrawn, distrusting individual who suffers from a low sense of self-worth and depression, is passive and dependent, and finds it difficult to develop or maintain intimate relationships" (Anglin et al. 1987, p. 500). This conclusion does capture the main themes of the literature reviewed; however, it attenuates the sense, in that literature, of opiate-dependent people's considerable, if not extreme, difficulties with trust and intimacy in relationships. It also overlooks the implication in some of these studies that opiate-dependent people may avoid intimate relationships, or at least restrict their emotional involvement.

2.2.2 The interactional behaviour of opiate-dependent couples

Two more recent laboratory studies by Kosten and his colleagues have measured aspects of opiate-dependent people's partner relationships (Kosten et al., 1987; Kosten et al., 1984). The first compared opiate-dependent participants' perceptions of their marital and family environment with those of their spouses or mothers, and then compared these with observer ratings of the couples' interactions. The second study examined the relationship between marital structure and interactions and relapse to opiate use.

In the first study, opiate-dependent people in outpatient treatment, and spouses and mothers living with an opiate-dependent person completed the self-report Moos Family Environment Scale (FES) (Moos, Insel, & Humphrey, 1974) about their current or
most recent family environment. Sixteen couples where at least one partner was opiate-dependent also participated in a videotaped interview which was analysed by means of the *Beavers Timberlawn Family Assessment* instrument (Lewis, Beavers, Gossett, & Phillips, 1976).

Opiate-dependent people perceived their family environment as having higher organisation and achievement orientation than normative standards, and lower conflict, lower intellectual-cultural orientation, and lower recreational orientation. Wives and mothers, on the other hand, perceived normative levels of organisation, achievement and intellectual-cultural orientation, and a lower level of control in their family. However, they were similar to the opiate-dependent person in perceiving lower conflict and recreational orientation. Opiate-dependent people's perceptions of their family environment were therefore in some respects discrepant with those of their family members, particularly in the desired level of control and organisation. Whereas opiate-dependent people appeared to experience the current level as excessive and possibly restrictive, wives perceived a relative lack of control. The opiate-dependent participants' scores on the *FES* were considered to show that they perceived their relationships with their spouses or parents as satisfactory.

The most notable finding in this study was the perception of lower than normative conflict by both spouses or mothers and the opiate-dependent person. This contrasted markedly with outsiders' observations during interview of frequent, unresolved fights between the couples concerned. The authors judged this to derive from family collusion in blaming the substance dependence and minimising other problems, so that conflict is not perceived; or from enmeshment between the opiate-dependent person and his or her spouse or mother, making the admission of conflict difficult. The available data did not allow a definitive conclusion. Both partners in such couples appear to deny or minimise a high level of conflict.
The second study (Kosten et al., 1987) related marital interactions to retention in treatment and relapse to opiate use. Seventeen opiate-dependent couples and seven opiate-dependent people and their parents were observed interacting with each other as they engaged in personally relevant discussions, and a simple task requiring cooperation. The authors point out that the opiate-dependent sample was predominantly white and male, selected for opiate-antagonist treatment, and the generalisability of the findings is therefore limited. The opiate-dependent participants were in weekly individual counselling, and family group counselling was also available. Interactional behaviour was coded using the Beavers Timberlawn Family Assessment. guide (Lewis et al., 1976). Most couples were observed to have rigid patterns of interaction, rather than flexible negotiation or a chaotic lack of structure. The rigidity meant that the couples could solve simple problems but could not negotiate difficult decisions effectively. Abstinence from opiate use, retention in treatment, and family health were found to be related to five dimensions of family structure and interaction: flexible leadership between partners in discussing problems, problem solving, empathy between spouses, closeness with distinct interpersonal boundaries, and the mood and tone of interactions.

2.2.3. Summary of findings on opiate-dependent people's partner relationships

The work of Kosten and his colleagues indicates that the partner relationships of opiate-dependent people are fraught with considerable difficulty. Because of rigid interaction patterns, the partners lack the ability to negotiate flexibly with each other to solve difficult problems or make decisions. They have discrepant perceptions of their relationship, particularly with regard to family organisation and control, and these are likely to be a potential source of conflict. Furthermore, the partners' agreed perception of lower than normative conflict in their relationship appears to be at odds with the reality.
On the positive side, some protective factors were noted. The opiate-dependent people who remained in treatment longest were those in couples that were relatively close, empathic, respectful of the other without depression or hostility, and able to negotiate efficiently and with flexible leadership when solving problems. Although marital satisfaction was not directly measured and there was no information on spouses' satisfaction, it appears that, similar to the alcoholics discussed above, opiate-dependent spouses were satisfied with their partner relationships.

2.3 Conclusion

Whereas the interpersonal difficulties of substance-dependent people are often referred to in discussions of substance dependence and its treatment (e.g. Anglin et al., 1987; Monti, Abrams, Kadden, & Cooney, 1989; Treece & Khantzian, 1986), the partner relationships of this population have received little systematic attention. Considering the extent of the research into problematic substance use, there are relatively few controlled studies of the partner relationships of this population and those that do exist consider a range of interactional behaviours, and employ several different outcome measures. Moreover, information on users of illicit substances other than opiates is almost completely lacking. However, the evidence presented in this chapter indicates considerable difficulties with interpersonal relationships, particularly partner relationships, in substance-dependent people.

The relationships of alcoholics appeared to lack balance and harmony between the partners, warm mutual exchange, and respect for the partner. A buffering role for alcohol against relationship distress in the alcoholic was also identified. Opiate-dependent people appeared broadly to be characterised by an isolation from emotional involvement in their relationships, giving rise to discrepancies in perception between the partners, isolation from normative ideas about relationships and conflict, an
inaccurate meta-awareness of the relationship, and rigid interactions. Comparable with alcoholics, opiate-dependent partners appeared to be satisfied with their relationships.

Chapter One considered the factors within the person associated with substance dependence, and the role that the substance might play. The various findings implied severe difficulties in relationships, which have been demonstrated, in this chapter, to exist in the partner relationships of this population.

The connection between the quality of a person's relationships in the external world and his or her internal state is discussed in the following chapter which introduces attachment theory. Attachment theory has been employed in this thesis as the basis of a new model of substance dependence.
CHAPTER THREE
Attachment Theory

In this chapter an outline of attachment theory (Bowlby, 1969, 1973, 1980) is provided, along with a summary of the major theoretical contributions since Bowlby's initial development of the theory. An overview of the research conducted into infant and child attachment is presented, followed by a more extensive discussion of attachment in adults that is the main focus of this thesis. Attachment theory has extended the understanding of adult romantic relationships in the field of social psychology, and proven fertile in generating many measures of attachment and extensive study of the dimensions underlying behaviour in romantic relationships (generally assumed to be attachment relationships). The development of some of the more influential measures, their conceptual basis, and the assumptions underlying them are discussed. The proposed association between early attachment experiences and adult psychopathology, including substance dependence, is then reviewed. The chapter concludes with the introduction of the proposed thesis.

3.1. The development of attachment theory

John Bowlby was trained in the psychoanalytic tradition and maintained that orientation all his life. In the course of looking at the effects on young children of lengthy separation from their primary caregiver (usually mother), he noticed symptoms that were similar to those observed in adult psychopathology. This led him to postulate that significant events in the early life of an infant or child might have an aetiological effect on adult disorders. Specifically he postulated that many forms of psychopathology could be attributed to deprivation of, or significant discontinuities in, maternal care (Bowlby, 1973, 1980). Bowlby reviewed a considerable body of literature in an attempt to establish prospectively the aetiological effect on adult

In establishing the effects of influential factors in the caregiving environment of the infant or child, Bowlby drew on the science of his day, particularly ethology (the study of animal infancy, parenting and tribal relationships, and their continuity with human beings), control theory for its postulates about the structure and organisation of behavioural systems, and information-processing theory for an understanding of cognitive processes in attachment.

This resulted in "attachment theory," a theory of the behaviour of the young of various species, including humans, which is postulated to be instinctive and directed towards species preservation. Its characteristics are behaviour that maintains proximity to a primary caregiver. It is argued to confer a survival advantage for the species by ensuring that the young are kept in touch with their caregivers and thus at reduced risk of coming to harm (Bowlby, 1969).

During the course of healthy development in human beings, attachment behaviour leads to the development of affectional bonds or attachments, initially between child and parent and later between adult and adult, which are retained throughout the whole life cycle and considered necessary to the individual's well-being and survival. To be attached, or to have an attachment bond with someone, means that a child is "strongly disposed to seek proximity to and contact with a specific figure [termed the attachment figure] ... in certain situations, notably when he is frightened, tired or ill" (Bowlby, 1971, p. 372). Attachment behaviour refers to any of the forms of behaviour that a child engages in to attain and maintain a desired proximity: crying, calling, following, protesting at separation, and physically clinging to the person.
Attachment behaviour is frequently and intensely elicited in infancy and early childhood and is less manifest over time as the child, adolescent or adult becomes more autonomous. Activating situations in infants and children are strangeness, illness, fatigue, anything frightening, and in particular the unavailability or unresponsiveness of the attachment figure. During development, children and adolescents internalise the care provided and become able to tolerate the absence of the attachment figure for longer. Eventually they become able to draw on their own resources much of the time, and have less need for external comfort and reassurance. However, the attachment system is still activated when needed. In adults, it is typically activated when the adult is ill, severely distressed, or threatened by physical danger.

Attachment behaviour is terminated by particular conditions such as a familiar environment (especially in children) and the availability and responsiveness of an attachment figure. When attachment behaviour is strongly aroused, termination may require touching, clinging, or active reassurance (Bowlby, 1969).

Bowlby points out that the most intense emotions possible in human beings are involved in the attachment system:

The formation of an attachment bond is described as falling in love, maintaining a bond as loving someone, and losing a partner as grieving over someone. Similarly, the threat of loss arouses anxiety and actual loss gives rise to sorrow; while each of these situations is likely to arouse anger. The unchallenged maintenance of the bond is experienced as a source of security and the renewal of a bond [after separation] as a source of joy (Bowlby, 1980, p. 40).

Strong anger is frequently a component of attachment relationships and is seen as having an important function. Anger expressed at separation from the attachment figure, or on reunion, may help overcome obstacles in the way of reunion, or
discourage the person from going away again. As such, it promotes the attachment bond and is regarded as functional. However, when anger is so persistent or intense that it alienates the partner and weakens the bond, it is considered dysfunctional. Repeated separations may cause a shift in the balance of feeling so that "deep-running resentment" is more salient than the love that has become weakened and remains uncertain and anxious (Bowlby, 1973).

Bowlby argues that attachment experiences with one's primary caregivers become organised within the person in internal representations of the self and attachment figures - "working models" - which are fundamental to the development of the personality. Working models are analogous to the cognitive maps proposed in animals (Bowlby, 1971, p. 110). Specifically, the infant develops self models based on the sense of his or her worth or acceptability in the eyes of the attachment figure, and models of how attachment figures can be expected to respond when needed, that is, how accessible and responsive they are (Bowlby, 1973).

Working models are argued to develop over the course of infancy, childhood and adolescence and to influence perception (what is perceived, what is ignored, and how situations are construed); action; and expectations of and behaviour towards others (what sorts of people and situations are sought out, and what avoided). Thus they operate to select and shape the individual's experience of the environment (Bowlby, 1973). Optimally, they function to make sense of new information by assimilating it into the current structure, or, where new information is discrepant with existing models, altering to accommodate it. There are periods in development considered to be critical, during which working models are most sensitive to environmental influence. The environmental conditions at these times most determine what models are developed and how flexible they are.
Bowlby suggests that an individual may have more than one working model of the attachment figure and the self, and that these multiple models originate at different times, differ in their dominance within the person, and in the extent to which the person is aware of them. Many may be unconscious, and even directly contradict other more conscious models. A description of an ideal parent, for example, which reflects the characteristics of the person's conscious model of that parent, may directly contradict stories of childhood abuse. The models developed from the experience of the abuse are held unconsciously in this case (Bowlby, 1973).

Through the influence of working models, attachment experiences also influence the pattern of relationships, or affectional bonds, that a person makes. Someone who has grown up in "an ordinary good home with ordinarily affectionate parents" has received the support, comfort, and protection needed for healthy development, and knows where they are to be found. Such a person has:

... an almost unconscious assurance that, whenever and wherever he might be in difficulty, there are always trustworthy figures available who will come to his aid. He will therefore approach the world with confidence and, when faced with potentially alarming situations, is likely to tackle them effectively or to seek help in doing so (Bowlby, 1973, p. 208).

This "unthinking confidence in the unfailing accessibility and support of attachment figures" is argued to be the foundation from which a stable and self-reliant personality can develop (Bowlby, 1973, p. 322).

Attachment experiences also provide the model on which future relationships are built:

A young child's experience of an encouraging, supportive and co-operative mother, and a little later father, gives him a sense of worth, a belief in the
helpfulness of others, and a favourable model on which to build future relationships. Furthermore, by enabling him to explore his environment with confidence and to deal with it effectively, such experience also promotes his sense of competence (Bowlby, 1982, p. 378).

With the experience of continued supportive family relationships, "the personality becomes increasingly structured to operate in moderately controlled and resilient ways, and increasingly capable of continuing so despite adverse circumstances" (Bowlby, 1982, p. 378). Less fortunate childhood and later experiences are highly likely to lead to "personality structures of lowered resilience and defective control, vulnerable structures which also are apt to persist" (Bowlby, 1982, p. 378). Inconsistent, absent or rejecting parenting may damage a person's capacity to relate, and unless modified by further experience, may impair personality functioning and relationships in later life.

Bowlby (1973, 1980) has examined a considerable body of evidence to argue the effect of damaging attachment experiences on the development of later psychopathology. Where the whereabouts of the attachment figure has been uncertain, or adequate care and support have been lacking, the person develops with a great lack of confidence that a caretaking figure will be truly available and responsive. In such people, "the world is seen as comfortless and unpredictable; and they respond by shrinking from it or doing battle with it" (Bowlby, 1973, p. 108). In such circumstances people develop disordered attachment behaviour which becomes incorporated into the personality, according to Bowlby, and may lead to different psychopathological disorders in later life. Bowlby distinguishes three variants of disordered attachment behaviour (Bowlby, 1980):
Anxious/ambivalent attachment

People who are prone to display unusually frequent and urgent attachment behaviour, when there appears to be no reason for them to do so, are considered to be anxious and/or ambivalently attached (Bowlby, 1980). Anxious attachment is held to be the result of discontinuities or inconsistencies in parenting which result in the person having no confidence that an attachment figure will be accessible and available, so that a strategy of remaining in close proximity to the attachment figure has been adopted to ensure that he or she will be there when needed. Bowlby sees many anxiety disorders as arising from anxiety about the availability of the attachment figure in earlier life.

Compulsive caregiving

Compulsive caregiving is considered to arise particularly where there has been a reversal of roles in childhood and the person has had to parent his or her parent. It is characterised by an intense, excessive concern and involvement in others' welfare. The person's own need for care is viewed as denied and displaced onto the recipient.

Compulsive self-reliance

The disposition towards compulsive self-reliance is a protested emotional self-sufficiency which can range from precarious to firmly organised within an individual. In the former case, as in anxious attachment, attachment relationships are likely to be ambivalent. In the latter, there may be relative immunity to their loss. The aetiological factors in this type of attachment organisation are argued to be loss of a parent in childhood, resulting in the child having to fend for himself or herself, or parental rejection or disparagement. Bowlby describes such self-sufficient people as appearing competent and self-reliant but lacking in understanding of themselves and others, readily aroused to jealousy and resentment, lacking in trust, and likely to be difficult to
work or live with. If they do confide in someone, he claims, they often report feeling extremely isolated and unloved (Bowlby, 1980, p. 212).

The apparent lack of concern with relationship in such individuals is explained as resulting from the defensive exclusion of information from processing. Prolonged distress in attachment relationships - for example, where a parent consistently rejects attachment behaviour - is argued to lead to eventual deactivation of the systems responsible for the behaviour, resulting in a state of partial or complete emotional detachment. Subsequently any information in the environment that might activate attachment behaviour and feeling is defensively excluded from awareness.

The work of treatment, Bowlby argues, is the detection of the existence of influential models (of which the person may or may not be aware), and an invitation to the person to examine them and consider whether they are still valid. The person's predictions of the therapist are, in Bowlby's view, particularly useful in revealing the nature of the working models exerting an influence in the person's life (Bowlby, 1973).

3.2. Research on attachment in children

3.2.1 Variants of attachment behaviour

To put some of Bowlby's propositions to the test, a close colleague of his, Mary Salter Ainsworth, conducted intensive observational studies of infant and mother interactions at home, and developed a laboratory paradigm, called the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978). The Strange Situation was constructed to observe the attachment behaviour of infants during short-term separations from, and reunions with, their mothers. In the Strange Situation, an infant's behaviour is observed over a series of conditions: in the room with mother and a stranger (the
researcher), alone in the room, alone with the stranger, and reunited with the mother with the stranger present. Two sources of mild threat, a strange environment and the absence of the attachment figure, are the conditions employed to elicit attachment behaviour.

Ainsworth and her colleagues found, unexpectedly, that infants in a normative sample of the population differed considerably from each other in their responses to separation from their mother and reunion with her. On the basis of this, and behaviour observed at home, Ainsworth identified three primary groupings of behavioural response in one-year old babies, with sub-categories in each group.

**Secure attachment**

One group of infants (66% of the sample) explored freely when the mother was present in the Strange Situation, were more inhibited when she was absent, promptly sought closeness when she returned, or, alternatively, initiated positive interaction over a distance. At home, they manifested less distress, were more positive in greeting the mother and being held, and more cooperative with their mother's commands. They were considered securely attached.

From her accompanying observation of the behaviour of the mothers, Ainsworth described the kinds of working models that infants develop from the mother's parenting (the mother was the primary caregiver in these cases). Secure babies have a model of the mother as being accessible and responsive. In a strange situation they are confident to explore because they know that she will be available, that they can unambivalently seek her out when they are distressed because she will respond and soothe them. She will provide what is needed to terminate the attachment behaviour - a feeling of security - and they can then return to exploration.
Anxious-ambivalent attachment

A second group of babies (12%) were very wary of the stranger in the laboratory situation, did not explore greatly, were intensely upset by the separations, showed ambivalence towards the mother when she returned and were difficult to soothe. Infants in one sub-group both sought contact and were angry and rebuffing; another sub-group of these children appeared too distressed on the mother's return to approach her.

Such infants, Ainsworth argues, have working models of a mother who is inconsistently accessible and responsive. They have no confidence that she is available if she is out of sight, so they protest more at her going. When she is present, they do not expect her to be responsive. When their attachment behaviour is activated, they increase the intensity of their demands but do not have confidence in her availability, and become frustrated. Their behaviour becomes imbued with anger towards her which is manifested after a separation episode (Ainsworth, 1985). These infants were concluded to be anxious-ambivalent in their attachment.

Anxious-avoidant attachment

The third group of infants (20%) tended to explore across all situations, tended not to be upset when the mother was absent, and to avoid her on reunion. This behaviour was termed anxious-avoidant attachment. At home, both anxious-ambivalent and anxious-avoidant infants cried more than secure babies. They responded less positively to being held by the mother, and after separations, but also responded more negatively on being put down. They were less responsive face-to-face, less likely to comply with maternal commands and were generally more angry (Ainsworth, 1985; Ainsworth et al., 1978).
Anxious-avoidant babies are considered to employ avoidance as a defence against the elicitation of attachment behaviour because it has previously been rejected: Bowlby's defensive exclusion. Ainsworth proposes that these infants have a working model of a mother who is rejecting and likely to rebuff attachment approaches. In a situation which elicits attachment behaviour, the baby experiences a severe conflict between the need for proximity to the caregiver, and the fear of rejection. Over time the attachment behaviour becomes deactivated. By defensively diverting his or her attention to other features of the environment (exploring), the infant avoids distress, rebuff of the attachment behaviour, and angering the mother. Avoidance of distress and of contact with the mother may actually assist the maintenance of proximity, as, if not distressed, the infant can stay within range of her, and hence (in terms of the attachment system's function) achieve protection from greater dangers (Ainsworth, 1985; Main & Weston, 1982).

These differing attachment behaviours are not considered to derive from strength or weakness of attachment. Almost all babies show evidence of being attached. Anxious children and those with neglecting or abusing parents are presumed to be as attached as those more fortunate (Ainsworth et al., 1978; Main 1995).

Clarifying the particular nature of the attachment relationship, Ainsworth (1989) defines it as an affectional bond: "a relatively long-enduring tie in which the partner is important as a unique individual, interchangeable with none other" (Ainsworth, 1989, p. 711). The bond develops in a dyadic relationship but becomes represented within the individual, in working models. Attachment relationships are a special kind of affectional bond and have the added criterion, not necessarily present in other affectional bonds, of the experience of security and comfort in the relationship with the partner, or the seeking of it (Ainsworth, 1991). The provision of security results in the person being able "to move off from the secure base provided by the partner, with confidence to engage in other activities" (Ainsworth, 1991, p. 38).
From Bowlby's (1980) work, we know that the source of such security is "unchallenged maintenance" of the affectional bond, and that it derives from positive appraisals of the attachment figure's accessibility should they be needed (Bowlby, 1973; Kobak, 1994). Ultimately it manifests in confidence in the other's accessibility and one's own worth.

Thus attachment relationships are characterised by proximity-seeking - the attempt to remain within the protective range of the primary caregiver; the secure base effect - the feeling of security in the presence of the attachment figure, and confidence to explore or engage in other activities; and separation protest, which is manifested in distress and attempts to ward off separation, when ready access to the attachment figure is threatened (Weiss, 1982; West, Sheldon, & Reiffer, 1987).

**Disorganised/disoriented attachment**

Several early studies of the Strange Situation reported difficulties categorising some infants into any of the three categories initially developed (Ainsworth, 1985; Main & Solomon, 1990). Some infants were found to demonstrate both anxious-ambivalent and anxious-avoidant behaviours in the Strange Situation. Some maltreated infants were classified as secure on the basis of their attachment behaviour, conflicting with the theory that secure attachment develops from sensitively responsive caregivers (Main, 1995).

Main and Solomon (1986, 1990) analysed videotapes of 200 Strange Situation episodes and concluded that the infants had in common episodes of interrupted organised behaviour, for example, beginning an action and then freezing, or suddenly altering a behaviour completely. These behaviours seemed "to lack a readily observable goal, intention, or explanation," to be "a collapse of strategy" (Main, 1995, p. 423; Main & Solomon, 1986, 1990). The episodes were often brief (10-30
seconds) but considered highly significant of disturbed attachment. Over 90% of previously unclassifiable infants were classified on the basis of this behaviour to a new category: disorganised/disoriented (Main & Solomon, 1986, 1990). As well, they were given the category classification that best fits their organised behaviour in the situation (Main, Kaplan, & Cassidy, 1985; Main & Solomon, 1986, 1990). Thus securely attached infants can also manifest disorganised attachment behaviour at times.

The distribution of the four infant groupings in normative populations have been found over many studies to range from: secure, 55-65%; avoidant, 20-25%; anxious-ambivalent (termed resistant by Main), 10-15%; disorganised/disoriented, 15-20% (Goldberg, 1995). Some children cannot be classified into any of the four categories and receive a "Cannot classify" label. This usually only occurs in combination with disorganised/disoriented attachment (Goldberg, 1995; Main, 1995).

The disorganised behaviour is explained as the outcome of the infant being alarmed, not by something in the external situation which elicits proximity-seeking, but by the parent, the source of security itself (Main, 1995; Main & Hesse, 1990). Alarm activates the attachment system, and leads the infant to seek the attachment figure, but if the parent is causing the alarm, the infant is placed in an impossible paradox, wanting to approach and flee, and its behaviour then becomes disorganised (Main & Hesse, 1990).

The kinds of behaviour in the parent that can cause alarm are, of course, direct abuse, but frightened parental behaviour is also held to do the same, particularly dissociation or withdrawal from the child as the source of the fear (Main, 1995; Main & Hesse, 1990). This behaviour in the parent can be the result of his or her own unresolved loss or experiences of abuse, and thus the child's behaviour is a second-generation effect of parental trauma (Main, 1995; Main & Hesse, 1990).
Main (1995) argues that insecure babies have developed an inflexible patterning of attention to control their attachment behaviour, in order to adapt to their attachment environment. Avoidant children avert attention from the caregiver, whereas resistant (anxious-ambivalent) children maintain attention almost exclusively towards the caregiver. This inflexibility is also argued to extend to aspects of memory, emotion and the awareness of surrounding conditions (Main, Kaplan, & Cassidy, 1985). Challenges to these inflexible states - for example, when avoidant children are forced to attend to environmental dangers (eliciting the need for an attachment figure) or when resistant children's attention is forced away from the attachment figure - are likely to create anxiety. Main (1995) argues therefore that the function of the children's adaptive strategies (avoidance or preoccupation with the caregiver's whereabouts) may be to impart a secondary kind of felt security.

3.2.2. Attachment organisation in children and later psychopathology

A significant association between attachment experiences and later psychopathology has been found in several studies of children (see Cicchetti, Toth, & Lynch, 1994, for a review) and in several studies of adults (meta-analysed by van IJzendoorn & Bakermans-Kranenburg, 1996).

Main's (1996) review of the existing research leads her to conclude that disorganised infants are currently at greatest risk of mental disorder. The work of Liotti (1992), Lyons-Ruth (1996) and Main and her colleagues (see Main, 1995) indicate that disorganised attachment status may confer a vulnerability to dissociative disorders, behaviour disruptive disorders and anxiety disorders.

Crittenden, who has worked widely with children from non-normative populations, particularly maltreated children, has proposed a model of vulnerability to psychopathology in children and adolescents who are insecurely attached (see
Crittenden, 1995, for a summary). Her work incorporates the theoretical propositions of Bowlby and Ainsworth with aspects of learning theory, cognitive information-processing theories, Piaget's theory of development, and Vygotsky's work on interpersonal communication.

In her model, secure children achieve balance in the use of affect and cognition, able to employ their affective responses to develop knowledge of themselves in different situations, and to communicate appropriately. Children who were avoidantly attached in infancy have learned that manifesting affect, particularly the desire for closeness, leads to rejection or they have been confused because of misleading affective behaviour in the caregiver. They therefore come to inhibit their affective responses (defend against affect) and to rely on cognition for their strategy in relationships. Those children who were ambivalently attached in infancy have mothers who reinforce their affective communication but are inconsistent in responding to their signals. As these infants cannot predict the mother's response, they are unable to develop the use of cognition in their relationships, and they respond with anxiety and anger. Over childhood, they develop a coercive strategy based on affect in their relationship with their caregiver, alternating between anger and coyness. The latter is argued to disarm the caregiver, elicit nurturing, and protect against reprisals for the anger.

According to Crittenden, these mental and behavioural patterns leave children and adolescents vulnerable to particular disorders. Those who have not developed cognition adequately are argued to be vulnerable to disorders of conduct and attention. Those who have learned to defend against affect are vulnerable to problems with intimacy, sexual relationships and depression. She states that in extreme cases suicide or addiction to substances can be the outcome of insecure attachment, or, in very few cases, psychopathy (Crittenden, 1995).
Longitudinal studies of infant and childhood patterns of attachment and later psychopathology have been conducted. However, the participants have not yet reached adulthood. The study of adult attachment has therefore been studied independently of empirically observed childhood patterns. The theory and research findings in relation to adult attachment (the focus of this thesis) are next reviewed.

3.3. Attachment in adulthood

Bowlby did not discuss attachment in adults at great length. The application of his theory to adult populations has chiefly been conducted by others, several of whom were Bowlby's colleagues. Parkes (1972) suggested that attachment theory could explain many of the phenomena observed in adult bereavement. In his study of bereaved spouses, he observed initial shock and then continuing preoccupation with the dead spouse, including attempts to search for the person, a focus on places in the environment where he or she might be expected to be, and calling and crying for the dead person. He considered these reactions to be manifestations of separation anxiety, and considered them isomorphic with what is observed in infancy. Weiss (1975) noted attachment behaviour in divorced spouses who continued to have strong feelings for the partner and experienced grief, even when the separation was desired.

Ainsworth (1989, 1991) and Weiss (1982, 1991) have both discussed attachment in adults in some detail. In close adult relationships, three behavioural systems are considered to be involved: the attachment system, the system governing sexual behaviour, and the caregiving system (Ainsworth, 1989, 1991; Bowlby, 1969; Weiss, 1982, 1991). Thus adult relationships are likely to have many characteristics that are relevant to attachment and many that are not (Bowlby, 1969; Weiss, 1974, 1991).

The caregiving system governs the activity of the parent in caring for young children and the partner when needed; the attachment system governs the activity of the person
when needing and seeking security, comfort and reassurance from the partner. Ainsworth describes the difference as one partner looking to the other as stronger, wiser or more competent at times (the attachment system) and the other reciprocating by providing care and reassurance, and thus security (the caregiving system) (Ainsworth, 1989).

The sexual system and sexual attraction are seen as important contributors to the initial establishment of a relationship, but the caregiving and attachment components are likely to become relatively more important as the relationship persists, and to sustain the bond when sexual interest has waned (Ainsworth, 1989). Adult attachment relationships do not always involve the sexual behaviour system. Some strong friendships are close enough to be characterised as attachment relationships, as are some bonds with parents or siblings (Ainsworth, 1989; Bowlby 1973, 1980; Weiss, 1982, 1991).

The attachment system and the system governing sexual behaviour are considered to operate independently of each other, though both systems may share component behaviours, for example, clinging and kissing (Bowlby, 1969). The distinctness of the two systems is further delineated by Weiss. Whereas attachment resists extinction even when there appears to be no positive gain from the relationship, sexual desire may persist or may not. Attachment becomes more reliable, the more established a relationship is; sexual desire often becomes less urgent. Under conditions of threat, attachment needs become powerful; sexual needs often diminish or may be suppressed. Attachment is strongly associated with particular figures and resists redirection towards others; sexual desire can be transferred to new figures comparatively easily (Weiss, 1982).

The attachment system operates somewhat differently between children and adults. In infancy, the attachment system readily overwhelms other behaviour systems when it is
activated. When attachment is threatened, infants are normally unable to attend to anything else, whereas adults can attend to other relationships, although they may experience difficulties concentrating when threats impinge (Bowlby, 1969, 1973; Weiss, 1982). Adults normally have more confidence in their own resources and the arrival of attachment figures if required, and are better able than children to tolerate temporary even lengthy separations without frequent reassurance (Bowlby, 1973, 1980). Thus the attachment system in adulthood does not usually overwhelm other behaviour systems.

Weiss also distinguishes attachment relationships from other kinds of relationship (cf. Ainsworth, 1989), particularly attachment relationships and those deriving from a social network (Weiss, 1973, 1991). He compared a group of people who had recently ended their marriages and had joined an organisation of single parents, with a group of couples who were in intact marriages but had moved to neighbourhoods over 500 miles away from their homes. The former reported a loneliness which was not reduced by friendship, although friendship helped make the loneliness easier to deal with; the loneliness was only alleviated by relationships that resembled the sexual and emotional intimacy of marriage. The couples who had moved to a new location did not report loneliness. Instead they felt isolated and experienced distress without access to a community of others (Weiss, 1973).

Attachment relationships have certain distinctive characteristics. Proximity-seeking, as previously explained, is the need for ready access to the attachment figure and the intense desire for proximity in situations of stress. The secure base effect is the attainment of heightened comfort and diminished anxiety in the presence of the attachment figure - a sense of "felt security" - and a return to exploratory behaviour because the attachment behaviour has been terminated by the appropriate action on the part of the caregiver. Separation protest is characterised by a marked increase in discomfort and anxiety when the attachment figure is inexplicably unavailable.
(Ainsworth, 1985, 1989; Weiss, 1982). In addition to these, Weiss (1991) has distinguished several other characteristic features of attachment behaviour or attachment relationships.

Attachment behaviour is directed towards specific, discriminated others from early infancy, and resists redirection towards other figures; no other relationship substitutes for what is provided by the attachment figure. Attachment behaviour is elicited by threat: the perception of threat activates the attachment system and directs the person towards the attachment figure as a source of security (Weiss, 1991).

Attachment feelings are inaccessible to conscious control. They persist even when there is recognition of permanent loss as in bereavement. Separation protest continues even when an attachment figure has become inaccessible and adequate alternative figures are available. Attachment persists and appears to be reliable over the course of long-standing relationships; in fact conditions of threat activate attachment behaviour more reliably in long-standing relationships than in new ones. Attachment does not wane through habituation or in the absence of reinforcement. Instead, separation from the attachment figure leads to pining which abates "only slowly and imperfectly" (Weiss, 1991, p. 67).

The attachment bond is characteristically insensitive to experience. It persists even with abusive or neglecting attachment figures. It may be accompanied by anger with the attachment figure which creates conflict in the person, but efforts at proximity are retained under conditions of threat. Even when the relationship has been injurious, the sense of emotional linkage persists (Weiss, 1991).
3.3.1. Variants of adult attachment behaviour

Attachment in adults has been studied from a developmental perspective and, within the field of social psychology, in the study of adult romantic relationships. In the field of developmental psychology, Main and her colleagues (George, Kaplan, & Main, 1985) have identified four groupings of adult attachment, consonant with the four groupings of children identified in earlier research. To study adult attachment, they developed a semi-structured interview protocol, the *Adult Attachment Interview (AAI)* (George, Kaplan, & Main, 1985), to measure the "state of mind [of the person] with respect to attachment." Transcripts of interviews with adults, whose children had been classified in the Strange Situation, were analysed for commonalities and differences resulting in a classification system of four groupings. In the development of the scoring system, the most significant variable resulting from the data analysis turned out to be coherence or incoherence of discourse, rather than content. Thus transcripts are scored on style of discourse, resulting in four groupings as follows (Main, 1995):

**Secure/autonomous**

The parents of secure children in the Strange Situation had a style of discourse that was coherent and internally consistent. They showed willingness to reflect anew on past attachment relationships even where they had involved negative experiences. They were labelled "secure/autonomous."

**Dismissing**

Parents of anxious-avoidant children tended to minimise the importance and effect of attachment relationships on themselves, often did not remember much of their childhood, and often idealised the parent but recounted childhood experiences which contradicted this picture, or had lapses of memory on the subject. Their style of
discourse was internally contradictory and considered excessively succinct. They were termed "dismissing."

**Preoccupied**

Parents of resistant children tended to have a style of discourse that was characterised by excessive, confused, and either angry or passive preoccupation with attachment figures or attachment-related events. The discourse was sometimes unclear, not always relevant or orderly, and the person manifested difficulty moving on "in a timely way" (Main, 1995, p. 441). They were given the term "preoccupied."

**Unresolved/disorganised**

Parents of disorganised/disoriented children at times exhibited disorganised behaviour, notably in the discussion of potentially traumatic events. This was indicated by lapses in the person's monitoring of discourse, for example, a sudden alteration of style of expression (such as a sudden eulogy, extremely prolonged silence resulting in the person appearing to forget what they had just said, or absorption in detailed recounting of loss or abuse experiences), or lapses in the monitoring of reasoning, for example, believing that someone had died because of something the person thought or wished (Main, 1995). The term applied to this group was "unresolved/disorganised."

Similar to the classification of infants and children, adults are assigned on the AAI to one of the categories of organised attachment behaviour and given the additional classification of unresolved/disorganised if it is warranted. Thus, it is possible for someone classified as secure/autonomous to manifest disorganisation in a specific area of discourse, where they are still suffering unresolved loss or abuse. Main (1995) makes the point that, unless a clinician is alert for brief lapses of organisation, this
may be overlooked in treatment because the person sounds coherent, is clear and has the capacity for meta-cognitive monitoring and self-reflection.

The attentional rigidity found in insecurely attached infants is also argued to be found in the discourse of adults (Main, 1995). Discourse violations in the insecure groups are considered to indicate difficulties in the ability to shift attention: dismissing adults are unable to turn attention towards affectively-laden attachment information, though they are unaffected in this way on non-attachment topics. Preoccupied adults are unable to turn their attention away from affectively-laden attachment topics: they are unable to organise the material coherently, maintain a relationship with the interviewer, or time their responses in a way that is appropriate to the occasion. These are seen not only as attentional difficulties but also as problems of different memory systems and considerable difficulty in interpersonal interaction (Crittenden, 1997; Main, 1995). The discourse violations are considered evidence that the person is attempting to maintain a particular representational state: that is, adhering to the models they have developed to deal with their painful attachment experiences in the past, and thus attempting to avoid the anxiety that arises when adopted behavioural strategies are challenged, as they are by the AAI interview questions (Main, 1995).

The AAI has the advantage that it may accommodate dynamic changes of attachment models over the lifespan. It does not categorise a person's attachment organisation on the basis of the kinds of childhood experiences described in the interview, nor on the past behaviour of interviewees or their parents. Classification is based on features of the discourse. Some interview transcripts indicate childhood experiences which might be expected to result in insecure attachment organisation. However, some people with such experiences have been able to develop a capacity to consider and reflect on their experience, rather than to deflect it, minimise it, or continue to be preoccupied with it. Thus they appear to have developed the characteristics of secure attachment, including the ability to appraise their attachment relationships reflectively, whether the
experiences involved were good or bad, and, importantly, they are able to impart security to their children. Security or insecurity in attachment may, therefore, be less related to specific working models than the degree to which such models are open to revision and cognitive control (Kobak & Cole, 1994).

The introduction of the fourth category, both in children and adults, allows the classification of many cases that would previously have been unclassifiable. However, there is still a small proportion of people who cannot receive a classification on the AAI. These people alternate between the discourse patterns of both insecure groups, or (rarely) appear globally incoherent but fail to provide sufficient indication of membership of one of the insecure groups. They now receive a "Cannot classify" label (Main, 1995).

Simultaneous with much of the attachment research in developmental psychology, attachment theory been employed to fill a theoretical gap in the understanding of adult romantic relationships, in social psychology. Hazan and Shaver (1987) proposed that adult analogues of the three infant groupings identified by Ainsworth and her colleagues (Ainsworth et al., 1978) would be observable in adult romantic relationships and developed a categorical measure to establish that this was the case. Subsequent research has argued for a fourth prototype (Bartholomew & Horowitz, 1991). Considerable attention has also been paid, in this field, to the dimensions of behaviour underlying the different behavioural groupings.

Much of this research is based on the assumption that internalised attachment experiences become stable characteristics of the person which influence behaviour in romantic relationships, and can be measured in consciously-held attitudes and beliefs about the self, others, and romantic relationships. Individual studies therefore do not necessarily ensure, when measuring attachment, that a specific attachment figure or attachment relationship is elicited.
Another body of work in this field approaches the study of attachment from the observation of actual behaviour in the person's current relationship. Kobak (1994), for example, argues that attachment behaviour is both a feature of the person and the person's current relationship and cannot be seen or studied independently of the latter. These studies tend to exercise care in ensuring that attachment behaviour is elicited, for example, by mild stress induction (e.g. Berman, Marcus, & Berman, 1994; Simpson, Rholes, & Nelligan, 1992). Attachment and relationship processes are measured with an emphasis on how attachment working models or attachment styles might affect or be affected by relationship interactions. Many of these studies do not distinguish between the influence of internal working models derived from early attachment experiences and models of the current partner relationship (e.g. Berman et al., 1994; Kobak & Hazan, 1991). The assumption is that the models influencing current relationship behaviour are the models of the current partner or relationship; the theoretically postulated effect of pre-existing models is often not explicitly addressed.

**Attachment styles**

The first body of research is based on Hazan and Shaver's (1987) paradigm of three "attachment styles" in adult romantic relationships, termed secure, anxious-ambivalent and anxious-avoidant (cf. Ainsworth et al., 1978). The proportion of respondents endorsing each style was found to be 56\%, 19%-20\%, and 23%-25\% respectively. This was similar to the proportions found in the classification of infants in American studies (Hazan & Shaver, 1987). The figures were summarised as 62\%, 15\% and 23\% respectively (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983; Hazan & Shaver, 1987).

Each style of attachment in romantic relationships was found by Hazan and Shaver (1987) to share a common core of experience with other styles, and to have a unique constellation of experience along theoretically-expected lines. Anxious-ambivalent
individuals, for example, were more obsessively preoccupied in their relationships, avoidant people were most distrustful and pessimistic about the course of love, and the secure participants were most confident of themselves and others' commitments. Correlations between the three groups and mental models of the self and others (through endorsement of statements about the self and others), beliefs about the course of love, and adjective descriptions of the parents in childhood were generally as expected of each suggested prototype. Both insecure groups reported more trait loneliness, with avoidant subjects describing themselves as distant from other people but not lonely.

The authors express concern about the limitations of their study, particularly that attachment style and feelings may arise from interactions between partners, as well as from traits, and that relationships arise from other variables, as well as personality. The shortcomings of self-reported data are discussed, including possible defensiveness, social desirability and the restriction of data to consciously-held beliefs, in contrast with the AAI which allows some conclusions about unconscious models.

Hazan and Shaver's (1987) proposals nonetheless proved fertile in generating a great deal of research into adult romantic relationships, and several more measures of attachment style. Many subsequent studies have adapted the original measure of attachment style to produce continuous dimensions rather than categories (e.g. Bartholomew & Horowitz, 1991; Collins & Read, 1990), or used it to validate new measures (e.g. Feeney, Noller, & Hanrahan, 1994).

Collins and Read (1990), building on Hazan and Shaver's (1987) study, developed the Adult Attachment Scale to investigate the dimensions underlying attachment styles. They found three: the perception of the reliable availability of the other; anxiety, particularly about being abandoned or unloved; and discomfort with closeness. These
dimensions correlated as expected with beliefs about the self and others, and
behaviour in romantic relationships. People who scored high on comfort with
closeness and confidence in others, and had low anxiety about abandonment, had
better self-esteem, more self-confidence and trust in others, reported warm and
sensitive parenting in childhood and were more likely to have a style in love
relationships characterised by selflessness. Thus they appear to show characteristics of
Bowlby's self-reliant personality, or secure attachment.

Another grouping of people had high anxiety about being abandoned and unloved, but
reported themselves to be comfortable with closeness and fairly confident of others'
availability. This group reported lower self-esteem and self-confidence, a diminished
sense of control or instrumentality, and that they found others less intelligible. They
reported parenting in childhood to have been cold or inconsistent, and were
characterised by an obsessive dependent love style. They therefore appear to have
many of the characteristics of anxious attachment identified by Bowlby, and to
resemble Main's preoccupied group. However the finding that this group had
moderate confidence in others' availability appears to conflict with attachment theory.
Bowlby and his successors saw anxiety as arising directly from lack of confidence in
the availability of attachment figures. This contradiction is not discussed by the
authors.

People who scored low on all three dimensions, that is, who had low anxiety, low
comfort with closeness, and low confidence in others' availability, were less well
discriminated than the other two groups but generally reported less trust of others, and
more independence. Their romantic relationships were characterised by lower levels of
selflessness and obsessive dependence. These rather general characteristics are
consistent with Bowlby's self-reliant group, or Main's dismissing group, but the
defensive nature of such behaviour is not tapped by the Collins and Read instrument.
The three dimensions were found likely to influence the selection of a partner, the
organisation of behaviors, perception and expectations in dating relationships, and to be predictive of the quality of the relationship.

Other studies attempting to discover the dimensions underlying attachment styles (usually employing the Hazan and Shaver measure adapted as a questionnaire) have consistently found two rather than three dimensions: anxiety and discomfort with closeness (e.g. Feeney, Noller, & Callan, 1994; Simpson, 1990; Strahan, 1991).

Approaching the measurement of attachment style somewhat differently, Bartholomew and Horowitz (1991) proposed that the dimensions underlying attachment styles were the person's working models of the self and other, and that logically four styles could be generated, depending on the valency of the attitude to the self and to others. Their study proposed and empirically separated four groups of individuals along their theoretically-expected lines.

Those individuals with a positive sense of self and a positive model of others as available and trustworthy were considered secure, and conceptually similar to Main's autonomous group and Hazan and Shaver's secure group. Those with both negative self and negative other models were labelled fearful, and considered to partly correspond to Hazan and Shaver's avoidant group.

Those with a negative sense of self and positive models of others were termed preoccupied, and considered similar to Main's preoccupied group and Hazan and Shaver's anxious-ambivalent category. Those with positive sense of self but negative models of others were termed dismissing, and considered to share characteristics with Main's dismissing classification.

The addition of the logically-derived fourth grouping, according to Bartholomew and Horowitz (1991), resolves a conflict in the literature between Main's dismissing group
which downplayed the emotional importance of attachments and the Hazan and Shaver avoidant group which reported distress and discomfort when close to others. Bartholomew and Horowitz (1991) suggest that there may be conceptually separable patterns of avoidance in adulthood, namely, fearful and dismissing. The authors note that the two underlying dimensions can also be thought of in terms of dependence on others for self-validation (independence to high dependence) and avoidance of intimacy (low to high).

Feeney and her colleagues attempted to resolve the disparate research findings as to the number of attachment styles and the underlying dimensions, and to overcome the reliance of current measures on the actual experience of a romantic relationship (Feeney, Noller, & Hanrahan, 1994). They developed a questionnaire measure, constructing items consistent with the two-by-two model of attitudes to the self and others developed by Bartholomew and Horowitz (1991). This resulted in a 40-item questionnaire, the *Attachment Style Questionnaire (ASQ)*, which measures confidence (in the self and others), discomfort with closeness, relationships as secondary (to achievement), need for approval, and preoccupation with relationships. Need for approval and preoccupation with relationships are associated with anxiety in attachment, and discomfort with closeness and relationships as secondary are associated with avoidance.

Using the five scales as grouping variables in a cluster analysis generated four groups, or attachment styles, which were given the same labels assigned by Bartholomew and Horowitz (1991) but indicated some differences in style from the original formulation. Consistent with the Bartholomew and Horowitz (1991) formulation, the secure group scored very highly in confidence and at a low level on all the other scales; the fearful group was very low in confidence and high on all other dimensions. The dismissing group, as expected, scored at a high level in seeing relationships as secondary, at a moderately high level on discomfort with closeness, and moderately on the confidence
scale. Unexpectedly, they scored moderately on preoccupation with relationships, and need for approval, suggesting to the authors more anxiety in relationships than expected of this group, and attenuated self-esteem rather than the positive self-model proposed by Bartholomew and Horowitz (1991).

The preoccupied group scored appropriately highly in preoccupation with relationships and need for approval, reported low to moderate confidence, and scored at a low level in considering relationships as secondary. However, they were also moderately uncomfortable with closeness, countering previous formulations of this group as desiring extreme closeness (e.g. Collins & Read, 1990; Hazan & Shaver, 1987). Feeney and colleagues interpret this as indicating the ambivalence expected in the anxious-ambivalent category of attachment, but not identified in other measures. It appears then that dismissing and preoccupied individuals may operate in a more complex manner than previously identified. Consistent with previous studies, comfort with closeness and anxiety over relationships were identified as the dimensions underlying the distribution of the four groups.

As mentioned above, a smaller number of studies has emphasised the importance of studying the influence of attachment style or attachment security on actual behaviour in relationship, rather than as self-reported behaviour or self-reported traits in relationships. These studies are based on the observation of dyadic interactions and how these might vary with the attachment style of each partner. Kobak and Hazan (1991) have additionally addressed the influence of the partner’s current behaviour on an individual’s attachment security.

Kobak and Hazan (1991) suggest that the research into romantic relationships from the personality viewpoint has usually illustrated the assimilative aspect of working models - assimilation of new relationships to existing expectations of the self and the other - and has comparatively neglected the accommodatory function of working models.
Working models of relationships are viewed as the product of reciprocal interaction between individuals and their partners.

To observe this reciprocal process, the authors measured accuracy of working models, relationship security, and how marital interactions affected security. Two scales, based on behaviours in the relationship, were developed to measure security. The first measured the perceived psychological availability of the partner for comfort and support, and the second - the reliance on partner scale - measured the self-reported ability to rely on and turn to the partner for comfort and support. Each partner completed both scales for himself or herself, and the spouse. Correlation identified the extent to which partners validated each other's self models as a measure of the accuracy of the self models.

Partner behaviour was found to affect relationship security, that is, working models were accommodated to current partner behaviour. When wives were rejecting in a problem-solving task, their husbands were less secure; when husbands listened on a confiding task, wives were more secure. Greater relationship security and accuracy of working models were associated with better marital adjustment.

Berman, Marcus and Berman (1994) have produced some pilot evidence that the marital relationship is mediated by the working models partners have of each other, and that attachment style - avoidant, resistant and dependent (secure) - is related to the amount and kind of attachment behaviour exhibited, and to marital adjustment. Avoidant individuals showed more avoidant behaviours (leaning forward less, averting their eyes from their partners). Couples in secure/insecure dyads manifested more attachment behaviour than secure dyads. Secure couples reported greater marital satisfaction than secure/insecure dyads. Reciprocal effects between attachment behaviour and partner response were not noted.
Simpson and his colleagues studied differences in attachment behaviour (support-seeking) and support-giving in dating relationships by inducing anxiety in female partners and observing, by videotape, whether and how they sought support or comfort from their partners, and how their partners responded. Attachment style was measured by adapting the Hazan and Shaver measure to create a continuous measure. Replies were factor analysed to produce two dimensions: secure-avoidant and anxious-non-anxious. Attachment style was shown to be related both to support-seeking and support-giving (Simpson, Rholes, & Nelligan, 1992).

Secure women sought more support as their anxiety increased; avoidant women sought it less. There were no significant effects for the anxious versus non-anxious dimension, which was considered a possible result of counterbalancing of the approach and avoidance behaviour expected with this attachment constellation. The behaviour shown by avoidant women is consistent with the avoidance of proximity as attachment needs increase, the expected result for this group. Avoidant women were less likely to mention their anxiety to their partners. However, if they did, they were more likely to be calmed by the discussion of it, independent of whether their partners' made gestures of support. Unexpectedly, when they did receive support, avoidant women appeared, unexpectedly, to be even more calmed by it than secure women. In explanation, the authors suggest that avoidant women may choose partners who routinely provide less support, so that there is a significant impact when it is offered. Secure men offered more support (caregiving) as anxiety increased in their partners. Avoidant men became more distant as their partners became more distressed.

At lower levels of anxiety, avoidant women sought more support than secure women, and avoidant men offered more support. Thus avoidance appeared to manifest when attachment needs were elicited, rather than being a general feature of the relationship, justifying the study of attachment under attachment-eliciting conditions and perhaps some caution in generalising from trait-based "styles" of attachment.
In the study of romantic relationships, attachment organisation has been found to have a lot of explanatory power. On the basis of self-report, people appear to fall into groups with different characteristics, whether they are allocated to discrete categories phenotypic with categories of infant attachment, or assessed on continuous measures yielding dimensions underlying attachment behaviour. The resulting groupings have the expected correlations with measures of self-worth, with self-reported attitudes or beliefs about others, and retrospective reports of childhood parenting. Other studies have shown that attachment style is directly related to actual behaviour in a relationship under attachment-eliciting conditions, and that attachment security and partner behaviour reciprocally affect each other.

In fact, the contribution of attachment models or processes to adult romantic relationships (if they qualify as attachment relationships) is a complex interaction of earlier internalised models (the basis of trait measures of attachment); the current situation, including the degree of threat, or attachment-eliciting conditions, and the partner's current behaviour; the person's model of the partner and the relationship; and the partner's models of attachment past and currently (Berman et al., 1994). The comparative weighting that needs to be accorded to these factors is a matter of debate, and the studies that have been presented indicate some of the different stances that have been taken. Ultimately, any method that takes into account only one or two of these factors is limited in its application, and the contribution of the remaining factors needs to be kept in mind.

As intimated above, much of the research on adult relationships in the attachment field is based on the assumption that behaviour in adult attachment or intimate relationships, or in relation to one's children, reflects the person's working models. It is also assumed that these can be measured, as mentioned above, through the analysis of discourse in semi-structured interviews, or in questionnaire instruments which tap conscious, generalised attitudes towards others and the self. Some studies place more
emphasis on the context in which interactions with attachment figures occur, but the underlying assumptions are similar.

3.3.2. Attachment organisation in adults and psychopathology

The exact processes whereby insecure attachment relationships, or insecure attachment organisation, might come to cause psychopathology have yet to be specified and demonstrated (Jones, 1996; Rutter, 1995). To date the evidence of the connection is largely correlational (Jones, 1996). However, it has been shown in several studies, using two different measures, that insecure attachment status is overwhelmingly represented in clinical populations.

**Adult Attachment Interview (AAI)**

The Adult Attachment Interview (AAI) has been employed extensively in the study of the association between attachment organisation and psychopathology. A meta-analysis of over 2000 AAI interviews by van Ijzendoorn and Bakermans-Kranenburg (1996) found the following distribution of AAI classification in non-clinical mothers: secure/autonomous: 55%; dismissing: 16%; preoccupied 9%; unresolved/disorganised or cannot classify: 19%. The distributions for fathers, adolescents, and people from other cultural backgrounds were comparable (van Ijzendoorn & Bakermans-Kranenburg, 1996). Main (1995) reports that approximately 7-10% of participants in low risk samples cannot be classified, so the figures for unresolved/disorganised (here combined with the "cannot classify" cases) are likely to be at this level. Considering organised behaviour only (i.e. without taking unresolved/disorganised attachment into account) the distributions were: secure/autonomous: 58%; dismissing: 24%; preoccupied 18%. Thus in normative samples - those at low risk of developing psychopathology - approximately 40% will be insecure with regard to attachment.
In clinical populations, by contrast, the distribution of insecure AAI attachment organisation was much greater: secure/autonomous: 8%; dismissing: 26%; preoccupied 25%; unresolved/disorganised or cannot classify: 40%. Distributed over the three categories of organised behaviour, the figures were: secure/autonomous: 13%; dismissing: 41%; preoccupied: 46%.

Van IJzendoorn and Bakermans-Kranenburg (1996) also considered the possibility of an association between the different attachment classifications and particular kinds of disorder. They concluded that there was a strong association between attachment classification on the AAI and clinical status, but that a systematic association between individual AAI classifications and particular psychiatric disorders could not be shown. Clinical status and depression, for example, were not exclusively associated with the unresolved/disorganised category, although that category was expected to produce the greatest risk. Associations between dismissing attachment and externalising disorders (e.g. conduct and oppositional disorders), and preoccupied attachment and internalising disorders (e.g. affective disorders) - proposed, for example, by Rosenstein and Horowitz (1993) - were not considered to be supported by the available evidence (van IJzendoorn & Bakermans-Kranenburg, 1996).

Research continues into the issue of whether particular attachment organisation confers vulnerability to specific psychiatric disorders, and some more recently published studies of adolescents and young adults have found associations between attachment organisation and particular forms of psychopathology. However, these have yet to be validated on a larger scale.

Fonagy and his colleagues found a preponderance of unresolved/disorganised and preoccupied attachment in their psychiatric sample, as classified on the AAI (Fonagy et al., 1996). The unresolved/disorganised classification was associated with a diagnosis of anxiety disorder and borderline personality disorder. Idealisation of the parent
(found in dismissing attachment) was positively associated with eating disorder and negatively associated with depression. Preoccupying anger (preoccupied attachment) was associated with depression. Major depressive disorder was associated with secure/autonomous attachment organisation, and bipolar disorder with a dismissing attachment organisation, which included derogation of the attachment relationship at interview. There was some preliminary indication that a dismissing attachment organisation may respond better than other classifications to treatment.

Cole-Detke and Kobak (1996) found that dismissing and preoccupied attachment organisation appear to predispose differentially toward eating disorder and depressive symptoms in young college women, controlling for the correlation between depression and eating disorder. Dismissing attachment organisation was found in the majority (67%) of women reporting eating disorder symptoms without depression. Women with depressive symptoms and no eating disorder tended to be preoccupied in relation to attachment (43%). Women with symptoms of both disorders were predominantly preoccupied (53%).

Adam, Sheldon-Keller and West (1996) compared two groups of adolescents in psychiatric treatment, those with and those without a history of suicidal ideation or attempted suicide. A strong association between suicidality and unresolved/disorganised attachment status, particularly in combination with preoccupied attachment, was found. As both internalising (depression) and externalising (delinquency) symptoms were found in the suicidal group, the authors concluded that suicidal behaviour could not be attributed to a particular form of psychopathology, nor, presumably, to a particular form of attachment organisation.

Unresolved/disorganised attachment status, age and sex independently increased the probability of belonging to the suicidal group, and the interaction of unresolved/disorganised status with preoccupied attachment also increased this
Dismissing attachment organisation decreased the likelihood. Exposure to trauma was similar for both groups (86% of the suicidal group compared with 78% in the comparison group) but lack of resolution was much greater in the suicidal group (73% against 44%). A strong interaction between preoccupied attachment and unresolved trauma was found (77% of such subjects were in the suicidal group, and 79% of those with preoccupied attachment were unresolved with regard to trauma), suggesting that preoccupied attachment is strongly associated with lack of resolution of trauma.

Allen, Hauser and Borman-Spurrell (1996) studied a group of adolescent psychiatric inpatients, without organic or psychotic disorder, at age 14, and followed them up 11 years later at age 25. Four measures of psychopathology were used: criminal behaviour, hard drug use, psychological distress and self-worth. Distributions of the three and four-group classifications on the AAI were similar to those found in clinical populations by van IJzendoorn and Bakermans-Kranenburg (1996). Both previous hospitalisation and attachment organisation predicted adult psychopathology. Criminal behaviour was associated with male gender, derogation of attachment relationships and unresolved trauma.

Higher levels of hard drug use were associated with derogation of attachment, absence of idealisation of the attachment figure, absence of the preoccupying anger often found in preoccupied attachment, and, in some analyses, lack of recall of attachment experiences. When socio-economic status, gender and previous hospitalisation were entered as covariates, attachment classification was associated with current adult psychopathology. The adolescents who could not be classified (26% of the hospitalised sample; 7% of the high school sample) reported higher levels of criminal behaviour, psychological distress and lower self-worth than the other categories. Dismissing attachment organisation was also associated with greater criminal involvement than secure/autonomous organisation.
Rosenstein and Horowitz (1993, 1996) hypothesised that dismissing attachment would be associated with the denial of distress and symptoms, and that preoccupied attachment would be associated with self-reported distress. Their study of 60 privately hospitalised adolescents found associations between particular psychiatric disorders and different attachment classifications. Distributions of the different attachment classifications on the AAI were as follows: secure/autonomous: 2%; dismissing: 38%; preoccupied 42%; unresolved/disorganised: 18%. Distributed over the three classifications, the proportions were: secure/autonomous: 3%; dismissing: 47%; preoccupied 50%. The authors expected and found an association between attachment classification and psychiatric diagnosis according to the Diagnostic and Statistical Manual of Mental Disorders (3rd edition, revised) (DSM-IIIR) (American Psychiatric Association, 1987) and between attachment classification and personality characteristics, but not between attachment classification and self-reported symptomatic distress. The latter was considered to be a possible artefact of an attenuated range of scores.

In relation to psychiatric diagnosis, conduct disorder and affective disorder alone were associated with dismissing and preoccupied attachment respectively. Subjects with both disorders were likely to have a dismissing classification. Unresolved/disorganised attachment was associated with affective disorder, whether or not comorbid conduct disorder was present.

Substance abuse, as defined by the DSM-IIIR (1987), was associated with the three-category attachment model only. The substance-abuse group was almost twice as likely to have dismissing attachment organisation. Substance abuse, attachment classification and Axis I disorders were significantly associated in the four-category model only (i.e. including the unresolved/disorganised attachment classification). Members of the substance-abuse group with conduct disorder, or comorbid conduct and affective disorders, were likely to have dismissing attachment. Those with
affective disorder without conduct disorder were split between the preoccupied and dismissing classifications. Overall, conduct disorder predicted dismissing attachment better than substance abuse. This study was included in the meta-analysis discussed above, but the association between attachment organisation and type of disorder did not lend enough weight in conjunction with other studies to support Rosenstein and Horowitz' (1993, 1996) conclusions.

The AAI was developed with normative populations and research and the development of scoring methods with clinical populations is only just beginning. However, Main (1995) has concluded from her research, and that of others, that a significant proportion of individuals with the most severe psychological difficulties cannot be classified on the AAI with respect to adult attachment status. These can include people with psychiatric disorders, people in criminal populations, individuals who have been sexually abused, and those who abuse others (Hesse, 1996; Main, 1995; van IJzendoorn & Bakermans-Kranenburg, 1996). At interview, their discourse indicates that defensive attachment strategies have failed, and that the result is severely compromised coherence of mind or behaviour (Main, 1995).

Reciprocal Attachment Questionnaire (RAQ)

West and his colleagues (West & Sheldon, 1988; West & Sheldon-Keller, 1992; West & Sheldon-Keller, 1994; West, Sheldon, & Reiffer, 1987) have developed an instrument to measure the attachment system in adulthood and its connection with adult psychopathology. The Reciprocal Attachment Questionnaire (RAQ) was developed as a measure which would require less time and training than the AAI, and which might prove to be more practicable. The questionnaire assesses people in an adult attachment relationship on five dimensions of attachment behaviour and four categories indicative of disordered attachment. The five dimensions are: proximity-seeking, separation protest, feared loss of the attachment figure, use of the attachment
figure, and the available responsiveness of the attachment figure. The four variants of disordered attachment identified by the instrument are: compulsive care-giving, compulsive self-reliance, compulsive care-seeking (the equivalent of Bowlby's anxious attachment), and angry withdrawal (the angry component of anxious attachment).

All scales, except compulsive care-giving, discriminated non-psychotic psychiatric patients from non-patients. Thus significantly higher scores on these scales were reported in a clinical population. However this difference needs to be interpreted with caution as normative scores are not available (West & Sheldon-Keller, 1994).

Some preliminary research with the RAQ in the field of personality disorder has challenged the categorical approach to the classification of personality disorders (e.g. DSM-IV, 1994) and proposed disordered attachment as a dimensional construct underlying personality disorder, and essential to its understanding and classification (West & Sheldon-Keller, 1994).

In conclusion, research using more than one instrument has found a significant association between insecure attachment and clinical status. Lack of resolution of past trauma appears to confer a great risk of later psychopathology, particularly when combined with preoccupied attachment. An effect for the influence of attachment organisation on the development of particular forms of psychopathology has yet to be consistently shown. However, some recent studies indicate an association which allows some tentative conclusions. The unresolved/disorganised grouping of individuals, as identified on the Adult Attachment Interview, appears to be associated with affective disorder, especially when co-existing with preoccupied attachment. This combination may make young women adolescents especially vulnerable to suicide. Preoccupied attachment also seems most strongly related to the affective disorders. Dismissing attachment may confer some protection from depression and the likelihood
of suicide. It appears to be more strongly associated with disorders of acting out: conduct disorder, substance dependence, eating disorders, and bipolar disorder. Strongly dismissing behaviours - derogation of attachment relationships and absence of idealisation - have been found in the latter disorder. It also appears that the most severe disturbances of behaviour may be associated with attachment experiences that produce a pattern of incoherent thinking and behaviour.

3.4. Attachment theory and substance dependence

3.4.1. Research findings

There has been very little application of attachment theory to the field of substance dependence. Bowlby (1980) himself mentions alcoholism but only indirectly. He cites a study by Birtchnell (1972) which found increased incidence of childhood bereavement in female alcoholics, particularly where the death of either parent had occurred before age ten. Discussing the disposition to compulsive self-reliance, he suggested that such people were at risk of depression, alcoholism, and suicide in later life.

Crittenden (1995) argues that adolescents who are reliant on cognition and have defended against affect (those with anxious-avoidant attachment organisation) may become isolated, compulsively self-reliant individuals who hide from their difficulties in interacting emotionally with others and their difficulties with intimacy, behind promiscuous sexuality or overachievement. She suggests that unless the inhibited affect can be reclaimed, or an appropriate compensatory activity found, such as academic or sporting achievement, then such individuals are at risk of depression, substance abuse and sexual promiscuity.
The study by Allen, Hauser and Borman-Spurrell (1996), described above, indicates that hard drug use is associated predominantly with dismissing attachment, although the dismissing group had somewhat different characteristics than expected: at interview, idealisation of the parent was absent and there was derogation of the relationship. The authors suggest that there may be different correlates of the dismissing state of mind (i.e. different possible psychopathological outcomes) where there is idealisation of the parents, and where this is lacking and accompanied by lack of recall and derogation of attachments. Although explicitly negative expectations of interaction with attachment figures have been found to be predictive, over time, of increasing hard drug use (Allen, Leadbetter, & Aber, 1994), the authors of this study point out that it does not indicate the direction of the association between attachment organisation, derogation of attachment, and criminal behavior or hard drug use, and that the two latter could lead to derogation of attachment.

In the study of adolescents by Rosenstein and Horowitz (1996), substance abuse as defined by the DSM-IIIR (1987) was associated with a dismissing attachment classification, and this was also the case where there was comorbid conduct disorder or conduct and affective disorder. Where there was comorbid affective disorder only, subjects were split between the dismissing and preoccupied classifications.

Substance dependence has not been explicitly studied by attachment theorists. However the studies reviewed above indicate that dismissing attachment appears the most likely to be associated with substance dependence, but a significant number of people preoccupied with attachment and suffering a comorbid affective disorder are also likely to abuse and perhaps become dependent on substances.

It seems clear that substance abuse and potentially substance dependence are associated with disordered attachment of either the dismissing or preoccupied kind.
Unlike many other psychiatric disorders, substance dependence does not appear to be strongly related to lack of resolution of trauma.

3.4.2. A developmental model

A developmental model of addictive behaviour, partly derived from attachment theory, has been proposed by Diaz and Frahauf (1991). As discussed in Chapter One, substance dependence is increasingly discussed in more generic terms as an addictive behaviour, and this model applies to substance dependence equally with other addictive behaviours. According to this model, addictive behaviour arises primarily from deficits in self-regulation, and is considered to be an excessive reliance on external structures to achieve the regulation of physiological arousal, emotional security, and impulse control. It occurs in the relative absence of a capacity for internal regulation and executive self-regulation (i.e. the capacity to flexibly plan, guide and monitor behaviour in accordance with changing circumstances) when situations overtax the ability of the person's system to regulate states of arousal, internal security and impulse.

Systematic regulation of arousal, security and impulse is considered to result from internalising the primary caregiver's management of these in infancy and early childhood, and deficient regulation is held to arise from failures in early parenting, either chaotic and permissive, or excessively rigid and controlled. In either case, the child does not learn to manage his or her own arousal, security and impulsive behaviour.

Drawing on attachment theory (Bowlby, 1969; Bretherton, 1985), the "attachment/security system" is proposed by Diaz and Frahauf (1991, p. 85) as the system responsible for the maintenance of a sense of internal security. Optimally, the system confers the capacity to flexibly recover from transient feelings of anxiety, insecurity or
fear when faced with unfamiliar situations. It is argued to become automatised and systemic, regulating security across a wide range of situations but with limitations which can be overtaxed. Situations may arise, for example natural or personal disasters, that cause anxiety or distress beyond the inner regulatory capacity of the individual, and external input is required to restore security. The authors do not specify that attachment figures are required. However, according to attachment theory, if internal resources were insufficient, resort to attachment figures would be necessary to achieve termination of the attachment behaviour and the distress.

The substance-dependent person, in this model, is proposed as someone who has weak internal regulation, and very little capacity for executive self-regulation; who, in situations requiring autonomous functioning, is dependent on substances to provide external regulation of feelings of discomfort and tension. Thus substance use would arise from a failure to restrain impulse, from physiological discomfort (owing to deficits in the management of arousal), and from anxiety (failure to maintain a sense of security in certain situations). The model is proposed as a preliminary one, requiring further conceptual development and empirical validation.

3.5 Conclusion

As has been shown in this chapter, attachment theory has provided a basis for a deeper understanding of the psychological underpinnings of many psychiatric disorders, and provided a needed theoretical explanation of observed differences in behaviour in romantic relationships. A small number of studies has found a relationship between attachment organisation and substance dependence, and a model of addictive behaviour, which in part owes its origins to attachment theory, has been proposed. Somewhat similarly to the psychoanalytic views described in Chapter One, the substance is proposed in this model to function as an external agent necessary to achieve internal regulation, in this case the regulation of security.
However, the attachment system is responsible for more than just the management of anxiety or security. The attachment system is also involved in the development of the person's sense of worth and lovability, his or her effectiveness in the world, and the capacity for relationship. Attachment experiences may contribute to failure to develop these capacities adequately, leaving the person with severe deficits in self-worth, self-confidence, and trust in others, without the capacity to reach out to relationships for security, and without the relationships themselves that could provide security when inner resources fail. How substance dependence or other addictive behaviour might connect with or compensate for these deficits is not considered in the Diaz and Fruhauf model. This thesis proposes a model of substance dependence in terms of these considerations, and a relational role for the substance itself.

The following chapter presents the rationale for this thesis, the model of substance dependence proposed and the hypotheses of the study. Subsequent chapters report the method chosen to examine the model, the results of the study, and the conclusions from the results.
CHAPTER FOUR  
Rationale

As we saw in the first chapter, substance dependence is associated with great distress. Apart from the distress of physiological addiction, particularly the experience of withdrawal, there is usually significant psychological distress, including anxiety and dysphoria related to feelings and beliefs about the self. Use of the substance provides a short-term amelioration of both physiological withdrawal and unwanted internal states or emotions. Beck and his colleagues (1993) identify that substance dependence can be driven by negative beliefs about the self, particularly about one's personal effectiveness and one's perceived lovability.

Psychoanalytic theorists see substance-dependent people as lacking the internal structure - a resilient or intact ego - to deal with intense intrapsychic affects or aggression, maintain self-esteem and an internal value system, and cope with external adversities. They propose that the substance not only alleviates intense, overwhelming negative emotional states or aggression, but that it acts as a substitute for the part of the ego that is missing, the part that could moderate or defend against overwhelming feelings, soothe the self, and provide feelings of self-worth. Both schools are agreed that the internal state of the person is often one of such distress that resort to the substance, an external means of coping, is required.

It appears that relationship with another significant person is insufficient to assist or alleviate the substance-dependent person's distress. In fact the relationship itself is usually distressed, as reported in Chapter Two. There can be much negative mood and behaviour, and severe problems with communication, cooperation, and conflict resolution. Discrepant perceptions of the relationship and a lack of flexibility in negotiation exacerbate the problems. Moreover, there may be denial as to the amount
and intensity of conflict in the relationship. These behaviours are found in both partners. The relationship distress does not, however, appear to be felt to the same extent by the substance-dependent partner. The substance appears to have a buffering effect.

Social learning theories have largely addressed the intrapsychic variables associated with substance dependence, the situational precipitants of substance use, and the various competencies required for freedom from dependence. The social learning or cognitive-behavioural analysis of partner relationships is similarly, and separately, predicated on intrapsychic cognitive variables such as attributions and expectancies (e.g. Schmaling, Fruzetti, & Jacobson, 1989). No assessment of the partner relationships of substance-dependent people is readily predictable from the analysis of substance dependence presented by this school of thought.

Psychoanalytic theories account for both dependence on the substance and the pattern of relationship with others as being the result of experiences with primary caregivers in early infancy. The substance is thought to provide what failed to be internalised from caregivers, and the pattern of relationship with others is considered to be a present-day enactment of past conflicts with significant others in infancy. However, these models are usually predicated on concepts of libidinal energy and drives, or the internal psychological structures postulated by Freud, which have received criticism as not being able to be empirically tested or falsified. There has also been the admission, noted in Chapter One, that traditional psychoanalytic approaches to the treatment of substance dependence have failed to be effective (Brickman, 1988) and that psychoanalytic theory has not kept pace with, or been applied to, developments in the field of substance dependence (Leeds & Morgenstern, 1996).

The field of substance dependence is characterised by a plethora of approaches to the problem: differing theories of cause, differing models of the person who becomes
dependent on substances, different views as to what constitutes effective treatment, and many treatment approaches. Over the last decade, there has been much discussion and acknowledgement of the extremely high rate, after treatment, of relapse from abstinence or moderation of substance intake, a recognition that many clients do not want to change their substance-using behaviour (Prochaska & DiClemente, 1986) and that all that can be offered sometimes is acceptance of the client's current view of their substance use, along with information that might encourage them to review it (Miller & Rollnick, 1991). There has been a widespread adoption of the social learning analysis of substance dependence and cognitive-behavioural methods of treatment.

Behind the energy and enthusiasm committed to new approaches to the problem, there appears to be an implicit acknowledgement of the long-standing difficulties of working with substance-dependent clients. In fact many of the approaches, such as Miller and Rollnick's (1991) motivational interviewing, can be seen as assisting practitioners in the field not to waste their efforts, as well as their avowed purpose; in this case, of assisting motivation to change without alienating the client. The long-term success of the social learning view of substance dependence and cognitive behavioural treatment remains to be established. No model has yet been able to propose a treatment that completely resolves the difficulties of working with substance-dependent people. Substance-dependent people are usually considered to belong to a heterogeneous group, requiring a variety of interventions and supports (Mattick & Jarvis, 1993).

A theory which can account for the intrapsychic factors associated with substance dependence and the relationship patterns found in substance-dependent people, and which is predicated on constructs which are observable and measurable, may be a bridge between what is valuable in all these models. It is suggested that attachment theory potentially provides such a bridge. It is thoroughly grounded in the scientific tradition and has generated new research methods, extensive, rigorously conducted research and reliable empirical results (Eagle, 1997).
As outlined in Chapter Three, attachment behaviour is postulated to be an instinctive behaviour, which can be empirically observed, directed towards maintaining proximity to a primary caregiver. Failures in caregiver care in early life create insecure attachment bonds which have been implicated in adult psychopathology and later relationship difficulties. Attachment organisation therefore is an underlying construct which may explain the severe internal distress experienced by substance-dependent people, and their difficulties in interpersonal relationship.

The thesis proposed is that substance-dependent people are characterised by strongly disturbed patterns of attachment and that they use the substance to try to get their attachment needs met; that they seek and often experience in their substance use the comfort, security and confidence, even the feelings of love and intimacy, that are usually experienced in an attachment relationship. The substance may also function to provide a secure base for such people that enables them to engage with their environment in a way in which they would otherwise not be able. The relationship with the substance is considered to be a maladaptive solution to an extreme lack of internal security; a strongly lacking sense of worth in others' eyes or confidence in their responsiveness and support. This argument has not been found in the current review of the literature.

It is an important assumption of this model, therefore, that non-human objects can function to meet attachment needs. Rafael and Diaz (1991) argue that non-human objects are sought to reinstate physiological homeostasis and internal security; however, they do not address the relational nature of the insecurity. Support for the assumption that non-human objects can function in this way can be derived from several quarters. The cognitive-behavioural analysis has found that addictive behaviour is a property of the person not the object, and is similar whether it involves other people (e.g. Peele & Brodsky, 1975) or objects (such as substances) (Peele, 1985). In the field of psychoanalysis, Winnicott (1953), discussed the role of non-human objects
(such as blankets or soft toys) in comforting and assisting an infant or young child to maintain a positive internal state in the unavoidable absences of the primary caregiver. It is not unreasonable to extend this view to argue for a substitute, rather than a transitional, role for comforting objects, especially when there have been deeply damaging experiences of attachment relationships in the past.

It is not argued here that the substance provides a functional attachment relationship which assists the person to live effectively and happily with himself or herself, other people and the environment, as Bowlby envisaged secure attachment relationships. It is argued that the substance is resorted to, in the absence of attachment security, to meet attachment needs or to obtain the provisions of attachment relationships, and may assist the meeting of these needs in the short-term. Presentation for treatment, often many times over, indicates that, for a great number of substance-dependent people, the relationship with the substance ultimately fails, leaving the underlying problems exposed.

**Limits of the proposed model**

It is not expected that all substance-dependent people will be explained by this thesis. There is often a compulsive aspect to the seeking of the substance, and the gratificatory nature of substance dependence has been observed by theorists of differing schools. These phenomena are not ascribed to physiological addiction by the existing theories, and attachment theory does not have a ready explanation of them. Thus, the proposed model may not account for all substance-dependent people.

**4.1. The proposed model of substance dependence**

The proposed model of substance dependence is drawn from concepts of attachment theory (Bowlby, 1969, 1973, 1980) and from the research and clinical findings in
relation to substance dependence and the relationship difficulties of substance-dependent people (outlined in previous chapters). It consists of general propositions and specific propositions, arising from them, which are outlined below.

The model proposes four components of substance dependence: underlying insecure attachment and an attachment relationship with the substance, both considered to be directly involved in the dependence; and impairment of mood and functioning in close interpersonal relationships which are secondary to the first two components. Impairment of mood is considered to arise when moderation or abstinence from substance use is attempted, as a result of the loss of the relationship with the substance and underlying attachment insecurity. Impairment of closeness in interpersonal relationships is considered to be related to attachment insecurity.

The general propositions on which the proposed model rests are presented below, followed by the specific propositions to which they give rise, and the aims and hypotheses of the study.

4.1.1. General propositions

Underlying insecure attachment

1. The link between insecure attachment organisation and adult psychopathology, reviewed in Chapter Three, can be extended to include the psychopathology of substance dependence.

A small number of studies, as discussed above, have found an association between substance abuse and insecure attachment classification (dismissing or preoccupied) on the Adult Attachment Interview. The investigation of this is still in its preliminary stages and this study attempts to extend this research.
2. The internal distress of substance-dependent people and their difficulties in partner relationships are consistent with insecure attachment.

According to attachment theorists, disturbed attachment results in internal working models of the self as unworthy or unlikely to receive help or support from attachment figures, and models of others as unavailable or unresponsive to the self. It can lead to defensive adaptations such as compulsive caregiving, compulsive self-reliance or anxious ambivalence in attachment relationships. In healthy development where attachment has been secure, the result is a person who has unthinking confidence in himself or herself as worthy of help and support, confidence in others to be available, confidence in his or her own ability to solve problems, and the capacity to ask for help if personal resources are not sufficient. For optimal functioning, particularly when they are distressed, people are argued at any age to need the security and comfort provided by attachment relationships.

Substance-dependent people are characterised by lack of confidence in the self, lack of self-awareness and maturity, problems with self-efficacy and self-esteem, a lack of inner strength, and possible core doubts about their lovability. These findings are consistent with an underlying working model of the self as not worthy of others' support and assistance, and therefore with a related failure to develop genuine self-reliance; both the expected outcome of insecure attachment.

In their partner relationships substance-dependent people have been reported as having many problems, including difficulties in providing support and cooperation, the experience of painful negative emotional states and a lack of capacity to deal with them, and implied problems with trust and intimacy. These are consistent with the underlying negative models of attachment figures - that they will not be responsive or available if needed - found in insecure attachment. Furthermore, as indicated in Chapter Three, working models influence perception of current reality. They can become fixed,
resulting in perceptions which are discrepant with reality and other people's (including a partner's) perceptions, accounting for the discrepancy in partners' perceptions noted in Chapter Two. Rigid models may also account for the inflexibility in negotiation reported in these relationships, and the conflict between partners.

An attachment relationship with the substance

3. The role of the substance in substance dependence is the provision of an attachment relationship, that is, the provision of (a misleading sense of) emotional security and confidence to engage with the environment.

The theoretical model of Rafael and Diaz (1991) argues that the use of the substance occurs in order to externally overcome deficits in the capacity to regulate arousal, security and impulse, and functions to restore systemic homeostasis. The shortcomings of this model were discussed in the previous chapter. The present study proposes a construction of substance dependence in terms of its relational significance for the substance-dependent person.

As noted in Chapter Two, substance-dependent people were found to be more satisfied with their relationship, less unhappy and less desirous of change than their partners or distressed non-substance-dependent couples. The buffering effect of the substance for the substance-dependent person suggests that the substance is meeting some of the person's relationship needs, in a way not experienced by the non-substance using partner. This proposition is also supported by the applicability of the characteristics of attachment relationships, identified by Weiss (1989, 1991), to the substance-dependent person's behaviour in relation to the substance.

Proximity-seeking, the secure base effect and separation protest can all be observed. The substance is sought out continuously, reduces anxiety when it is found, and
heightens feelings of comfort and security. If the substance is not available for some reason, or the money to buy it is not there, or the person is attempting to stop or moderate substance use, there is intense physical and emotional distress, comparable with separation from a source of psychological security. Physiological addiction can also be considered to explain these behaviours. Proximity-seeking could be instituted to prevent physiological withdrawal, the comfort could be experienced because withdrawal is alleviated, and the protest when the substance is not available could be the result of physical withdrawal or the fear of it. However, the intensity of the distress experienced is often out of proportion to the amount of physiological pain or discomfort involved, and these behaviours are also observed with substances which are not physiologically addicting, such as cannabis and amphetamines. A psychological dimension to the distress therefore seems to be indicated.

Elicitation of attachment behaviour by threat is another characteristic identifying attachment relationships: the perception of threat activates the behaviour and directs the person towards the attachment figure as a source of security. Anecdotal accounts of the relief of "getting stoned" - and the fact that there was no relief until the person could get stoned - after a raid by police, a court appearance, or any challenging situation, are commonplace in accounts of substance dependence heard in clinical practice. The apprehension of threat in these instances would, according to attachment theory, elicit attachment needs and proximity-seeking behaviour, which would not be terminated until contact with the attachment figure had been experienced. The relief provided by use of the substance is consistent with that experienced by the attainment of proximity to an attachment figure.

In interpersonal relationships, the criterion of specificity of the attachment figure is observed in the direction of attachment behaviour towards discriminated others for whom no other relationship substitutes. It is not argued in this thesis that substance-dependent people do not have interpersonal attachment relationships, but that the
behaviour of substance-dependent people in relation to the substance indicates that the
substance is the pre-eminent consideration and that other human relationships do not
replace it. Continued use of substances, or a high rate of relapse, occurs despite
enormous support from parents or partners (existing or potential attachment figures).
The specificity of the attachment can also be observed when substance-dependent
people try to substitute another substance or activity for the preferred substance. They
often report that they never really feel the same way about the substitute (unless they
become "addicted" to it in turn).

Weiss (1991) has noted the insensitivity of the attachment relationship to experience.
In human relationships, attachment persists with abusive and neglecting attachment
figures, despite often horrifying experiences. There may be anger with the attachment
figure, but efforts at proximity are retained under conditions of threat. One of the
things that puzzles families and friends most about substance-dependent people is how
the substance-dependent person can keep doing what he or she is doing when it is
often life-threatening and causes such havoc in the person's life. This could be
explained by physiological addiction (intolerance of physiological withdrawal) if it was
confined to the physiologically addicting substances. But it is not.

If substance dependence is considered as an attachment relationship, then this
phenomenon is readily accounted for by the fact that people need attachment
relationships for security and persist in specific relationships even when the
relationship is unrewarding or harmful, and other adequate figures are available. If
substance-dependent people have been disappointed in getting their attachment needs
met interpersonally, as is the case in insecure attachment, and have felt the substance to
be a more reliable source of security, the attachment experience with the substance
itself could create persistence. The lack of any genuine alternative, as the person
perceives it, would arguably strengthen the adherence to substance use, even when it
proved disappointing.
Impairment of mood

4. Mood states observable in substance-dependent people during attempts to abstain from, or moderate use of, the substance are consistent with an attachment relationship with the substance and underlying attachment insecurity.

According to Weiss (1991), attachment relationships are not subject to conscious control. They persist. They do not wane with habituation or lack of reinforcement. Psychological or emotional involvement continues even after recognition of permanent loss of the relationship. Separation protest is observable, and pining abates only slowly. In substance dependence, anxiety and depression are often observed for several months after a person becomes abstinent from substance use, and many substance-dependent people report missing their substance. These emotional states appear to reflect a persisting attachment to the substance. They are also consistent with the exposure of underlying attachment insecurity, though other (external) factors may also be associated with their development.

Consideration of substance dependence as an attachment relationship can therefore explain the high rate of relapse noted in this field, particularly when it occurs after months or even years of abstinence. If loss of the substance, through attempts at abstinence or moderation of use, is equivalent to the loss of an attachment relationship, then pining (possibly despair) and desire for reconnection would persist for a long time and abate only slowly. Unlike permanent separation in human attachment relationships, the substance continues to be available and there is always the possibility of reconnection. Thus, a return to substance use could be a powerful solution to the pain of the loss, presenting a long-term risk of relapse.
Impairment of close relationship

5. Underlying attachment insecurity is likely to impair the experience of intimacy in close relationships, resulting in feelings of loneliness.

Findings in relation to the partner relationships, and the interpersonal style of substance-dependent people, reviewed in Chapter Three, imply considerable difficulties with intimacy in close relationships. The lack of trust in others to be responsive or available, expected in insecure attachment, is likely to act against confiding in a partner, or taking the kinds of risks that create closeness in relationships. The relationship is therefore more likely to sustain damage when there is disagreement, and there may be a minimising of the importance of the relationship. Other possible concerns such as preoccupation with one's own relationship needs, or feelings of inadequacy or uncertainty of the other's esteem, could plausibly mean one is less available for the other to confide in. All these factors would impair the experience of intimacy in relationships, and create greater interpersonal loneliness, particularly in attachment relationships.

These five general propositions yield certain specific expectations of the behaviour of substance-dependent people in treatment that can be empirically tested. These specific propositions are presented below, followed by the aims and hypotheses of the study.

4.1.2. Specific propositions

Attachment-related experience of the self and others

1. As a manifestation of working models of themselves and others that reflect attachment insecurity, substance-dependent people will have poorer self-worth and a
lack of confidence in others to be available, in comparison with a normative group of similar age. They will show more extreme levels of disordered patterns of attachment, such as anxious attachment and compulsive self-reliance, and behaviours consistent with those patterns, such as excessive proximity-seeking or discomfort in close relationships, in comparison with a normative group.

**Experience of the substance**

2. Substance-dependent people will subjectively confirm that they had an attachment relationship with their preferred substance; that, when used, it conferred a feeling of security and enabled them to engage with the environment in a way that otherwise they did not feel capable of.

**Mood**

3. The absence of the substance from the person's life will be experienced as loss of an attachment relationship, resulting in depressed mood.

4. Underlying attachment insecurity will be revealed in the absence of the substance and will be observable in anxiety symptoms.

**Experience of close relationships**

5. The underlying attachment insecurity in substance-dependent people will be revealed in impairment of intimacy and feelings of loneliness in close interpersonal relationships, particularly attachment relationships.
4.2. Aims and hypotheses

The aim of this study was to empirically examine the proposed model and test the specific propositions by comparing a group of substance-dependent people with an appropriately-matched non-clinical, non-substance-dependent group in relation to each of the four components of the model. The following hypotheses were put forward:

4.2.1. Attachment security

In comparison with a non-substance-dependent group, substance-dependent people will:

1. Demonstrate a poorer sense of self-worth.
2. Manifest less confidence in others to be available and responsive.
3. Manifest on dimensions associated with attachment, levels of behaviour indicating greater attachment insecurity, involving significantly different levels of proximity-seeking, fear of loss of the attachment figure, protest at separation, preoccupation with relationships, and discomfort with closeness.

4.2.2. Relationship with the substance

In relation to their preferred substance, substance-dependent people will:

5. Assert that they had a relationship with the substance they preferred, and describe the relationship in terms descriptive of an attachment relationship, such as attainment of comfort, relief of distress, or ability to engage with the environment.
6. Report that the substance gave them a sense of security, resembling the "felt" security of an attachment relationship, deriving from the subjective experience of the substance use and a sense of its dependable availability.

4.2.3. Mood

In comparison with a non-substance-dependent group, substance-dependent people will report:

7. Higher levels of depression.
8. Greater levels of anxiety.

4.2.4. Experience of close relationship

In comparison with a non-substance-dependent group, substance-dependent people will report:

9. Less intimacy with the person they are currently closest to.
10. Greater loneliness in their relationships, particularly attachment relationships.

The following chapter outlines the method chosen to examine this model.
The following chapter describes the design of the study, the participants, the measures employed to establish substance dependence and the measures testing the components of the model proposed, that is, attachment security, the relationship with the substance, mood and the experience of close relationship. This is followed by a description of the procedure used in the study, and a summary of the analyses conducted on the data.

5.1 Design of the study

To empirically test the model of substance dependence proposed in Chapter Four, a one-way multivariate design was employed with group membership (substance-dependent and control) as the independent variable, measured over several dependent variables: (a) attachment security, consisting of self-worth, confidence in the self and others, and attachment behaviours in interpersonal relationships; (b) current mood state, that is, depression and anxiety; and (c) intimacy and loneliness in current close relationships.

The relationship with the substance could not be included in this analysis, as the control group was not substance-dependent and therefore expected to produce extremely skewed, non-comparable data. This component of the model was measured qualitatively as described below (Section 5.5.2).
5.2 Participants

5.2.1. Substance-dependent group

In Australia, participants in human research may not be paid as an inducement to participate (National Health and Medical Research Council, 1992, p. 3). This study was therefore restricted to voluntary participants. Moreover, the testing of project hypotheses required at least temporary abstinence from substance use in the substance-dependent participants, which is difficult to ensure in community samples. To maximise participant recruitment, sample size and abstinence from substance use, it was decided to approach residential treatment centres which insist on abstinence.

Sixty substance-dependent people volunteered to participate in this project, 16 women and 44 men. They were recruited from six long-term residential treatment programs in New South Wales (NSW) and the Australian Capital Territory (ACT) in Australia, and agreed to participate in a project designed to look at the kinds of problems substance-dependent people have in adult partnership relationships and what might assist them. They had been abstinent from all substances, including alcohol and excepting nicotine and caffeine, for a period ranging from 1.25 months to 12 months. Mean length of abstinence was four months \((SD = 3.05)\), median length was three months. Twenty-three (38%) were under a bond or legal order at the time.

The mean age of the participants was 29.08 years \((SD = 7.40, \text{ range } = 18 \text{ to } 49 \text{ years, median } = 27)\). Mean years of school education completed was 10.03 years \((SD = 1.38, \text{ range } = 7-12, \text{ median } = 10)\).

Most of the substance-dependent sample reported use of more than one substance. However, when asked to identify the substance they used most, or preferred, 49%
reported opiates to be their primary choice; 32% reported alcohol; 10% amphetamines; 7% cannabis; and 2% (one participant) nominated benzodiazepines (tranquillisers).

All members of the substance-dependent group had a self-reported problem with use of substances sufficient for admission to a long-term residential treatment facility. In addition, published instruments were used to measure severity of substance-dependence. These are described in Section 5.3.1 below.

Exclusion criteria were age under 18 years, length of abstinence from substance use of less than five weeks or over 12 months, and a current, medically confirmed diagnosis of psychotic disorder. In Australia, adult research participants need to have attained the legal age of majority which is 18 years of age (National Health and Medical Research Council, 1992, p. 8). The period of five weeks' minimum abstinence from substance use was chosen to ensure that any physical or emotional states reported were not the result of physiological withdrawal from a substance, or the initial emotional turmoil which often accompanies the first few weeks of abstinence. The maximum period of 12 months was selected to ensure that all the substance-dependent participants belonged to the same population. According to the model proposed in this thesis, sustained abstinence would involve a move towards greater internal attachment security or more secure attachment relationships in the person's life. Thus people with long-term recovery may not belong to the same population as the group studied here. However, since working models tend to resist change, and changes are consolidated only after a considerable period of time, 12 months was judged as an appropriate upper limit.

A self-reported current diagnosis of mental illness, or elevated levels of depression and anxiety as measured by the Beck Depression Inventory (BDI) or the Beck Anxiety Inventory (BAI), did not exclude substance-dependent participants. Clinically significant levels of anxiety and depression were expected. Participants with medically
confirmed psychotic disorders were excluded because it is frequently difficult to tell which is the primary disorder when psychosis and substance dependence occur comorbidly and the emphasis of this study required a primary diagnosis of substance dependence.

Three volunteers were excluded from this study on the criterion of length of abstinence: two with less than five weeks' abstinence and one with greater than a year. None was excluded on the other criteria.

5.2.2. Control group

A possible comparison group for this study would have been people who had been exposed to alcohol and illicit substances but had not become dependent on them. While exposure to alcohol is relatively easy to ensure, exposure to illicit substances is not. Such exposure usually occurs in the context of a subculture and lifestyle which aims to avoid detection. Such participants would have been difficult to find and there was little inducement for them to participate. The substance-dependent group in treatment at least had the incentive that the findings of the study might assist them to understand their substance use, their experiences in treatment, and their difficulties in interpersonal relationships. There was no such inducement for the control group participants, except that of being useful for the understanding of substance dependence. Moreover, once substance-dependent people have developed consistent moderation or abstinence from their substance use, they usually function within the range found in the normative population, unless they have a comorbid disorder.

Thus, comparison with a subcultural group presented considerable difficulty and comparison with members of a psychiatric population was considered inappropriate on the grounds just mentioned. As the substance-dependent population spans a
considerable age range and generally has not attained a university level education, comparison with university level students was also considered inappropriate.

The population selected for comparison in this study was the population of students in the Australian technical education sector, that is, in tertiary education aimed at the development of technical or vocational skills and qualifications. Entry to this level of education is possible at a lower academic level than that required for university entrance.

This group was matched for age and education with the substance-dependent group, and consisted of 32 students (17 women and 15 men) attending an Institute of Technology in the ACT, or a College of Technical and Further Education in NSW in Australia. They volunteered to participate in the project as described above and were recruited from Welfare, Management, and Food and Hospitality Courses. The only substance use reported was alcohol.

Mean age of participants was 26.87 years ($SD = 8.04$, range = 18 to 52, median = 25). The mean number of years of school education completed was 11.44 ($SD = 0.91$, range = 9-12, median = 12). Comparison of these means and standard deviations with those of the substance-dependent group indicated that the two groups were comparable (see Chapter 6, Section 6.3).

Exclusion criteria for the control group were age under 18 years, age over 40 in women (necessary for comparability), self-reported problems with the use of alcohol or other drugs in the past and/or a score indicating mild or greater severity of dependence on the published measures of dependence, a self-reported current diagnosis of mental illness, or a score greater than 15 for depression or anxiety on the *Beck Depression Inventory (BDI)* or the *Beck Anxiety Inventory (BAI)*. The exclusion
criteria were introduced to ensure that the members of the control group were of legal age, were matched for age, and not simultaneously members of a clinical population.

Seven participants were excluded on the basis of elevated scores on the BDI or BAI. Of these, three had a current diagnosis of anxiety or depressive disorder. Six participants were excluded on the criterion of age: one was under 18 and five women were over 40 years of age. One student was eliminated because of an elevated score for subjective dependence on cannabis. In total, 14 student volunteers were excluded on the criteria employed.

The demographic characteristics of the substance-dependent and control participants of this study are presented in Chapter 6 (Table 1).

5.2.3. Representativeness of participants

The substance-dependent sample was recruited from rehabilitation centres which are well-established and have been operating for many years. They are well-known across the two states (ACT and NSW), both to substance users who refer themselves for treatment and the health professionals who refer them. Many of the residents have come a considerable distance to enter these programs. Thus, while this is not a random sample of substance-dependent people, and, because of the voluntary nature of the participation, not even a random sample of people in residential treatment, the largest and best-known centres were selected in order to provide the largest possible population to recruit from, and thus ensure the maximum representativeness possible within these restrictions. Most of the studies in this field operate under similar constraints.

To assess how representative the substance-dependent volunteers were, demographic details of the total treatment population were sought from each of the participating...
rehabilitation centres. Specifically requested were details of average age, sex
distribution, years of school education, preferred substance, severity of dependence,
average length of abstinence from substances, and the proportion of people under a
legal order to undertake treatment.

In relation to the control group, the parent campuses were approached to provide the
average age, school education level and sex distribution of the total student enrolment
in the courses recruited from.

The information obtained for the parent populations of both samples is presented in
Chapter Six (Tables 2 and 3) and discussed in Section 6.3.

5.3. Measures

Some of the hypotheses of this project could not be tested using available published
measures, for example, the relationship with the substance. Therefore a semi-
structured interview was developed to enquire into these areas. An interview was also
considered necessary to gather in-depth, qualitative data on the personal insights of
each participant into himself or herself and relationships with others, in order to gain a
richer understanding of how substance-dependent people and a matched non-clinical
group might compare with each other.

5.3.1. Substance dependence

To obtain an adequately-sized sample for this study, participants were recruited from
several treatment centres which had different admission criteria. Severity of substance
dependence was measured to ensure that participants from the different centres could
be pooled into the one group, and also to obtain information as to the degree of
severity of the substance dependence.
It was suggested in the 1970's that alcohol dependence might be a measurable construct of use in the drug and alcohol field (Edwards & Gross, 1976; Edwards, Gross, Keller, Moser, & Room, 1977) and could be more usefully viewed on a continuum with recreational use and substance abuse, rather than as categorically present or absent. It was considered that the latter view did not sufficiently allow for the observed variations in an individual's substance use over a long period. Subsequently dependence was argued to extend to other drugs as well, and to require consideration of the psychological components of dependence, particularly compulsive use (Edwards, Arif, & Hodgson, 1981).

Since substances differ in the symptoms they induce, particularly in withdrawal, it is not possible to use one instrument to measure dependence. Thus, subsequent research along the lines suggested by Edwards and his colleagues has resulted in several measures of severity of dependence for different drugs: the Severity of Alcohol Dependence Questionnaire (SADQ) (Stockwell, Hodgson, Edwards, Taylor, & Rankin, 1979), the Severity of Opiate Dependence Questionnaire (SODQ) (Sutherland et al., 1986), and the Severity of Amphetamine Dependence Questionnaire (SAmDQ) (Churchill, Burgess, Pead, & Gill, 1993). Each of these instruments attempts to tap the various components of dependence: physical and emotional withdrawal symptoms, withdrawal relief (by use of the substance), and rapidity of reinstatement of dependence after a period of abstinence. These are generally correlated with other variables known to be of importance in substance dependence, such as quantity consumed, frequency of consumption, duration of the substance-using pattern, and, often, milestones in the use of the substances.

The compulsive aspect of substance dependence has been examined by means of an additional short instrument, initially termed the Opiate Subjective Dependence Questionnaire (OSDQ) (Sutherland et al., 1986) which measures the subjective experience of dependence, being "hooked." The OSDQ has been employed, for
corroborative purposes, in studies investigating the psychometric properties of the 
*SODQ* (Burgess, Stripp, Pead, & Holman, 1989; Phillips et al., 1987; Sutherland, 
Edwards, Taylor, Phillips, & Gossop, 1988) and, with slight alteration of wording, 
the *SAMDQ* (Churchill et al., 1993). Gossop and his colleagues have established it as 
a reliable and valid instrument in its own right, altering it slightly to suit any drug 
under investigation, and renaming it the *Severity of Dependence Scale (SDS)* (Gossop 
et al., 1995).

In this study, the *Severity of Alcohol Dependence Questionnaire* and the *Severity of 
Opiate Dependence Questionnaire* were employed where substance-dependent people 
stated a preference for alcohol or opiates. Amphetamine dependence was not measured 
since the available measure, the *Severity of Amphetamine Dependence Scale*, was not 
sufficiently validated at the time. Nor was a comparable measure of cannabis 
dependence available. To measure severity of dependence across all participants and all 
classes of substances (including amphetamines, cannabis and licit drugs), the *Severity 
of Dependence Scale* was administered. Wording was altered to ask about a typical 
period of substance use in the past rather than currently (since all were abstinent from 
substance use). All protocols appear in Appendix B.

**Subjective severity of substance dependence**

The *Severity of Dependence Scale (SDS)* (Gossop et al., 1995) is a five-item 
questionnaire designed to measure subjective or psychological dependence on a 
particular substance; the wording is altered as appropriate to the substance under 
consideration. The questionnaire yields one factor consistent with dependence. The 
authors report alpha coefficients across five samples of users of different substances, 
ranging from 0.81 to 0.90 (Gossop et al., 1995). Evidence of test-retest reliability is 
not yet available (Gossop et al., 1995). However there are difficulties with its
measurement given that subjective severity of dependence varies over time (Gossop, Griffiths, Powis, & Strang, 1992).

Responses to the items across users of different classes of substances have been found by Gossop and his colleagues to be correlated with other behavioural patterns associated with dependence, such as daily dose, frequency and duration of use, and with a measure of opiate dependence (Severity of Opiate Dependence Questionnaire) \( (r = .57) \) (Gossop et al., 1995). Severity of heroin dependence, as measured on the SDS is negatively correlated with methadone maintenance and time in methadone treatment, both of which are known to reduce heroin use and therefore subjective dependence on heroin; and the SDS shows the full range of scores when administered to samples with different degrees of involvement in substance use (Gossop et al., 1995). Its criterion validity is indicated in the elevated scores found in heroin users seeking treatment at both specialist and non-specialist agencies (Gossop et al., 1995).

In this study, SDS items were appended to other measures of dependence (see below), or presented alone if the appropriate measure did not exist (e.g. with cannabis use). The items are as follows, answered on a scale of 0 \( (\text{Not at all}) \) to 3 \( (\text{A great deal}) \):

Did you think your use of [nominated substance] was out of control?
Did the prospect of missing a [drink, fix, dose] make you very anxious or worried?
Did you worry about your use of __________?
Did you wish you could stop?
How difficult would you find it to stop, or go without __________?
Severity of alcohol dependence

The Severity of Alcohol Dependence Questionnaire (SADQ) (Stockwell et al., 1979) is a 20-item questionnaire, answered on a four-point frequency scale from 0 (Not at all) to 4 (Nearly always). Scores greater than 30 are considered to indicate severe alcohol dependence, 21-30 moderate dependence and 0-21 low dependence (Stockwell et al., 1979; Stockwell, Sitharthan, MacGrath, & Lang, 1994). Test-retest reliability is reported at .85 for the total scale (Stockwell et al., 1979). The SADQ is significantly correlated with aspects of alcohol dependence, such as tolerance and narrowing of repertoire (diminished variability in drinking pattern), and clinician ratings of severity of dependence; concurrent validity is indicated by significant correlation with clinician ratings of withdrawal severity, for example, craving and tremors (Stockwell et al., 1979). Typical items are as follows:

During a period of heavy drinking, my hands shake first thing in the morning.
When I'm drinking heavily, I dread waking up in the morning.
During a period of heavy drinking, I drink more than [e.g. half a bottle of spirits a day or 8 pints of beer or 2 bottles of wine].
[After not drinking for a few weeks, then drinking very heavily for two days] I would be craving for a drink.

Severity of Opiate Dependence

The Severity of Opiate Dependence Scale (SODQ) (Sutherland et al., 1986) is a 20-item measure that incorporates items now adapted as the SDS, answered on a four-point frequency scale, similar to the SADQ. It has the same cutoffs for degree of dependence as the SADQ: 0-20 (low), 21-29 (moderate), 30 and over (severe). Internal consistencies of the subscales measuring different aspects of dependence (physical withdrawal, affective withdrawal, withdrawal relief) range from .81 to .88
(Sutherland et al., 1986) and, in subsequent studies, .75 to .90 (e.g. Phillips et al., 1987). Test-retest reliability has not been published in any of the four studies conducted with the measure. The SODQ correlates with subjective dependence measured on the SDS (previously known as the OSDQ) \((r = .23-.71)\) and with global ratings by clinicians of severity of dependence (Burgess et al., 1989; Phillips et al., 1987; Sutherland et al., 1986; Sutherland et al., 1988). Examples of SODQ items are as follows:

On waking and before my first dose of opiates, my body aches or feels stiff.
On waking and before my first dose of opiates, I feel restless and unable to relax.
In the morning, I use opiates to stop myself feeling sick.

5.3.2. Attachment

There is no completely satisfactory measure of attachment in adults at this stage. The Adult Attachment Interview (AAI) has many advantages, pointed out in Chapter Three, including the fact that it may accommodate dynamic changes of attachment models, since attachment classification is based on features of the discourse rather than content of memories. The AAI identifies characteristics of groupings of individuals, not characteristics of individuals or specific relationship styles. The "state of mind with regard to attachment" is considered to influence people's behaviour in relating interpersonally, particularly with their own children, and to be associated with certain forms of psychopathology (Main, 1995). Studies of the implications of attachment classification for adult partnerships have not been found in the review of the literature. Serious practical limitations prevented use of the AAI as a research instrument in this study. The discourse analysis involved is time-consuming and requires intensive international training to develop the required expertise. At this time in Australia, such training is very expensive and only infrequently available.
It was considered important in this study to have a measure of adult attachment that could be applied to a clinical population. The Reciprocal Attachment Questionnaire (RAQ) has been used in both clinical and normative samples, and is particularly oriented towards identifying disordered attachment. However, there has been relatively little convergent validation of this measure. Nor does it measure security of attachment except by inference from compared samples. It was therefore decided to use the RAQ in conjunction with an additional measure of adult attachment, the Attachment Style Questionnaire, to strengthen the findings. Like other questionnaire measures in this field, these measures are based on the assumption that self-reported consciously-held attitudes can indicate the nature of a person's attachment organisation.

**Reciprocal Attachment Questionnaire**

The Reciprocal Attachment Questionnaire (RAQ) (West & Sheldon-Keller, 1994) has several strengths as a measure of adult attachment. It adheres closely to attachment theory, is particularly oriented towards identifying the disturbed attachment patterns described by Bowlby (1973), and has been employed with a clinical population. It attempts to elicit a specific attachment figure, and questionnaire scales directly measure attachment behaviours such as proximity-seeking. However, there are no items directly measuring secure attachment.

The RAQ is a 43-item questionnaire. Nine scales measure five dimensions of behaviour in relation to an attachment figure (proximity-seeking, separation protest, feared loss of the attachment figure, available responsiveness and use of the attachment figure) and four patterns of insecure attachment (angry withdrawal, compulsive caregiving, compulsive care-seeking and compulsive self-reliance). The expected secure base effect, and the theoretical distinction between the availability of the attachment figure and the responsiveness of that figure, failed to be measurable in validation
studies and are not measured by this instrument. Participants endorse each item on a 5-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

For the dimensional scales, West and Sheldon-Keller (1994) report coefficients of internal consistency ranging from .71 to .85, and for the attachment pattern scales, .70 to .80. Test-retest reliabilities ranged from .68 to .85 for the dimension scales and .54 to .77 for the pattern scales. All scales, except compulsive care-giving, were able to discriminate psychiatric patients from non-patients.

Instructions were varied slightly for the population involved in this study, since the original instructions refer to a current partner relationship and most of the substance-dependent group were not in a partner relationship at the time of the study. It was felt that repetition of an unfamiliar term "attachment figure" in each item would not be particularly meaningful for this population, given the degree of insecure attachment expected. Hence the words "attachment figure" were replaced with a line to refer to the person the participant had in mind, for example, "I don't object when ________ goes away for a few days." Participants were also asked to identify whether the person was a current partner, a former partner, friend or other. Instructions were as follows:

This questionnaire asks you about a relationship with an attachment figure. Someone in your past or present life, not a member of your family of origin, whom you sought (or seek ) out when you were (or are) troubled, or in trouble, on whom you could depend for comfort, with whom you have been (or are) very close, with whom you could share your problems and private feelings, the person you would be most likely to turn to for comfort, help, advice, love or understanding. Often this may be a sexual partner but does not have to be. Choose someone with whom you have had a special relationship for at least six months.
Examples of items from each scale are provided below.

- **Proximity-seeking:** I have to have ______ with me when I'm upset.
- **Separation protest:** I resent it when ______ spends time away from me.
- **Feared loss:** I'm afraid that I will lose ______'s love.
- **Availability:** I worry that ______ will let me down.
- **Use:** Things have to be really bad for me to ask __ for help.
- **Angry withdrawal:** I wish there was less anger in my relationship with __
- **Compulsive care-giving:** I put ______'s needs before my own.
- **Compulsive care-seeking:** I would be helpless without ______
- **Compulsive self-reliance:** I feel it is best not to depend on_______

**Attachment Style Questionnaire**

The Attachment Style Questionnaire (ASQ) (Feeney, Noller & Hanrahan, 1994) was developed in the field of social psychology to measure dimensions of behaviour associated with attachment styles in adults. It has the advantage for this study of a scale directly related to security of attachment: confidence in the self and in others' availability. The authors consider it suitable for clinical populations (reporting a high degree of insecurity) as, in validation studies with non-clinical samples, scores at the top of the range were not obtained on the scales associated with insecure attachment.

The ASQ employs 40 items to measure attitudes to the self and others, producing five scales: confidence in the self and others, the need for others' approval, preoccupation with relationships, discomfort with closeness, and relationships as secondary to achievement. Particular constellations of scores over the five scales yielded groups endorsing different patterns of behaviour in interpersonal relationships (Feeney, Noller & Hanrahan, 1994). Securely-attached people endorsed a high level of confidence and low levels of the other four scales. Insecure attachment was identified by a low
confidence score and elevations on the other scales. Different kinds of insecure attachment (fearful, dismissing or preoccupied) were identified from the patterns of endorsement of the other four scales, as discussed in Chapter Three.

For the five scales, the authors report coefficients of internal consistency ranging from .76 to .80, and test-retest reliability ranging from .67 and .78. Validation against Hazan and Shaver's (1987) three-category measure indicated that the confidence scale, the two scales associated with anxious attachment (need for approval and preoccupation with relationships), and the two scales considered to measure avoidant attachment (discomfort with closeness and relationships as secondary) showed the expected association, with correlations ranging from .27 to .60 (Feeney, Noller & Hanrahan, 1994). Sample items are as follows:

Confidence: Overall, I am a worthwhile person.
Discomfort with closeness: I prefer to depend on myself rather than other people.
Relationships as secondary: To ask for help is to admit you're a failure.
Preoccupation with others: It's very important to me to have a close relationship
Need for approval: I worry that I won't measure up to other people.

The RAQ and the ASQ appear in Appendix C.

Models of the self

The confidence scale of the ASQ yields information relevant to the model of the self. However, the other scales of the quantitative measures did not tap dimensions related to self models. Moreover, qualitative differences were expected between the self models of the control group and the substance-dependent participants. It was therefore decided that, in addition to the confidence scale of the ASQ, interview questions would best provide data illustrating and explaining the nature of any differences.
There were ethical and time constraints on obtaining an extensive childhood attachment history. The substance-dependent people in this project were in relatively early treatment and were receiving counselling from staff. It was felt that probing enquiry into childhood attachment issues could prove overwhelming and was inappropriately intervening in a counselling relationship that had already determined its parameters. The interview therefore restricted its enquiry into these areas.

Expected differences in self models were operationalised as differences in self-worth, denoted as a characteristic of self models by Bowlby (1982, p. 378), and interview questions were developed which would tap this quality. Rather than direct questions as to how participants valued themselves, likely to be an unfamiliar task for most people, it was decided to measure self-worth indirectly: by enquiring as to current self-esteem - an indication of an individual's worth in his or her own eyes - and self-acceptance, considered to be an indication of the stability of the person's self-worth.

Although published, well-validated instruments exist which measure self-esteem or self-acceptance, they yield data as to the relative degree of these qualities in compared groups, or against established norms. For this study, it was considered essential that the nature of any differences between the two groups emerge, so as to throw maximum light on the self-models generating them. The two questions asked at interview were:

1. How do you feel about yourself?
2. How would you like to be?

The first question was asked to indicate the degree of self-esteem of the participants. The second question was developed as an indication of self-acceptance, with stated or implied discrepancies between the currently-perceived self and the preferred self indicating a relative lack of self-acceptance.
5.3.3. Relationship with the substance

The nature of the substance-dependent person’s relationship with the substance could not be ascertained using an existing measure. To draw out the hypothesised attachment dimensions of substance dependence, therefore, information was sought by means of several interview questions. In asking the questions, the term "drug" was used instead of "substance" as likely to be more familiar to the participants involved. The questions were as follows:

1. Many people feel as if they had a relationship with the drug they preferred. Would you say this was the case for you?
2. How would you describe your relationship with the drug you preferred?
3. Did the drug (or your relationship with it) give you a sense of security?
4. How would you describe that security?

All interview questions appear in Appendix F.

5.3.4. Mood

To measure depression and anxiety in the comparison groups, the Beck Depression Inventory (BDI) (Beck, 1978) and the Beck Anxiety Inventory (BAI) (Beck, 1987) were used. Both are well-known and widely-used instruments. They are also brief, which was felt to be an advantage given the number of measures used in this study.

Depression

The BDI enquires into both cognitive and physical aspects of depression. It contains 21 items, and participants can endorse any or all of four components per item, which are graded in severity. Two sample items are as follows:
0 I do not feel sad 0 I don't get more tired than usual
1 I feel sad 1 I get tired more easily than I used to
2 I am sad all the time and I can't snap out of it 2 I get tired from doing almost anything
3 I am so sad or unhappy that I can't stand it 3 I am too tired to do anything

The Beck Depression Inventory Manual (Beck & Steer, 1987) reports the reliability and validity of the BDI over several psychiatric samples. Internal consistency ranged from .79 to .88 for six psychiatric populations. Test-retest reliability of the BDI ranged from .48 to .86 for psychiatric populations, and .60 to .90 for non-psychiatric populations, over varying intervals of time. The BDI has been shown to discriminate psychiatric patients from a normative population, to show the expected correlation with the construct hopelessness ($r = .38-.76$), and to correlate ($r > .40$) with other self-report depression scales and clinician ratings (Beck & Steer, 1987).

Anxiety

The BAI is a 21-item measure enquiring into the physical and affective components of anxiety, such as numbness or tingling, feelings of choking, fear of dying, at any or all of three levels of severity per item: 0 (Not at all), 1 (Mildly), 2 (Moderately), 3 (Severely).

The Beck Anxiety Inventory Manual (Beck & Steer, 1993) gives the internal consistency of the BAI as $\alpha = .92$ and test-retest reliability as $r = .75$, over a one-week period. The scale returned a moderate overlap when completed by primarily anxious and primarily depressed patients but discriminated type of anxiety disorder in groups of patients with five different diagnoses of anxiety disorder. The BAI showed the expected correlations with measures of depression (in common with other measures of anxiety) and obsessive-compulsive disorder ($r = .25-.61$), and not with
hopelessness, which is often a feature of depressive disorders. It correlated significantly with other self-report measures and clinical ratings of anxiety ($r > .47$) (Beck & Steer, 1993).

The BAI and the BDI are shown in Appendix D.

5.3.5. Experience of close relationship

Intimacy

The model of substance dependence investigated in this study proposes that attachment organisation affects the person's capacity to experience intimacy. The Miller Social Intimacy Scale (MSIS) (Miller & Lefcourt, 1982) was selected because it requests the participant to indicate the preferred level of involvement in his or her current closest relationship, as well as the frequency of certain behaviours considered to reflect intimacy (Miller & Lefcourt, 1982). It was considered that the level of intimacy indicated on this measure would be a reasonable reflection of the person's capacity for intimacy.

Other advantages of the MSIS are that it is brief, readily available and widely used. It is a 17-item instrument which aims to measure the level of intimacy currently experienced with the "person you are closest to at the moment." The questionnaire consists of two scales which are summed for a total intimacy score. One scale measures the frequency of emotional or physical contact, and the other the intensity of feelings for the other person, and the degree of desire for emotional and physical contact with them. Items are endorsed on a 10-point Likert scale, the frequency scale ranging from 1 (Very rarely) to 10 (Almost always) and the intensity scale from 1 (Not much) to 10 (A great deal).
The authors report the internal consistency of the total scale to be .86 and .91 on two samples. Test-retest reliability was measured at $r = .96$ over a two-month interval. The *MSIS* correlates highly with the *Interpersonal Relationship Scale (IRS)* (Schlein, Guerney, & Stover, 1971, cited in Guerney, 1977) which measures trust and intimacy in marital relationships ($r = .71$) and negatively with the *UCLA Loneliness Scale* (Russell, Peplau, & Ferguson, 1978) ($r = -.65$). A moderate correlation with the *Tennessee Self-Concept Scale* (Fitts, 1965) ($r = .48$) and different scales of the *Personality Research Form* (Jackson, 1967) was found (Miller & Lefcourt, 1982). There was no correlation with the Marlowe-Crowne *Need for Approval Scale* (Crowne & Marlowe, 1964). Discriminant validity was established by comparison of intimacy scores with close friends as compared with casual friends, and indicated significantly greater intimacy with the former (Miller & Lefcourt, 1982). Examples of frequency items are:

How often do you keep very personal information to yourself and do not share it with him/her?

When you have leisure time, how often do you choose to spend it with him/her alone?

Intensity items asked for information such as:

How much do you like to spend time alone with him/her?

How satisfying is your relationship with him/her?

As the frequency scale of the *MSIS* refers to the frequency of certain behaviours when with the other person, rather than frequency of contact per se, the fact that the substance-dependent people were in residential treatment without frequent access to the person closest to them (unless that person was in the treatment centre) should not have affected the intimacy rating on this scale.
Loneliness

Loneliness was measured using the *Social and Emotional Loneliness for Adults (SELSA)* (DiTommaso & Spinner, 1993). Though less well-known than some other measures, it has the advantage of being based in attachment theory and distinguishing different types of loneliness from each other. The SELSA is a 37-item questionnaire which measures romantic, family and social loneliness on a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The romantic loneliness scale was considered to be directly relevant to the study of adult attachment.

Coefficients of internal consistency are reported by the authors to range from .89 to .93. Test-retest reliability has not been reported. All three scales of the SELSA were correlated with the *UCLA Loneliness Scale* (Russell, Peplau, & Ferguson, 1978) (romantic, $r = .40$; family, $r = .37$; social, $r = .79$). Analyses of the scales against two items measuring social and emotional loneliness (Russell, Cutrona, Rose, & Yurko, 1984) indicated the discriminant validity of the SELSA romantic and social subscales ($r_{rom} = .69$ and .14; $r_{soc} = .27$ and .57). Further analysis of concurrent and discriminant validity found greater romantic loneliness (but not family or social loneliness) with lower dating frequency, non-involvement in a romantic relationship, and poorer dyadic adjustment. Greater family loneliness was associated with worse dyadic adjustment in the married group but not the non-married group. Family and romantic loneliness were highly correlated in married people ($r = .75$) but not in people who were not married ($r = -.10$). In two social groups for single people, there was no significant social loneliness, but significantly more romantic and family loneliness, compared with members of a community services club (DiTommaso & Spinner, 1993). The romantic loneliness scale contains items such as:

I am in love with someone who is in love with me (reverse scored)

I have an unmet need for a close romantic relationship.
Family loneliness is measured by items such as:

I feel alone when I'm with my family
There is no one in my family I feel close to, but I wish there were.

Sample social loneliness items are:

I feel part of a group of friends (reverse scored)
I do not feel satisfied with the friends I have.

The MSIS and the SELSA appear in Appendix E.

5.4. Procedure

An Information to participants sheet and a consent form were distributed to the volunteer participants at a group session. The former contained detailed information about the requirements of the project, the protection of confidentiality and anonymity, and notice of the freedom to withdraw without penalty. Those who agreed to participate after reading the information sheet and signing the consent were issued with a folder containing a form requesting demographic and personal information (background history), and the published questionnaires (BDI, BAI, RAQ, ASQ, MSIS, SELSA) presented in random order. The consent form, Information to participants sheet, and the background history form appear in Appendix A. The published measures appear in Appendices C to E. The interviewer/researcher asked each participant what substance they used (control group) or had used preferentially (substance-dependent group) and distributed the SADQ, SODQ and SDS as appropriate. These questionnaires appear in Appendix B.
Each participant was given the choice to complete the questionnaires on the spot, with the interviewer/researcher available to answer queries, or to bring the completed questionnaires to an individual interview session. A 20-minute semi-structured interview was conducted with each participant to gather information about the relationship with the substance and the attitude towards the self. The interview was audiotaped with the person's consent and transcribed for the rating of responses. Interview questions appear in Appendix F and responses in Appendix G.

5.5. Data analysis

5.5.1. Preliminary psychometric analysis of measures

Coefficients of internal consistency (Cronbach's $\alpha$) were obtained for the published measures to verify that the questionnaires used in this study were measuring the constructs intended when applied to the populations under consideration.

5.5.2. Analysis of data

Published measures

Examination of outlying values revealed that they should be considered valid responses. Endorsement of extreme values was held to reflect the participants' genuine opinion or experience, and was therefore retained. Retention of the outlying values did not require data to be transformed. Missing values on all measures were replaced with the participant's group mean for that variable.

The null hypothesis of no difference between the substance-dependent and control groups on the dependent measures (representing the components of the model) was investigated by means of multivariate analyses of variance (MANOVA) performed for
each component of the model (measures of attachment security, measures of current mood state, and measures of intimacy and loneliness in close relationships) with group (substance-dependent and control) entered as the independent variable. Multivariate analyses of variance are recommended when the significance of group differences is being investigated on a number of dependent variables. The analysis creates a new dependent variable that is a linear combination of the contributing dependent variables, obviating the need for multiple separate comparisons and thus protecting against an inflated Type 1 error rate for the analysis (Tabachnick & Fidell, 1989).

Univariate comparisons for each dependent variable were examined with the use of a Bonferroni adjustment to preserve an experiment-wise error rate of $\alpha = .05$ (Tabachnick & Fidell, 1989, p. 399). Evaluations of normality, multicollinearity, and homogeneity of the variance-covariance matrices were conducted for each analysis and are reported in the following chapter.

**Qualitative data (interview)**

Interview responses relating to the relationship with the self were independently allocated to categories by two raters, the interviewer/researcher and a Clinical Psychologist experienced in the alcohol and drug field but not conversant with attachment theory. The categories, determined by the interviewer/researcher, represented high, moderate or low self-esteem and self-acceptance. Where a response appeared to fit more than one category, it was assigned to the category considered to best reflect the person's emphasis, as separately perceived by the raters. Where agreement could not be reached, the interviewer/researcher made the final decision.

As a basis for the qualitative analysis of responses, the proportion of each group (substance-dependent and control) allocated to each of the three categories was calculated. For a statistical comparison of the two groups, the self-esteem responses
were divided into positive and negative self-esteem, and the self-acceptance responses into self-accepting and non-self-accepting, and compared by means of the Chi-square statistic (the appropriate analysis for categorical data).

For the relationship with the substance, negative responses (i.e. those who did not assert a relationship with the substance) were removed from the analysis. Criteria for judging a relationship were determined and category descriptions consistent with an attachment relationship were developed by the interviewer/researcher. For positive responses not consistent with an attachment relationship, categories were developed by the interviewer/researcher which attempted to best reflect and maximise the face validity of their content. Allocation to categories was carried out as above, with the same treatment of ambiguous responses.

Responses were judged as describing a relationship if they described the effect or provisions of the substance in terms that would be used of an interpersonal relationship, even if an extremely dependent one. They were judged as not describing a relationship if the substance was described in impersonal terms, as an object. The categories used for the analysis appear below. Actual category descriptions and the responses allocated to them appear in Appendix G. The responses of those participants who did not feel that they had a relationship with the substance, or that it gave them security, are also presented in Appendix G.

1. Relationship with the self (self esteem)
   (i) Generally positive about the self
   (ii) Qualified self-esteem
   (iii) Negative about the self

2. Relationship with the self (self acceptance)
   (i) Happy with the self.
(ii) Desiring more change in the self and capable of self-reflection.
(iii) Desiring considerable change in the self.

3. Relationship with the substance

(i) Description in attachment-related terms, including personified references to the substance as a dependable relationship, lover, best friend.
(ii) Description in terms of provisions from the substance identical to those of an attachment relationship, such as security.
(iii) Description of the substance as providing qualities lacking in the self, or necessary to function.
(iv) Description of the relationship as a sexual relationship, or providing insufficient detail to establish whether it was an attachment relationship that was described.
(v) Description of the relationship in terms of the addictive experience, for example, for gratification or the pharmacogenic effect.

4. Security provided by the substance

(i) Described in terms consistent with an attachment relationship (e.g. emotional security).
(ii) Described as providing self-worth, self-confidence or replacing lacks in the self (also consistent with an attachment relationship).
(iii) Described as alleviating unwanted feelings and worry.
(iv) Described in terms of excessive emotional self-sufficiency.
(v) Described in terms of the addictive experience.

As there were practical time constraints on the other rater listening to the audiotapes and interpreting their meaning, analysis of the participants' responses to interview questions are based on transcriptions of audiotapes. In this process, much valuable information has of course been lost. Missing most significantly are the emotional tone of the voice, the accompanying gestures and facial expressions, and the multiple
possible meanings, conveyed by the context, of hesitations, degrees of articulation, directness and evasion, to mention only a few. Thus the interpretation of the replies is based almost exclusively on their content, and not their style or quality. This has not done full justice to the informants' responses but has yielded meaningful information nevertheless.

The results of the data analysis, including reliability estimates, are presented in detail in the following chapter.
CHAPTER SIX

Results

This chapter presents the results of the examination of the model of substance dependence proposed in Chapter Four. It begins with the results of the preliminary psychometric analysis of measures, outlined in Chapter Five, examination of the representativeness of the two samples (substance-dependent and control groups), the matching of the two groups and the measurement of substance dependence. This is followed by the results in relation to the hypotheses of the study in the order presented in Chapter Four. The order is as follows:

6.1. Analysis of scale reliabilities for the published instruments used in the study.
6.2. Representativeness of the substance-dependent and control groups.
6.3. Matching of the substance-dependent and control groups for age and education.
6.4. Analysis of the severity of substance-dependence.
6.5. Overview of the results of the quantitative and qualitative analyses conducted.
6.6. Analysis of group differences in attachment working models: qualitative data concerning the evaluation of the self, and quantitative measures of attachment to others.
6.7. Analysis of the substance-dependent participants' relationship with the substance: qualitative data.
6.10. Summary.
6.1. Scale reliabilities

Cronbach's coefficient of internal consistency was obtained for all published measures over the whole sample (substance-dependent and control groups combined). For all measures, except the **Reciprocal Attachment Questionnaire (RAQ)**, scale reliabilities were acceptable, ranging from .72 to .94. Five scales of the RAQ returned reliabilities between .72 and .77. However, four scales (**Use of the attachment figure, Perceived availability of the attachment figure, Compulsive care-giving** and **Compulsive self-reliance**) showed low reliability in this sample (ranging from .48 to .61). West and Sheldon-Keller (1994) report acceptable reliabilities for these scales (see Chapter Five). However, the low reliabilities found in this analysis created doubt that a unitary construct was being measured in this sample. Without retesting on a similar sample (beyond the scope of this thesis), it was not possible to gauge whether the problem lay in the measure, or whether this sample was behaving differently from those studied by West and Sheldon-Keller, 1994). The four scales were, therefore, omitted from further analysis.

6.2. Representativeness of participants

Demographic characteristics of the substance-dependent and control participants of the study appear in Table 1 below. The representativeness of the two samples in relation to their parent populations is indicated in Tables 2 and 3, which compare the participants with their parent populations on relevant variables. Table 2 illustrates the characteristics of the substance-dependent sample and its parent population; Table 3 the characteristics of the control sample and parent population.

Very few of the participating rehabilitation centres had demographic data in a form that was readily comparable with the data collected in this study, reflecting their limited
resources and primary emphasis on treatment. In some cases, data relevant to this study were not available at all. Omissions are indicated in Table 2.

Table 1

Demographic characteristics of substance-dependent and control groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Substance-dependent group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years) (SD)</td>
<td>29.08 (7.40)</td>
<td>26.87 (8.04)</td>
</tr>
<tr>
<td>Mean education (school yrs) (SD)</td>
<td>10.03 (1.38)</td>
<td>11.44 (0.91)</td>
</tr>
<tr>
<td>Sex ratio (M:F) (%)</td>
<td>73:27</td>
<td>47:53</td>
</tr>
<tr>
<td>Preferred substance:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>32%</td>
<td>100%</td>
</tr>
<tr>
<td>Other</td>
<td>68%</td>
<td>-</td>
</tr>
</tbody>
</table>

Data from the participating rehabilitation centres were gathered from annual reports of the centres concerned, or verbal information from the managers of the centres, who usually consulted their annual report or funding submissions to provide the data. Data on level of education were provided by one centre only. Mean length of abstinence is not a relevant criterion for the treatment centres, as they are more concerned with the progress of their clients over time rather than cross-sectional measurement. These data are therefore missing. In relation to substance use, most of the centres measured all substances preferentially used by the person, rather than forcing a primary choice as this study did. Thus the proportions reported for each centre usually represent overlapping categories. On this variable, therefore, the total for all centres is omitted as misleading in relation to primary preferred substance.
In Tables 1, 2 and 3, the variables are expressed as means, as the proportion of the population with that characteristic, as the range provided, or, in the case of sex ratio, the ratio of men to women expressed as a percentage.

Table 2

Demographic characteristics of the substance-dependent group compared with parent rehabilitation populations

<table>
<thead>
<tr>
<th>Variables</th>
<th>This study</th>
<th>Rehab. 1</th>
<th>Rehab. 2</th>
<th>Rehab. 3</th>
<th>Rehab. 4</th>
<th>Rehab. 5</th>
<th>Rehab. 6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
<td>29</td>
<td>26</td>
<td>-</td>
<td>32</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Education (yrs)</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>7-10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Substance preferred</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opiates</td>
<td>49%</td>
<td>-</td>
<td>58%</td>
<td>-</td>
<td>48%</td>
<td>20%</td>
<td>59%</td>
<td>-</td>
</tr>
<tr>
<td>Alcohol</td>
<td>32%</td>
<td>-</td>
<td>25%</td>
<td>Majority</td>
<td>38%</td>
<td>60%</td>
<td>23%</td>
<td>-</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>10%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8%</td>
<td>20%</td>
<td>20%</td>
<td>-</td>
</tr>
<tr>
<td>Cannabis</td>
<td>7%</td>
<td>-</td>
<td>-</td>
<td>2nd</td>
<td>4%</td>
<td>50%</td>
<td>35%</td>
<td>-</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2%</td>
<td>-</td>
<td>6%</td>
<td>-</td>
</tr>
<tr>
<td>Severe dependence</td>
<td>70%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>70-80%</td>
<td>80%</td>
<td>-</td>
<td>75%</td>
</tr>
<tr>
<td>Abstinence (mo)</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Legal order</td>
<td>38%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40%</td>
<td>50%</td>
<td>30%</td>
<td>40%</td>
</tr>
</tbody>
</table>

1 Personal communication (from statistical records) (A. Sinclair, May, 1998)
2 Personal communication (annual report, 1996-7) (A. Sacco, June, 1998)
3 Personal communication (funding submission) (T. Crowe, June, 1998)
4 Personal communication (annual report) (J. Pitts, June, 1998)
5 Personal communication (B. Brown, June, 1998)
6 Personal communication (funding submission) (G. Popple, June, 1998)
Data for the parent population of the control group were calculated at the researcher's request by the institution providing the majority of the participants (the ACT college) (T. Vickers, July 23, 1998).

Table 3
Demographic characteristics of the control group compared with parent student population

<table>
<thead>
<tr>
<th>Variable</th>
<th>Parent campus</th>
<th>This study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (years)</td>
<td>26.9</td>
<td>26.9</td>
</tr>
<tr>
<td>Mean education (years)</td>
<td>11.6</td>
<td>11.4</td>
</tr>
<tr>
<td>Sex ratio (M:F)(%)</td>
<td>44:56</td>
<td>47:53</td>
</tr>
</tbody>
</table>

The data indicate that the substance-dependent and control participants of this study were representative of the populations from which they were drawn. In the case of the substance-dependent participants, sampling across several representative treatment centres, this means that they were representative of people with severe substance dependence in long-term residential treatment (6 weeks - 12 months) with respect to age, sex ratio, substances reported, severity of substance dependence and proportion under a legal order to undergo treatment.

6.3. Matching of samples

6.3.1. Age

There was no significant difference between the substance-dependent and control groups in age \(F (1,90) = 1.75, p < .189\).
6.3.2. Education

There was a significant difference between the two groups in education \((F (1,90) = 26.87, p < .000)\). However, although this difference is statistically significant, in real terms it represents a difference of one year in education level attained (Year 10 vs Year 11). This difference is not considered to have placed the control group at a sufficient advantage educationally or vocationally to make it an invalid comparison group. The two groups are therefore considered sufficiently matched in age and education. Means and standard deviations for both variables are shown in Table 1.

6.4. Severity of substance dependence

Clinical norms were consulted to measure the severity of alcohol and opiate dependence as indicated on the Severity of Alcohol Dependence Questionnaire (SADQ) and the Severity of Opiate Dependence Questionnaire (SODQ). Information was available for 80% of the whole substance-dependent group and, of this, 70% was severely substance-dependent, 17% was moderately dependent and 13% reported low dependence. Almost 70% of those reporting alcohol dependence reported severe dependence, 20% moderate dependence, and 10% low dependence. The great majority of opiate users reported severe dependence (90%), while 8% reported moderate dependence and 2% low dependence. The control group reported use of alcohol only and indicated no dependence when compared with clinical norms. Means and standard deviations of both groups for alcohol and opiate dependence are shown in Table 4 below.

Subjective severity of dependence was measured by the Severity of Dependence Scale (SDS). The mean score obtained for substance-dependent participants was 10.93 \((SD = 2.75)\) and for the control group 0.75 \((SD = 1.32)\). Since the control group uniformly reported low dependence, the data were too skewed to allow comparison of the two
groups. Clinical norms are not available for the SDS. However, in combined clinical and non-clinical samples, Gossop and his colleagues report mean SDS scores ranging from 1.5 (median = 0) for amphetamine users to 9.3 (median = 9) for heroin users (including community samples and methadone maintenance) in one study (Gossop, Griffiths, Powis, & Strang, 1992) and 3.7 to 4.3 (SD = 3.2-4.0) for amphetamine users and 5.2 to 8.7 (SD = 5.0-4.0) for heroin takers (including community samples and methadone maintenance) in another (Gossop et al., 1995). Darke and his colleagues reported a mean SDS score of 4.3 (SD = 3.3) in a predominantly community sample of amphetamine users (Darke, Cohen, Ross, Hando, & Hall, 1994). Means and standard deviations of substance-dependent and control participants for subjective severity of dependence are shown in Table 4 below.

Table 4

Mean and standard deviation scores of substance-dependent and control groups for severity of substance dependence

<table>
<thead>
<tr>
<th>Scale</th>
<th>Substance-dependent</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity of Dependence Scale (SDS)</td>
<td>10.92 (2.66)</td>
<td>0.75 (1.32)</td>
</tr>
<tr>
<td>(subjective severity of dependence)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity of Alcohol Dependence Questionnaire (SADQ)</td>
<td>36.42 (11.28)</td>
<td>1.50 (2.24)</td>
</tr>
<tr>
<td>(32% of group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severity of Opiate Dependence Questionnaire (SODQ)</td>
<td>43.82 (10.81)</td>
<td>-</td>
</tr>
<tr>
<td>(49% of group)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It appears, as might be expected with a physiologically addicting substance, that heroin users report higher levels of subjective dependence. This sample of people in residential treatment, which included people with severe alcohol dependence (also physiologically addicting), scored most similarly to, but higher than, heroin addicts in
a mixed community and methadone maintenance sample, when describing the severity of their dependence in the past.

6.5. Overview of analyses conducted

Multivariate analyses of variance (MANOVA) were performed on measures of attachment, mood, and the experience of close relationship, entering group (substance-dependent and control) as the independent variable. Evaluations of normality, multicollinearity, and homogeneity of the variance-covariance matrices were satisfactory for all measures, except anxiety and depression which are discussed in Section 6.8.3 below.

Between the distribution of the questionnaires and the follow-up interview, there was a 12% attrition in participation. Analysis of the qualitative data, therefore, is based on a sample of 56 substance-dependent people (compared with 60 participants for the distributed questionnaires). Thirty of the control group participants returned for interview (compared with 32 who completed distributed measures).

For the qualitative data, inter-rater agreement on the categories to which interview responses were allocated ranged from 80% to 84%. Disagreements between the raters over the appropriate category were discussed after calculating inter-rater agreement. Where agreement was achieved, the response was allocated to the agreed category. Where disagreement remained, the interviewer/researcher made the final allocation (a total of ten responses over the whole sample of 224 responses). Attention is drawn to these responses in Appendix G under the relevant question, along with both raters' categorisations. A small number of responses was considered by both raters to be unclassifiable and these are also discussed in Appendix G. The percentages shown in each category are the proportion of the whole substance-dependent or control group allocated to that category.
While the results need to be analysed in terms of the thesis proposed, there is a danger that some of the intrinsic interest of the response is lost when material is selectively abstracted from replies. Therefore, when presenting responses in the results reported below and in Appendix G, the complete verbal response to the particular question has been retained as far as possible, in order to better represent the response and the person making it, although it may contain material irrelevant to the point.

Responses to individual questions have generally been presented separately. This loses the flavour of the whole interview with each subject, and how responses may have altered over the course of it from factors such as rapport with the interviewer, comfort with the questions, interruptions to the interview, and other such considerations. Each participant has been allocated a number which appears beside his or her response to each question, so that it is possible to discern a person's responses over all questions from Appendix G.

6.6. Attachment

It was predicted that the substance-dependent group, relative to the control group, would indicate less confidence in themselves as worthy of others' support, manifested in poorer self-worth (Hypothesis 1), and less confidence in others to be available and responsive (Hypothesis 2). They were also expected to show, on dimensions associated with attachment, such as proximity-seeking, preoccupation with relationships, and comfort with closeness, levels of behaviour more indicative of attachment insecurity than the comparison group (Hypothesis 3), and to endorse to a greater extent patterns of behaviour associated with insecure or disordered attachment (Hypothesis 4).
Data relevant to Hypotheses 1-4 were obtained for both substance-dependent and control group participants from questions at interview directly addressing the attitude to the self, and from published measures of attachment.

6.6.1 Models of the self

Confidence in the self

One scale of the ASQ (Confidence in the self and others) yields information relevant to the hypothesis (1) of poorer self-worth. A between-subjects multivariate analysis of variance (MANOVA), performed on the five scales of the ASQ, with group (substance-dependent and control) entered as the independent variable, indicated that the two groups differed significantly from each other on the combined scales (Wilks' lambda = .6395, multivariate $F (5,86) = 9.70$, $p < .000$. Power = 1). A Bonferroni adjustment of $\alpha = .01$ was set for the univariate comparisons. The substance-dependent group reported significantly less confidence in themselves and others (univariate $F (1,90) = 19.96$, $p < .000$. Power = .99). The full analysis of the ASQ is reported below (Section 6.6.2).

In addition to the Confidence scale, two questions at interview obtained information as to participants' self-esteem and self-acceptance, also relevant to Hypothesis 1. The results are presented below and appear, in summary form, in Table 5.

Self-esteem

Q. How do you feel about yourself?

Responses were allocated to three categories with an inter-rater agreement of 80%. Examples of responses in each category are presented below. One response was
considered unclassifiable (2%). Table 5 shows the percentage of responses in each category. All responses appear in Appendix G.

**Category 1.** Respondents were generally positive about themselves. Control group 60%, substance-dependent group 48%.

**Control group**

Restricted because of my car accident. I'm proud of the way I got through. I've stuck at it and I'm proud of that.

Pretty good, feeling very confident. Study has boosted my self-esteem. I'm finding new skills and abilities I didn't know I had before.

Pretty good. There's a few stressful moments with TAFE [technical college]. I'm a bit worried about my next placement but I have a good social life, good friends, supportive family and boyfriend. So I'm pretty fortunate.

**Substance-dependent group**

Pretty good, pretty positive. I have my good parts and my bad parts. I find when I get depressed there's things I do to compensate for that, whether it's journal writing, talking to someone in recovery.

Pretty good at the moment. A lot better than I did a few months ago.

Pretty good I suppose. Happy, than I used to be. A lot happier. Bit more protective of myself too. More friends, especially here, which is good for me.

**Category 2.** Respondents reported qualified self-esteem. Problems identified appear to be in the self, or to affect self-esteem. Also included are some positive responses
which were judged by the raters to lack conviction. Control group 37%, substance-dependent group 20%.

**Control group**

Content in a way. But I feel I'm not getting anywhere, I've stagnated. I suppose it's the mid-life crisis.

Swings every couple of weeks. Pretty good on the whole. I don't really have any long-term goals so that sometimes that hits me in the face. Sometimes my lack of very formal education. I do get a little bit envious of people who've taken those opportunities.

I get cranky with myself, disappointed, mainly about tech. [technical college], that I haven't been putting in the time I should. I'm angry because I'm always tired but otherwise I'm pretty happy.

**Substance-dependent group**

Pretty good. I do have this self-esteem problem at the moment where I think all my answers are pretty stupid. Apart from that, I'm pretty proud of myself for what I've done so far.

I'm not sure. I go through days of feeling quite good about myself and quite proud for where I'm at, and I'm really ashamed for my life and what's happened. I get torn between the two things. I also get scared for the future.

Some days I feel okay but a lot of days I don't. I sort of feel unworthy, seeking approval. But on the good days, I feel okay.
Category 3. Respondents did not feel good about themselves. Control group 3%, substance-dependent group 30%.

Control group

Everything seems to revolve around work. Work feels like a burden.

Substance-dependent group

Liking myself a bit more. Pissed off about wasting years. I haven't achieved what I wanted. Disappointed in myself. I'm a coward, I run away from problems. Scared to get clean and face up to stuff that's there. Hurt, sad.

Not too, I have felt better, I'm not feeling too good at the moment but that's because of the difficulties I'm experiencing in this program. I'm feeling like a useless, kind of worthless type of person at the moment. Sometimes I think I'm an idiot for some of the things I do. I know better but I don't do better. Sort of like a lazy and apathetic attitude but that's only over the last month or so. Before that I was doing better.

Don't feel a lot about myself. Don't feel I've done a lot to feel good about.

The majority of people in both groups reported that they felt good about themselves currently (Category 1). Most of the control group respondents (60%) stated that they were happy with themselves and not greatly affected by problems or stresses in their lives. There were no suggestions of dissatisfaction with the self. Almost half of the substance-dependent people (48%) indicated that they were also feeling positive self-esteem currently. Several expressed pride in themselves; many were feeling heartened by their progress, and considerably better about themselves than just prior to treatment. Much of the reported self-esteem was expressed in comparison with how the person had felt before treatment. In many of the replies of the substance-dependent group,
there was an implication of significant problems within the self which still needed to be addressed.

Thirty-seven per cent (37%) of the control participants indicated a positive self-evaluation which was qualified by other information in the response (Category 2). In many of these responses, the experience of problems currently appears to have affected self-esteem, whereas this was not the case in Category 1. Twenty per cent (20%) of the substance-dependent group also reported qualified self-esteem. The majority of responses indicated a shifting between positive and negative states implying corresponding shifts in self-evaluation between positive and negative, and hence unstable self-esteem. Feelings of anxiety, depression and confusion were reported in many cases, and appear to be associated with negative self-evaluation, or perhaps with the instability of the self-concept.

Very few of the control group participants indicated that they felt bad about themselves (3%). The one response in Category 3, although it does not mention the self at all, was allocated to this category because it was judged qualitatively different in tone from the other control group responses, and the diminished sense of effectiveness was considered to imply a poor self-concept. Contrasting with this low number, almost one-third of the substance-dependent participants (30%) indicated low self-esteem. They felt bad about themselves, and in many cases indicated active dislike, anger at, or derogation of the self, implying very negative self-evaluations. Many reported strong feelings of despondency, fear, and unresolved guilt.

Overall, almost half of the substance-dependent group indicated that they had positive self-esteem currently, considered in this study to illustrate self-worth. A second group manifested a more unstable self-concept, shifting between positive and negative self-esteem. More seriously, the remaining one-third demonstrated apparently stable negative self-evaluation and self-esteem. Over half of the substance-dependent group
(representing Categories 2 and 3) therefore gave evidence of poor self-worth, compared with 40% of the control group.

This difference was not statistically significant ($\chi^2 (1, .025) = .6296, p > .05$). However when the individual responses were inspected, the nature of the self-worth reported by the substance-dependent participants seemed to be qualitatively different from that reported by the control group, appearing more unstable. These findings are discussed in detail in the following chapter.

Hypothesis 1 was tested as well by a second question at interview, which asked how the person would like to be. Replies were expected to indicate how close the self, as currently perceived, was to the ideal, thus obtaining a measure of self-acceptance.

**Self-acceptance**

*Q. How would you like to be?*

Responses were again allocated to three categories but for one, considered unclassifiable (2%). Inter-rater agreement was 80%. Examples of each category are given below and the percentage of responses in each category is shown in Table 5. The complete set of responses appears in Appendix G.

**Category 1.** Respondents reported themselves to be happy with themselves as they were, perhaps desiring minor change. Control group 63%, substance-dependent group 11%.

**Control group**

I like to be what I am now, I don't mind what I am now. I'd maybe prefer a few better relationships, say with my father. I like what I am now.
I really wouldn't like to be any different. I think there's a lot of imposed pressures from outside. In many ways, what I am is what I'd like to be but you sort of feel there's a sort of pressure to be a little bit different. I've achieved my personal goals.

I don't know. I'm quite happy with myself. I don't think I want to change.

**Substance-dependent group**

The way I am now. Keep going with it.

Like I am now. I'm better than I was before. A bit more happy.

I can't really see that I'd like to make much change from what I've just said. I'd just want to learn to live the rest of my life without drugs. I don't really want to change much.

**Category 2.** Respondents desired more change in themselves, appearing more dissatisfied with themselves than respondents in category 1. They indicated a capacity for self-reflection and appraisal of specific areas of desired change. Control group 23%, substance-dependent group 24%.

**Control group**

I'm very busy. I'd like to be able to do a few things really well than a lot of things fairly well.

Not as fat! Probably a bit more confident. A bit less sensitive sometimes. Less moody.
Probably secure, financially and within myself as well. More in tune with myself. In a good long-term relationship.

**Substance-dependent group**

I'd just like to be me, be myself. Happy with who I am, in what I'm doing, not giving myself such a hard time all the time.

Responsible. Just responsible. I'd just like to be a good mum and have my children back again and make up for lost time.

More outgoing. It's very difficult for me to make friends easily. It takes a lot of time for me to relate to them and for them to relate to me.

**Category 3.** Respondents signified a desired self that suggested considerable change from the current self, including multiple areas of change. Responses implied a lack of the desired qualities in the self as currently experienced. Control group 13%, substance-dependent group 65%.

**Control group**

A lot more trusting of people. I'm pretty wary, it takes a long time for me to trust someone and let down the barriers enough for them to become part of my life. A bit more easygoing, not so much of a perfectionist [academically]. I'm not far off [ideal self]. There's things that need work.

Probably like to be a little bit more self-sufficient, not rely on people so much. More decisive. More punctual, more organised, more motivated.

More forgiving. Decrease the temper level. Have more confidence when talking to people.
Rich and brainy! Happy and comfortable. Happier. And not feel as if it's such a battle all the time, and everything's my responsibility.

**Substance-dependent group**

Peaceful, comfortable inside.


Rich! A bit more motivated and know where I'm going, be a bit more of a decision-maker, that this is what I want to do for my future and bang, go out and do it. Not just sit back and wait for everything to happen, because I know it won't. More motivated. Bit more considerate to other people. Be a bit more sociable, be able to turn to others instead of relying on myself.

There was a considerable discrepancy between the two groups in the number of respondents who accepted themselves as they were. Sixty-three per cent (63%) of the control group reported that they were essentially happy with themselves (Category 1). Only 11% of substance-dependent people made the same claim. Several of the control group participants indicated perceived shortcomings in themselves and a desire for some change in their behaviour, but appeared to be adjusted to themselves as they were.

Category 2 responses indicated that approximately one-quarter of the people in each group (24% of substance-dependent group and 23% of control group) wanted more significant changes in themselves, indicating less self-acceptance than people in Category 1. The responses demonstrate reflection, self-awareness and realistic appraisal; the perceived shortcomings are specific; and the desired changes appear realistic and possible. Many of the control group participants wanted more confidence and others wanted to feel more positive. One person expressed the desire for internal
security. Several of the substance-dependent people expressed a desire for changes in themselves that would improve their relationships (e.g. S47, S55, S92), including acceptance of others and more trust. Others mentioned greater self-acceptance, more confidence, financial security, and a desire to achieve success in the world. One person wanted a greater sense of direction in life.

Category 3 contained those responses indicating desire for a considerable degree of change, change in multiple areas, or indicating a lack of the desired qualities in the self at present. The allocation of responses was almost the opposite of that in Category 1. Sixty-five per cent (65%) of the substance-dependent group, compared with 13% of the control group, were considered as belonging to this group. The degree of self-acceptance can only be inferred from these responses, but the implied need to be so different from the current self is judged to indicate very poor self-acceptance. In over half of these cases, the desired changes were general rather than specific, and appear over-optimistic and unrealistic. Many indicate a wish for a radical change of state, rather than improvement along the same continuum as the current self (e.g. S36, S39, S44). The remaining half of the responses expressed desire for specific changes which appeared to be the outcome of realistic self-appraisal but the extent of the change desired was judged as indicating a greater lack of self-acceptance than responses in Category 2.

The two groups differed significantly from each other in self-acceptance ($\chi^2 (1, .025) = 25.17, p < .05$). Almost the whole of the substance-dependent group (89%) (Categories 2 and 3) and 36% of the control group reported poorer self-acceptance than that shown in Category 1 responses, predominantly by control group participants.

Consideration of the responses to the earlier question suggested that the positive self-esteem reported by 48% of the substance-dependent respondents was relative to the self prior to treatment, and likely to reflect somewhat unstable positive models of the
The responses to the second question on self-acceptance appear to bear that out. It appears that underlying negative models of the self might still be salient in the greater part of the substance-dependent group, certainly for the 65% in Category 3 on the second question.

Table 5

Levels of self-esteem and self-acceptance (%) in control and substance-dependent participants

<table>
<thead>
<tr>
<th>Self-esteem</th>
<th>Substance-dependent (%)</th>
<th>Control (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive self-esteem</td>
<td>48</td>
<td>60</td>
</tr>
<tr>
<td>Qualified positive self-esteem</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td>Negative self-esteem</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Unclassifiable</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Self-acceptance

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<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Happy with self</td>
<td>11</td>
<td>63</td>
</tr>
<tr>
<td>Desiring change, self-reflection</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>Desiring considerable change.</td>
<td>65</td>
<td>13</td>
</tr>
</tbody>
</table>

Summary

This section has addressed data relevant to models of the self and self-worth. The substance-dependent participants had significantly less confidence in themselves (and in other people to be available), as predicted in Hypotheses 1 and 2. Over half of the substance-dependent group and a large minority (40%) of the control group reported poor self-esteem. The two groups did not differ significantly on this variable and Hypothesis 1 was not supported statistically. Inspection of the content of responses,
however, indicated subtle differences in the nature of the positive self-esteem asserted by the two groups, which is taken up in the following chapter.

The difference in self-acceptance between the two groups was marked: 89% of the substance-dependent participants compared with 36% of the control participants were judged as lacking self-acceptance, supporting Hypothesis 1. An extreme lack of self-acceptance was indicated by 65% of the substance-dependent participants, compared with 11% of control participants.

Statistically, the findings in relation to self-worth are equivocal. Two measures produced a difference between the two groups; the third did not. Hypothesis 1, that substance-dependent would demonstrate a poorer sense of self-worth than an appropriate comparison group, was supported for the substance-dependent participants in relation to confidence in the self and others, and for a majority (but not all) of the substance-dependent group in relation to self-acceptance, but not for self-esteem. The implications of these findings are considered in the following chapter.

Hypotheses relating to the models of others held by the participants, derived from questionnaire measures of attachment, were then considered. The results are presented in the following section.

6.6.2 Models of others

**Attachment Style Questionnaire**

A between-subjects multivariate analysis of variance (MANOVA) was performed on the five scales of the *Attachment Style Questionnaire* entered together with group (substance-dependent or control) as the independent variable.
Employing the Wilks' criterion, the two groups differed significantly from each other on the combined scales (Wilks' lambda = .6395, multivariate $F (5,86) = 9.70$, $p < .000$. Power = 1). A Bonferroni adjustment of $\alpha = .01$ was set for each univariate comparison. Separate univariate analyses revealed significant effects for group on all five scales.

The substance-dependent group reported significantly less confidence in themselves and others (univariate $F (1,90) = 19.96$, $p < .000$. Power = .99) and significantly greater elevations on the other four scales: discomfort with closeness (univariate $F (1,90) = 38.20$, $p < .000$. Power = 1), relationships as secondary (univariate $F (1,90) = 18.07$, $p < .000$. Power = .99), need for approval (univariate $F (1,90) = 24.96$, $p < .000$. Power = 1) and preoccupation with relationships (univariate $F (1,90) = 21.07$, $p < .000$. Power = .99). Means and standard deviations for substance-dependent and control participants on each scale are shown in Table 6.

Despite the relatively small sample size of this study, estimates of the power of both the multivariate and univariate analyses indicate that these results can be generalised to the populations under scrutiny.

*Reciprocal Attachment Questionnaire*

In completing the *Reciprocal Attachment Questionnaire*, four of the sample of 60 substance-dependent people could not nominate a non-familial attachment figure, either according to the instructions on the *RAQ* or in discussion with the researcher. They represented too small a sample to be analysed and are omitted from the following results. However, it is noteworthy that four people could not nominate any attachment figure whereas all control participants could. It shows, in this small sub-group, almost no confidence in others to be available, and an extreme reluctance to trust or confide in them.
After elimination of the scales with poor scale reliabilities, a between-subjects MANOVA, entering the remaining five scales of the RAQ, indicated a significant effect for group on the combined scales (Wilks' lambda = .7892, multivariate F (5,82) = 4.38, p < .001. Power = .96). A Bonferroni adjustment of α = .01 was employed to examine the univariate F tests.

Separate univariate analyses revealed a significant effect for group on three of the five scales. Substance-dependent people reported significantly more angry withdrawal in their relationship with their attachment figure (univariate F (1,86) = 7.52, p < .007. Power = .77), significantly more compulsive careseeking (univariate F (1,86) = 13.48, p < .000. Power = .95), and significantly greater fear of loss (univariate F (1,86) = 15.52, p < .000. Power = .97). There was a tendency in the substance-dependent group towards greater proximity-seeking (univariate F (1,86) = 5.79, p < .018. Power = .66) and separation protest (univariate F (1,86) = 5.10, p < .026. Power = .61), compared with the control group. Means and standard deviations for substance-dependent and control participants on each scale are shown in Table 6.

Power estimates suggest that the findings related to compulsive careseeking, fear of loss and angry withdrawal can be generalised to the populations sampled in this study. Theoretically expected and meaningful differences between the two groups in proximity-seeking and separation protest approached significance, but would require further confirmation in a larger scale study.

Hypotheses 2 to 4 predicted that substance-dependent people would indicate greater attachment insecurity than a non-clinical comparison group, expressed in a greater lack of confidence in others’ availability, stronger patterns of disordered attachment in attachment relationships, and a greater enactment of attachment behaviours and endorsement of attitudes related to insecure attachment, such as proximity-seeking, preoccupation with relationships or discomfort with closeness.
These hypotheses were multiply supported: by the results of the analysis of the Confidence scale of the ASQ; the findings of greater levels in the substance-dependent participants of angry withdrawal, compulsive care-seeking and feared loss; the tendency towards more proximity-seeking and separation protest on the RAQ; and the greater preoccupation with relationships, need for approval, discomfort with closeness and relationships as secondary on the ASQ.

Table 6
Mean and standard deviation scores of substance-dependent and control groups on the Attachment Style Questionnaire and the Reciprocal Attachment Questionnaire

<table>
<thead>
<tr>
<th>Scale</th>
<th>Substance-dependent</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attachment Style Questionnaire:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence in self and others</td>
<td>28.81 (6.87)</td>
<td>35.60 (5.64)</td>
</tr>
<tr>
<td>Discomfort with closeness</td>
<td>43.48 (7.18)</td>
<td>33.46 (6.95)</td>
</tr>
<tr>
<td>Relationships as secondary</td>
<td>20.36 (5.64)</td>
<td>15.35 (4.57)</td>
</tr>
<tr>
<td>Preoccupation with relationships</td>
<td>33.65 (5.25)</td>
<td>27.75 (5.00)</td>
</tr>
<tr>
<td>Need for approval</td>
<td>28.05 (6.24)</td>
<td>21.36 (4.65)</td>
</tr>
<tr>
<td><strong>Reciprocal Attachment Questionnaire:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angry withdrawal</td>
<td>19.49 (6.46)</td>
<td>15.71 (5.01)</td>
</tr>
<tr>
<td>Compulsive care-seeking</td>
<td>18.85 (5.76)</td>
<td>14.64 (4.39)</td>
</tr>
<tr>
<td>Feared loss</td>
<td>9.97 (3.71)</td>
<td>6.31 (2.76)</td>
</tr>
<tr>
<td>Proximity-seeking</td>
<td>9.32 (3.19)</td>
<td>7.69 (2.97)</td>
</tr>
<tr>
<td>Separation protest</td>
<td>8.26 (3.56)</td>
<td>6.52 (2.93)</td>
</tr>
</tbody>
</table>
6.7. Relationship with the substance

It was expected that substance-dependent participants would report that they had a relationship with the substance they preferred (Hypothesis 5) and that it gave them a sense of security resembling that provided by an attachment relationship (Hypothesis 6). Questions were asked at interview to obtain information relevant to these two hypotheses and the results are reported in turn below.

Q. Many people feel as if they had a relationship with the drug they preferred. Would you say that was the case for you? How would you describe that relationship?

The majority of participants (71%) answered in the affirmative. Descriptions of the relationship were allocated to five categories with an inter-rater agreement of 84%. Examples of each category are presented below, followed by some responses of the minority of subjects who did not feel they had a relationship with the substance. Of those, one of the replies was considered to reflect an attachment relationship. However, all replies were excluded from the allocation process on the basis of the participants' assertions that they did not have a relationship with the substance. The percentages reported in each category reflect the proportion of the total substance-dependent group in that category, not just those who asserted a relationship with the substance. The percentage of responses appearing in each category appears in Table 7. All responses appear in Appendix G.

Category 1. Respondents spoke explicitly of the relationship in terms expected of an attachment relationship, as a partner or dependable friend (16%).

A companion for me that I could rely on. It was always there. No matter how I felt, good or bad, it was always there, always the same. Always gave me the same effect. I could rely on it more than other people.
Basically the most important thing in my life at that time. I loved the drug. It was my partner at the time.

A very abusive one. I use it as an excuse and it used me. I felt I was being used. Even now I think I didn't get to have my parting shot, this good-bye thing. It's really strange. Sometimes I felt it was my only friend and I could depend on it, and I knew how it would make me feel.

**Category 2.** Respondents described qualities of the relationship, or outcomes which would be associated with an attachment relationship, such as security, comfort, or dependability (9%).

They [drugs] have taken the place of a relationship. To start with, they gave me what I looked for in relationships. They gave me the warmth, the security, the feelings of esteem ... of belonging, of acceptance, of being part of something. And they gave me an escape from day to day life which I find I can get in a relationship.

It's always there. Whenever you're feeling down, you can have some of it, and it'll take you away from reality. If you're in despair or depressed, you wouldn't feel that. Just as comforting as what a relationship could be.

The love of my life. It's a comfort when you're feeling anxious or angry or sad or depressed or just uncomfortable.

**Category 3.** Respondents described the substance as providing qualities they felt they lacked, or, in more extreme cases, necessary to function at all. Many of the latter responses described the relationship as addictive, but were judged to be describing a psychological state, not exclusively physiological dependence (14%).
It'd bring me out of me at certain times. I could be friendly, I could argue with people. I had more confidence to do things, especially with my relationships as well. I could be a lot more open. It broke the ice, and it'd be a talk point too.

I just couldn't live without it. I was very dependent on it. I couldn't function properly unless I was stoned. I thought I just couldn't communicate with anybody ... The drugs made me an extrovert.

It gave me the things in myself I wanted at the time, confidence and that. I didn't feel I was anything unless I had speed in me.

Addictive. It was on my thoughts more than anything else whether family, friends or anything ... When I was straight, I couldn't stand it, I had to do something.

**Category 4.** The relationship with the substance was described as a substitute for a sexual relationship, which in this study is distinguished from an attachment relationship though it may overlap with one; or the respondents used relationship terms but provided insufficient detail to indicate whether it was an attachment relationship that was being described (14%).

I used to treat heroin as a lover. I haven't had a sexual relationship for going on three years and I didn't feel as if I needed one. For a long time, I saw heroin as my mistress. It took me too long to realise she just kept letting me down.

It became my sex, everything. After I got fully into it, I didn't worry about a lot of things.

Quite passionate really.
I couldn't deny that I loved it. Bit of a dead end. It was sort of a love-hate. I loved it and I hated it.

**Category 5** was employed for those responses where the relationship with the substance was described in terms suggestive of addictive behaviour, rather than a relationship: with a focus on the pharmacogenic effect, the gratification of using the substance, domination of the person's life by the substance, or the substance being perceived as necessary without specifying whether the need was physical or psychological (18%).

Sheer bliss. I loved it, the effect.

I really loved being stoned, and drugs. I couldn't survive the days without them. And that was my main reason to be alive, even more than my partner, was just going out to get stoned or drunk.

In the beginning it was just a lot of fun and games. Once I started to get obsessed with it, it was no longer fun and it was sort of a burden. I had to get drugs. Then it became a one-way affair. I had no control over it.

Several participants (29%) did not feel that they had a relationship with the substance they preferred. Their responses describe a somewhat different experience of the substance from those already presented. Some examples of these are reported below as part of the spectrum of the experience of the substance in substance dependence. The remainder appear in Appendix G.

You were too out of it, you never had to think about bills, things like that ... It just took all your problems away. Like [indistinguishable] ... things and people you can destroy along the way.
For me, it was a medicine to get me through the day. I didn't even used to get stoned.

A deadening of how I was feeling. I did like the drug itself.

Towards the end if I was feeling down or frustrated, it was a little bit like that [a relationship]. That's what I'd turn to for help. I neglected relationships.

The great majority of the substance-dependent group claimed to have a relationship with the substance they preferred (71%). However, the two raters judged that 53% of the substance-dependent group were describing a relationship, according to the criteria outlined in Chapter Five. Of the whole group, 16% described the substance as the pre-eminent one in their lives in terms that a person could be expected to use in describing an attachment relationship. Another 9% claimed that the substance gave them the kinds of benefits that attachment relationships normally confer: comfort, security, or the ability to engage with the environment that a secure base would provide. The responses of this 25% of the substance-dependent group were therefore judged to be describing an attachment relationship which has primacy in the person's consciousness and life. Another 14% (Category 4) acknowledged a relationship dimension to their substance use but did not provide enough detail to verify whether it was an attachment relationship.

One group (comprising 14% of substance-dependent people) reported quite extreme states of dependence on the substance to be able to function (Category 3). The remaining responses (Category 5) did not appear to be describing a relationship with the substance.

Results indicate that 25% of the substance-dependent participants had an attachment relationship with the substance they preferred. Another 14% claimed it as necessary to
function. It will shown in the discussion which follows that this category of responses is also consistent with an attachment relationship with the substance. Thus 39% of substance-dependent participants were considered to have a relationship with their substance that fulfilled the criteria of an attachment relationship. Thus Hypothesis 5 was supported for this proportion of the substance-dependent group.

Table 7
Relationship with the substance: categories of response (%)
(substance-dependent group only)

<table>
<thead>
<tr>
<th>Relationship with substance</th>
<th>% of total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71</td>
</tr>
<tr>
<td>No</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>% of total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attachment relationship</td>
<td>16</td>
</tr>
<tr>
<td>2. Receiving attachment provisions</td>
<td>9</td>
</tr>
<tr>
<td>3. Providing what is lacking in self</td>
<td>14</td>
</tr>
<tr>
<td>4. Sexual or not enough detail</td>
<td>14</td>
</tr>
<tr>
<td>5. Addictive experience</td>
<td>18</td>
</tr>
</tbody>
</table>

To corroborate the nature of the substance-dependent participants' relationship with the substance, they were asked whether emotional security was conferred by use of the substance, and the nature of that security, if it was claimed.

Q. Did the drug give you a sense of security? How would you describe that security?

The great majority of the substance-dependent participants (85%) asserted that the substance provided a sense of security. However, when asked to elaborate, it is
apparent from the responses that the participants understood the word in a variety of ways, not all of which relate to the felt security of attachment theory. The responses fell into five categories with some subjects (14%) reporting more than one benefit, or type of security, from use of the substance. Responses reporting more than one kind of benefit were allocated to (both) the categories appropriate to the benefit claimed, as there was no reason to believe that people only use substances for one reason. Final percentages therefore represent the proportion of the whole group giving responses matching that category, with some individual participants counted more than once. Three per cent of responses were considered unclassifiable. Inter-rater agreement was 83%. Examples from each category are presented below, followed by the responses of those who did not feel they had a relationship with the substance. The percentage of responses in each category (i.e. the proportion of the whole substance-dependent sample in each category) are shown in Table 8. The full group of responses appears in Appendix G.

Category 1. Responses were consistent with an attachment relationship: the provision of security, comfort, confidence to interact with the environment, self-worth (22%).

[The drug was] a replacement for sex, food, life. It was security, warmth, well-being, everything.

A feeling of well-being. I felt that I was more sociable, using it. And I used to enjoy working under the influence. It took away any physical pain I had and kept me interested in what I was doing. I had a fulfilled feeling that I didn't have without the drug. I had an empty feeling without the drug.

Felt more confident, happier, safer. It made me face things, be more relaxed in a group of people.
Category 2. The respondents described the substance as replacing perceived lacks in the self, or providing the confidence or self-worth to do things they normally would not have felt able to do. These benefits are also consistent with the benefits of an attachment relationship (20%).

Able to do things I normally wouldn't be able to do, like speak up and say things when I thought they were wrong. Just a sense of security within me, just to get through the day.

Gave me more confidence to do what I've always liked doing, like associating with people, talking to people, having the courage to actually do what I wanted to do instead of just sitting back and taking things as they come.

Prior to getting into drugs I always felt empty, didn't belong. Getting into drugs, I felt I belonged, I felt whole, I didn't feel like anything was missing anymore.

I'm a fairly insecure person. When I was on the drug, I was confident.

Category 3. The respondents described the substance as alleviating unwanted feelings and worry, providing security against an internal state (17%).

In the sense that I didn't have to deal with myself and what I was dealing with, and what I was feeling. Yeah, heaps, I didn't have to think about emotions and that's better. You didn't have to think about your problems, or why you were hurting or things you'd lost in life. I had a lot of trouble with my kids ... and I didn't want to deal with that. It was really hard. The more drugs I took, the less I had to think about it. So it worked out well.
I feel I can do anything I want without having to worry about other people criticising me or making comments about me.

Nothing really worried me. I was different around other people and what people said didn't matter.

**Category 4.** The respondents described a security which appears to be excessive emotional self-sufficiency (18%).

Nobody could hurt me. I was ten foot tall and bullet-proof. I could do anything I wanted to. I could manipulate my own mind into believing what I was doing was right, even though it was wrong, because I hated being wrong. It made me comfortable in my own skin.

In the end, it put me in a world of my own, blocked out my emotions, all my feelings. I wasn't really thinking about much. I was just in a world of my own. When I had the stuff I felt comfortable. Didn't have to worry about anything else or anybody, and it made me feel good.

At the time, I felt on top of everything. I was doing so many things at once that normally I wouldn't be able to do. I could get things done and I knew I could do it. Didn't have to worry about relying on other people because I knew I could do it myself. I could go on forever. I never used to sleep much or read. I just kept powering on.

**Category 5.** In the final group were placed responses indicating the use of substances addictively, for gratification or to prevent physical withdrawal (15%).
The feeling of being high. The excitement of going out and ripping people off. It's an adrenalin rush to go out and do something and not get caught. I had a lot of good times.

Complete oblivion, the adrenalin of the life style, excitement, didn't lose control.

Once I'd had a shot, I wasn't sick, I could do my housework, care for [toddler]. I'd get really sick without it. Because I'd been using so long, the good thing was that I wasn't sick. If I got stoned, it was a bonus. It was good if I didn't get sick.

A minority of participants (17%) did not feel that the substance gave them a sense of security. Some of their responses are presented below. The remainder appear in Appendix G.

No. A sense of insecurity!

No. Mainly had it for back pain.

No. Have done things when I was stoned that I possibly wouldn't do when I was straight, not being affected by people emotionally.

The greater part of the group (85%) considered that the substance gave them a sense of security. The raters judged the responses in Categories 1 and 2, 42% of the substance-dependent group, as directly consonant with the security provided by attachment relationships.

The bulk of the responses in Category 3 claim the chief benefit of the substance as not having to feel unwanted feelings, or alleviating anxiety - helping the person not to have
to worry about anything, including responsibility. A small number of these responses (5%) indicated use of the substance to protect the person from anxiety about what others were thinking.

Eighteen per cent (18%) of the group (Category 4) described the security provided by the substance as extreme emotional self-sufficiency, being in a world of one's own, independent of the need to rely on others, or to consider other people. The remaining responses were judged as describing a search for addictive gratification or prevention of physical withdrawal, rather than a search for, or experience of, emotional security.

Table 8

<table>
<thead>
<tr>
<th>Security provided?</th>
<th>% of total group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>85</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>% of total group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Receiving attachment provisions</td>
<td>22</td>
</tr>
<tr>
<td>2. Replaces lacks in self</td>
<td>20</td>
</tr>
<tr>
<td>3. Alleviates unwanted feelings</td>
<td>17</td>
</tr>
<tr>
<td>4. Emotional self-sufficiency</td>
<td>18</td>
</tr>
<tr>
<td>5. Addictive experience</td>
<td>15</td>
</tr>
<tr>
<td>Unclassifiable</td>
<td>3</td>
</tr>
</tbody>
</table>

It will be argued in the discussion which follows that the responses in Category 3 which express concern about what others are thinking of the self (5%), and the excessive self-sufficiency claimed in replies in Category 4 (18%), can be understood as
manifestations of different kinds of insecure attachment, and are directly consonant with attachment theory. Thus 65% of the substance-dependent participants were judged to use their substance for attachment-related reasons - to obtain felt security - providing partial support for Hypothesis 6.

Of the substance-dependent participants, between 39% and 65% were judged to have an attachment relationship with the preferred substance. Hypotheses 5 and 6 were therefore supported by a large proportion of the substance-dependent group, although not all.

6.8. Mood

It was hypothesised that a greater level of depression would be found in the substance-dependent group, consistent with the loss of an attachment relationship (Hypothesis 7), and that a greater level of anxiety would be found in the substance-dependent group, consistent with greater insecurity in attachment organisation (Hypothesis 8).

The degree of depression and anxiety present in the substance-dependent and control groups was measured against clinical norms provided for the Beck Depression Inventory and the Beck Anxiety Inventory. Both groups were then compared with each other by means of a multivariate analysis of variance (MANOVA).

6.8.1. Depression

Measured on the Beck Depression Inventory (BDI) (Beck, 1978) and compared with clinical norms provided by the manual (Beck & Steer, 1987), 40% of the substance-dependent group reported mild to moderate depression, 27% reported moderate to severe depression, and 8% extremely severe depression. The mean score for the whole group was 16.79 (SD = 8.95) which is mildly to moderately depressed. In the control
group, measured by the BDI, 21% was mildly depressed and the remainder not depressed. The mean score was 6.19 (SD = 6.45) which is in the normal range.

6.8.2. Anxiety

Measured on the Beck Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988) against the clinical norms provided (Beck & Steer, 1993), 23% of the substance-dependent group were suffering mild anxiety, 18% moderate anxiety, and 15% severe anxiety. The mean score for the whole group was 13.38 (SD = 9.92) which is mildly anxious. Among the control group participants, the majority reported no anxiety and 6% reported mild anxiety. The mean score for the control group was 3.44 (SD = 3.31), a minimal level of anxiety.

6.8.3. Substance-dependent and control groups compared

A between groups multivariate analysis of variance (MANOVA) was performed on the BAI and BDI scales with group (substance-dependent or control) as the independent variable. Evaluations of normality and multicollinearity were satisfactory. However, evaluation of the homogeneity of the variance-covariance matrices was not (Box's $M = 47.23$, multivariate $F(3, 108883) = 15.31, p < .000$). Inspection of the variances of each group indicates that the smaller cells had smaller variances, so that the null hypothesis can be rejected (Tabachnick & Fidell, 1989, p. 379). Pillai's criterion is reported, as being the most robust in this situation (Tabachnick & Fidell, 1989).

The two groups differed significantly from each other on the combined scales (Pillai's criterion = .332, multivariate $F(2,89) = 22.16, p < .000$). To preserve an experiment-wise error rate of $\alpha = .05$, alpha was set at .025 for each univariate comparison. Separate univariate analyses revealed significant effects for group on both scales. The substance-dependent group reported significantly more depression (univariate $F(1,90)$
and anxiety (univariate $F (1,90) = 29.59, p < .000$) than the control group. Means and standard deviations on both scales for substance-dependent and control participants are shown in Table 9 below.

The substance-dependent participants were significantly more depressed and anxious than control group participants, supporting Hypotheses 7 and 8. Against clinical norms for the BDI, 75% of the substance-dependent participants were depressed, compared to 21% of the control group, and at least one-third was moderately to severely depressed. Clinical norms for the BAI indicated that 56% of the substance-dependent group were experiencing anxiety, compared with 6% of the control participants, and the anxiety experienced was moderate to severe in one-third of this group.

Table 9
Mean and standard deviation scores of substance-dependent and control groups on the Beck Depression Inventory and the Beck Anxiety Inventory.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Substance-dependent</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck Depression Inventory</td>
<td>16.50 (8.75)</td>
<td>6.06 (4.43)</td>
</tr>
<tr>
<td>Beck Anxiety Inventory</td>
<td>13.25 (9.85)</td>
<td>3.47 (3.34)</td>
</tr>
</tbody>
</table>

6.9. Experience of close relationship

Hypotheses 9 and 10 predicted that substance-dependent people would report lower levels of intimacy in their closest relationship and a greater degree of loneliness in close relationships than the control group.

A multivariate analysis of variance (MANOVA) of the Miller Social Intimacy Scale (MSIS) and the three scales of the Social and Emotional Loneliness Scale for Adults
(SELSA), entered together, with group as the independent variable, indicated that the two groups differed significantly from each other (Wilks' lambda = .7400, multivariate $F(4, 87) = 7.64, p < .000$. Power = 1).

Table 10

Mean and standard deviation scores of substance-dependent and control groups on the Miller Social Intimacy Scale and the Social and Emotional Loneliness Scale for Adults

<table>
<thead>
<tr>
<th>Scale</th>
<th>Substance-dependent</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Miller Social Intimacy Scale</strong></td>
<td>119.16 (21.73)</td>
<td>133.58 (22.43)</td>
</tr>
<tr>
<td><strong>Social and Emotional Loneliness Scale for Adults</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Romantic loneliness</td>
<td>53.66 (17.63)</td>
<td>35.07 (19.83)</td>
</tr>
<tr>
<td>Family loneliness</td>
<td>29.77 (14.96)</td>
<td>20.41 (11.70)</td>
</tr>
<tr>
<td>Social loneliness</td>
<td>49.14 (16.38)</td>
<td>35.76 (14.39)</td>
</tr>
</tbody>
</table>

A Bonferroni correction set $\alpha$ at .012 for each univariate comparison. Separate univariate analyses revealed that, in relation to the comparison group, substance-dependent people reported significantly less intimacy with the person they were closest to at the time (univariate $F(1,90) = 8.75, p < .004$. Power = .83), and were significantly more lonely currently in all three kinds of relationships measured by the SELSA: romantic (univariate $F(1,90) = 20.71, p < .000$. Power = .99), family (univariate $F(1,90) = 9.42, p < .003$. Power = .86) and social (univariate $F(1,90) = 14.92, p < .000$. Power = .96). Power estimates indicate the generalisability of these findings to the populations sampled. Means and standard deviations of substance-dependent and control participants on these scales are shown in Table 10.
Hypotheses 9 and 10, which predicted greater impairment of close relationship in substance-dependent people compared with a non-clinical population, were therefore supported.

6.10. Summary

The results of this chapter have indicated considerable support for the hypotheses presented in Chapter Four. Substance-dependent people demonstrated models of themselves and others consistent with greater insecurity in attachment than that shown by control participants. A large proportion of the substance-dependent participants was judged to have an attachment relationship with the preferred substance (between 39% and 65%). The mood of the substance-dependent people was more depressed and anxious than the comparison group, and they were more lonely and experienced less intimacy in their close interpersonal relationships. The implications of these results for the proposed model of substance dependence are discussed in the following chapter.
CHAPTER SEVEN

Discussion

Attachment theory has been argued, in this thesis, to provide a more complete explanation than competing theories of the clinical phenomena associated with substance dependence and its treatment: the function of the substance, associated depression and anxiety, considerable difficulties with close interpersonal relationships, and the observed high rate of relapse to substance use. The physiological component of substance dependence, including the phenomena of tolerance and withdrawal, is acknowledged. However, the contribution of psychological factors in the development of substance dependence is considered crucial, and is agreed by other schools of thought (reviewed in Chapter One).

This thesis has put forward a model of substance dependence that sees it as arising out of the need for a dependable attachment relationship in people with deep disturbance of attachment organisation. It was proposed that substance-dependent people would find in their use of the substance a surrogate attachment relationship.

The proposed model of substance-dependence consists, as mentioned previously, of four components: attachment insecurity, an attachment relationship with the substance, depressed and anxious mood, and impairment of close relationship. The depressed and anxious mood are considered to be secondary to the loss of the relationship with the substance and the underlying attachment insecurity. The impairment of intimacy and the experience of loneliness in close interpersonal relationships are consistent with the interpersonal difficulties of people who are insecurely attached.

This study first established the presence of substance dependence in one group of participants, and its absence in a comparison group matched for age and education. It
was then determined whether the substance-dependent group was insecurely attached relative to the normative group, and whether the substance-dependent participants had an attachment relationship with their preferred substance. The emotional state (mood) of the substance-dependent participants in abstinence and their current experience of close interpersonal relationships were compared with the normative group, to test hypotheses relating to the third and fourth components of the model.

The discussion below first addresses the findings of this study in relation to attachment in the substance-dependent and control groups, beginning with attachment-related models of the self, then models of others. The nature of the relationship with the substance, identified by the substance-dependent participants, is then discussed. This is followed by an analysis of the findings of the study in relation to the emotional state of the participants, and their current experience of close interpersonal relationships. The conclusion addresses the initial aims of the research, the meaning of the results for the understanding of substance dependence, particularly for clinical practice, some shortcomings in the conduct of the study, and some possible directions for future research.

7.1. Attachment

As discussed in Chapter Three, attachment experiences become internally represented in models of the self and others, based on evaluations of how acceptable the self is in the eyes of attachment figures, and how attachment figures can be expected to respond, that is, how accessible and responsive they are. This study obtained qualitative accounts of how the participants valued themselves, as well as quantitative measures of attachment behaviour in relation to other people.
7.1.1. Models of the self

Confidence in the self

Analysis of the Confidence scale of the Attachment Style Questionnaire indicated that the substance-dependent participants had significantly less confidence in themselves and in other people to be available than did the control participants. As few items of the Confidence scale directly address self-confidence (in contrast to confidence in others), additional measures were needed to establish self-worth. Self-worth was operationalised as self-esteem and self-acceptance, and predicted to be poorer in the substance-dependent group compared with the control group (Hypothesis 1).

Self-esteem.

Overall, 60% of the control group reported positive self-esteem. This proportion is consistent with the percentage of people found in the normative population who would be expected to have positive self-esteem, that is, those who are securely attached. The remainder of the control group indicated poorer self-esteem (37%) and one person was judged to indicate negative self-esteem (3%). This proportion (40%) is consistent with the proportions of insecure attachment found in the normative population, divided between anxious/ambivalent and avoidant attachment (e.g. Hazan & Shaver, 1987). It is possible then that the greater vulnerability in self-esteem apparent in the latter group reflects attachment insecurity though, of course, it does not prove it.

Of the substance-dependent group, almost half (48%) reported positive self-esteem, 20% were less positive and 30% were negative. In categorical terms (positive or negative self-esteem) the control group participants were 60% positive to 40% negative; the substance-dependent participants were 48% positive to 52% negative. Statistically, the difference between the two groups was not significant. Close
inspection of the responses, however, indicated qualitative differences between the control and substance-dependent participants in the estimation of the self, and revealed clear differences in self-esteem.

In those participants reporting positive self-esteem, the tone of responses in both groups is positive. However, the positive sense of self in the substance-dependent group is relative to how the person felt before treatment, and there is an admission in many cases that further progress is needed. The control group put no such conditions on their self-esteem. Thus the current level of self-esteem in the substance-dependent participants appears to be new, and the implied underlying positive sense of the self (or self-model) also new or revived. But the presence of recent negative self-esteem, and an underlying negative self model, is strongly implied. Many responses indicate that the current level of self-esteem is conditional on continued perceived progress in treatment. Thus, the substance-dependent participants do not seem to have attained the same kind of stability in their sense of self that the control participants appear to have.

The substance-dependent participants with poorer self-esteem (responses in Category 2) manifested shifts between positive and negative self-esteem and self models - an instability of self-esteem - which was not found in the control group participants (see comments in Chapter Six, Section 6.6.1). None of the control group participants actively felt bad about themselves (Category 3), compared with the specifically negative self-esteem expressed in the substance-dependent responses. As mentioned in the Chapter Six (Section 6.6.1), the substance-dependent group indicated strong dislike, anger at and derogation of the self.

Considering both the numerical proportions of group members in each category and the qualitative data, a large minority of people in the control group and the majority of the substance-dependent participants have worse self-esteem than their peers. It appears as well that a degree of caution should be exercised in judging the positive
responses of the substance-dependent participants as a sign of prevailing self-esteem, as there are indications that many of them are state-dependent. The implications of these results for the hypothesis under consideration are addressed below (see Self-worth).

**Self-acceptance**

The greater part of the control group (63%) indicated considerable self-acceptance, reporting that they were essentially happy with themselves as they were, again consistent with the proportion of securely attached people in non-clinical populations. In several cases there was a perception of shortcomings in themselves but adjustment to them was evident. Very few substance-dependent participants were in this category (11%). Poorer self-acceptance was indicated by 23% of the control group and 24% of the substance-dependent group, who expressed a desire for change without the same evidence of self-acceptance despite shortcomings.

The majority of the substance-dependent participants (65%) and 13% of the control group were judged to strongly lack self-acceptance. Once again there were qualitative differences in the replies of the two groups. The control group responses usually expressed a desire for comparative change: to be "more forgiving," "more trusting," "decrease the temper level." The desired change was on a continuum with the present self. By contrast, the great majority of replies from the substance-dependent group (77% of this category) expressed a desire for absolute states or personal qualities, not for comparative change. They wanted to be "peaceful," "contented," "loved," "warm," "totally honest," "perfect." The inference is that the perceived present self is not those things: that the respondent wants to be a different person. This implies a severe lack of self-acceptance. Moreover, most responses lack a sense of agency to bring about the desired changes and reveal a lack of realism in the conception of the ideal self, suggesting that the desired change (for a categorical change of state) would be
perceived or experienced as impossible. As long as the model of the desired self is construed as so categorically different from the currently perceived self, the result is likely to be an entrenched lack of self-acceptance.

The proportion of the control group lacking self-acceptance (36% in Categories 2 and 3) is again consistent with the proportions of insecurely attached people in the normative population. By contrast, almost the whole of the substance-dependent group (89%) lacked self-acceptance. How these findings relate to self-worth is discussed in the following section.

**Self-worth**

Overall, on measures of self-worth (confidence in the self and others, self-esteem and self-acceptance), the control group’s responses were consistent. Control group participants reported significantly greater confidence in themselves and others than the substance-dependent group. Approximately two-thirds of this group reported stable positive self-esteem and self-acceptance. The remaining one-third was shown to be comparatively lacking in both. As pointed out above, these proportions are consistent with the occurrence of secure and insecure attachment in non-clinical populations, and the findings that would be expected.

The responses of the substance-dependent group over the three measures were less consistent. As expected, these participants had less confidence in themselves and others. Approximately half reported positive self-esteem. Almost all lacked self-acceptance and 65% were judged seriously lacking in the latter. Analysis of individual responses suggested that the positive models of the self and the corresponding self-esteem reported by half the substance-dependent respondents were likely to be somewhat unstable.
The responses to the self-acceptance question bear this out. Asking participants how they would like to be may have caused them to reflect on the more dissatisfying aspects of the currently perceived self, making negative models of the self more salient. Thus negative models of the self would seem to be readily elicited in the greater part of the substance-dependent group, indicating that the positive self-esteem is not consolidated, and that an overall sense of self-worth is lacking.

Bowlby (1973, 1982) portrays self-worth as a stable characteristic of the securely attached, self-reliant person. Shifts between positive and negative estimates of the self, and desire for change in the self without a sense of agency to bring that about, form no part of this portrait. These phenomena are far more consistent with insecure attachment.

The qualitative difference in stability of self-esteem between the substance-dependent and control participants, the severe lack of self-acceptance in the substance-dependent group, the greater lack of confidence in the self and others in that group, and the portrait of the securely attached person, identified by Bowlby (1973), strongly indicate poorer self-worth in the substance-dependent participants compared with the control group, and are considered to support Hypothesis 1.

The greater attachment insecurity in relation to others, hypothesised in the substance-dependent participants (Hypotheses 2-4), was measured using the Attachment Style Questionnaire and the Reciprocal Attachment Questionnaire and is discussed next.

7.1.2. Models of others

Results of the analysis of the Attachment Style Questionnaire (ASQ) indicated that the substance-dependent participants had significantly less confidence in themselves, and in other people to be available and responsive (supporting Hypothesis 2), and were
more preoccupied with relationships, had a greater need for others' approval, were more uncomfortable with closeness, and more likely to view relationships as secondary to achievement.

When Feeney and her colleagues conducted an initial cluster analysis of ASQ scale scores, two clusters were produced: one represented a group of people who scored at a high level in confidence and a low level on all other scales, considered to indicate a secure attachment style; the second represented the opposite, a group which was low in confidence and elevated on all other scales, indicating insecure attachment (Feeney, Noller, & Hanrahan, 1994). Further analysis by the authors indicated that the first group remained stable across all solutions, but the second group was able to be subdivided into different styles of insecurity in attachment. In the current study, on the two-cluster criteria, the control group appears to be secure and the substance-dependent group, as expected, insecure.

On the Reciprocal Attachment Questionnaire, only two patterns of disordered attachment, compulsive care-seeking and angry withdrawal, and three dimensions of attachment behaviour, proximity-seeking, feared loss and separation protest, were able to be tested. Results showed that substance-dependent people had significantly greater fear of loss of their attachment figure, were more compulsively care-seeking, that is, indicated dependence on and a high need for care from their attachment figure, and reported significantly greater angry withdrawal, that is, anger, disappointment and letdown at the perceived unavailability of the attachment figure. There was also in these participants a possible tendency towards a greater need for proximity to the attachment figure, and more protest at separation from that person.

Over both measures, the substance-dependent group endorsed dimensions associated with avoidant or dismissing attachment (discomfort with closeness, relationships as secondary to achievement, angry withdrawal), and also gave many indications of
behaviour associated with anxious-ambivalent or preoccupied attachment: greater preoccupation with relationships, greater need for approval, fear of loss of the attachment figure and compulsive care-seeking. The possible tendency towards greater proximity-seeking and separation protest further suggest anxious rather than avoidant attachment.

Studies of the connection between attachment organisation and adult psychiatric status have found considerable evidence of an association between preoccupied attachment (as measured by the AAI) and adult psychopathology. However, the studies of substance abuse have generally found an association with a dismissing attachment organisation (also as measured on the AAI), though preoccupied attachment has been found as well in some studies. This study, employing different measures of attachment security, has found evidence of anxious (preoccupied) attachment in the substance-dependent group, as well as elevated endorsement of scales associated with avoidant (dismissing) attachment.

Overall, the substance-dependent group reported significantly greater levels of behaviour associated with insecure attachment than a normative group of people, both on dimensions of behaviour associated with attachment and patterns indicative of disordered attachment. Hypotheses 3 and 4 were therefore supported.

7.1.3 Summary of findings in relation to attachment

Hypothesis 1 predicted that substance-dependent people, relative to a non-clinical, non-substance-dependent comparison group, would manifest poorer self-worth. Hypotheses 2-4 predicted, in the substance-dependent group, behaviour in relation to others indicative of greater attachment insecurity. Several measures of self-worth indicated support for the first hypothesis. The analysis of attachment behaviour in relation to other people directly confirmed the hypothesis of greater insecurity in the
substance-dependent group (Hypotheses 2-4) and appeared to implicate anxious or preoccupied attachment, as well as avoidant attachment.

The results not only confirmed predictions in relation to the substance-dependent group but identified within-group variation in the control group. When the control group was considered as a whole, the influence of the possible insecure sub-group was not apparent. However, when interview responses were categorised according to degree of self-esteem and self-acceptance, the control group was sub-divided in a way that allowed the presence of a sub-group of these participants to be more influential. The categorisation of the qualitative data thus enabled a differentiation of the control group in a way that is consistent with theory, and which at least partly captures the subtleties and variations inherent in relationships in the normative population.

7.2. Relationship with the substance

7.2.1. Description of the relationship with the substance

The substance-dependent participants were expected to report having a relationship with their preferred substance indicative of an attachment relationship (Hypothesis 5). Though 71% of the substance-dependent participants reported the subjective experience of a relationship with the substance, just over half the responses (53%) were judged as describing a relationship. Twenty-five per cent of the total group (25%) were considered to be describing an attachment relationship. Sixteen per cent (16%) called their preferred substance, "my partner at the time," "my best friend," "my only love," that could be depended on, relied on, was always there: terms reflecting the bond and the qualities associated with an attachment relationship. Another nine per cent (9%) claimed other benefits from the substance: "It's a comfort when you're feeling anxious," "They gave me the security ... the feelings of esteem ... of acceptance," "[I was] able to mingle and socialise with people without any problems."
These are also provisions associated with attachment relationships, including, in the last response, the secure base effect.

Another 14% described an extreme need for the substance in order to function at all. The substance is described in some cases as necessary to enable communication with others, or to participate in life, "to keep going, to be motivated, to be accepted to life." In other cases, it provides self-worth, or confidence to engage with people: "I didn't feel I was anything unless I had speed in me." In two cases the substance appears to alleviate a state of extreme internal crisis: "When I was straight, I couldn't stand it, I had to do something," "If I didn't have it, I wouldn't talk, stress out, things like that." Union with the substance brings joy in one case, and in its absence, others report feelings of loss and grief.

In most cases the impairment described appears to be an extreme inability to interact with the environment at all, and an extreme lack of self-worth. These responses are consistent with deprivation of a secure base within the self (internalised security), and a lack of confidence in the importance of the self to others. Both appear to be paralysing for these participants. The substance enables the person to function by providing a base from which he or she can then engage, or by providing a sense of worth. The two cases describing internal crisis appear to be describing an intense preoccupation. The object of the preoccupation is not specified but it appears to be the unbearable state of the person internally. What fixes it is ingestion of the substance (the experience of proximity). This is reminiscent of the behaviour characteristic of preoccupied attachment, where the uncertainty about the dependability of the attachment figure elicits a preoccupation with the relationship that dominates other concerns in the present. Thus, it may reflect an extreme form of preoccupied attachment insecurity in these two people.
This category of participants, then, also appears to be using substances for attachment-related reasons: to experience union with an attachment figure, to compensate for a lack of internal security (obtain a secure base that will enable engagement with the world), or directly to relieve attachment insecurity. In many cases, the substance seems to be providing a means of adaptation to severely insecure attachment.

People who claimed not to have a relationship with the substance, or were judged not to be describing an attachment relationship, comprised 47% of the group. Another 14% described a sexual relationship (which is not necessarily an attachment relationship) or did not provide enough information about the relationship to judge whether it met attachment criteria.

Overall, 39% of the substance-dependent group can be seen as having an attachment relationship with their preferred substance or, in the two more extreme cases, a substitute attachment relationship. This proportion of the substance-dependent group therefore provided support for Hypothesis 5.

7.2.2. Provision of security by the substance

It was predicted that substance-dependent participants would report that their preferred substance conferred the kind of security associated with an attachment relationship (Hypothesis 6). Eighty-five per cent (85%) of the group claimed that the substance conferred security. However, as discussed in Chapter Six, "security" appears to have been understood in different ways. Forty-two per cent (42%) of these participants were judged to be directly describing the provision of "felt" security (Categories 1 and 2).

Twenty-two per cent (22%) indicated benefits that are the more obvious provisions of attachment relationships: comfort, safety, feelings of self-worth and self-confidence,
the dependability of the substance to be there for the person. Other responses in this category draw attention more acutely to the nature of the internal state of the person that the substance alleviates, and the more subtle provisions of attachment relationships. Feelings of emptiness and loneliness are reported; the substance provides fulfilment. A sense of belonging, of feeling needed, or a part of something, appears to be lacking in some cases; the substance gives the person the needed sense of fitting in. One person talks of her painful shyness; the substance takes that away. Another response implies that the person lacks internal strength or willpower to carry on; the substance provides it. Someone else turns away from people and towards his substance, the implication being that people have disappointed him or cannot meet his needs, and the substance helps him.

A further 20% of respondents reiterated benefits from substance use that are also associated with the secure base effect in attachment relationships: feeling better about the self, enabled to interact and communicate with others, and to express oneself. Underlying feelings of intense fear and insecurity are reported. Feelings of emptiness, of something missing, are again mentioned. One person uses his substance to be himself, to feel "normal." There is a strong sense of something lacking in the self that the substance temporarily provides, arguably an inner strength, security, or sense of self that was not internalised in the past in the person's attachment relationships and without a substitute for which the person cannot function.

A small number of responses (5%) indicated use of the substance to protect the person from what others are thinking. Typical of these responses are statements such as "I didn't have to worry. I didn't have to worry what people thought," "Nothing really worried me. I was different around other people and what people said didn't matter." These responses may reflect a preoccupation with relationships. Certainly they appear to reflect concern about the person's worth in others' eyes, and suggest that the substance may function, in these cases, to moderate anxious attachment.
The responses reflecting extreme emotional self-sufficiency (18%) are of great interest when the significance of other people to the participant is considered. Most responses imply severe underlying difficulties in relation to other people: fear of domination by others, discomfort in others' presence (as opposed to being in one's own world), concern about what others are thinking, or how they will treat one, and reluctance to rely on others. These themes are evident in responses such as: "It put me in a world of my own... Didn't have to worry about anything else or anybody," "I could do anything I wanted to, without answering to anybody," "Nobody could hurt me," "Didn't have to worry about relying on other people." Other responses imply feelings of intellectual or personal inadequacy: "I was right and everybody else was wrong," "[I] felt in control of what was going on around me... I felt smarter." The substance provides both a strong sense of self and a strong disconnection from others. In this category of responses, then, the substance appears to be functioning to assist the achievement of compulsive self-reliance (dismissing or avoidant attachment).

Overall, 42% of the substance-dependent group appear from their responses to have had an attachment relationship with their preferred substance, obtaining the felt security conferred by such a relationship, or a secure base from which to operate. The preoccupied responses in Category 3 and the excessively self-reliant responses in Category 4 suggest that a further 23% of the group may have been using the substance to assist them to defend against extreme insecurity, which alone they could not internally achieve. The substance protected the person from anxiety about what others think, or met a perceived need for a total defense against others. These two groups then seem to lack extremely a sense of self-worth in other people's eyes, or confidence in others' availability and responsiveness.
7.2.3. Summary of findings in relation to the substance

Reports of their experience of the substance by the substance-dependent people themselves indicate that a sizeable proportion of them had a conscious relationship with the substance indicative of an attachment relationship; or sought and received from the substance the kind of security and other benefits usually associated with attachment relationships (25% of responses to the first question, 42% of responses to the second). For another group (14% in response to the first question, 23% on the second), it appears that the preferred substance assisted them to overcome, or compensate for, the consequences of severely insecure attachment. These responses are strongly suggestive of very negative models of the self and others. At least 39%, and possibly up to 65% of the substance-dependent participants therefore appear to have had an attachment relationship with their preferred substance, or to have obtained from it compensation for attachment insecurity: the replacement of what is experienced as major deficits in the self. A large proportion of the group therefore supported the predictions of Hypotheses 5 and 6.

7.3. Mood

The results of the measurement of depression and anxiety supported the hypotheses that these would be found to a greater extent in the substance-dependent group (Hypotheses 8 and 9). It would be naive to suppose, on the basis of these results, that the occurrence of greater depression and anxiety in this group is the result of the loss of the attachment relationship with the substance, or of insecure attachment, without considering other possible reasons for the reported states.

Depression can occur from a variety of events, any of which members of this group could have experienced: physical withdrawal, self-blame for the destruction they have caused themselves and others in their pursuit of the substance, the death of family
members or friends, broken relationships, separations, debt, and the possibility of gaol, to name just a few. A large minority of this group (38%) was under a legal order at the time and possibly facing imprisonment if they did not remain in treatment.

The anxiety identified could have been the result of factors such as physical withdrawal, impending court cases, the fact of being in an emotionally confronting environment, or having to leave the treatment centre soon and maintain treatment gains on one's own.

Investigation of the contribution of these factors was beyond the scope of this thesis. However, there is some evidence that the states of depression and anxiety reported by the substance-dependent people are not completely explained by these factors. The treatment centres involved in this study encourage resolution, early in treatment, of outstanding legal and financial problems, disrupted relationships and any interpersonal conflicts within the residence (at any time). A process of resolution of these issues is usually in hand within several weeks. The self-esteem question generated evidence of considerable positivity in approximately half of the substance-dependent participants, and several responses referred to the attempted resolution of external stressors as well as perceived internal progress. The substance-dependent participants had been in treatment for an average of four months, and none had been in treatment less than five weeks. The reported anxiety and depression are, therefore, a continuing phenomenon in these participants. It is well known that depression and anxiety continue after the period of initial withdrawal, in many cases, for the first three to six months of abstinence from substance use (Geller, 1991), suggesting that internal factors are contributing to these states.
7.3.1. Depression

This thesis cannot substantiate that the greater depression found in the substance-dependent participants is the result of the loss of the relationship with the substance. However, approximately half the group did appear to have a direct attachment relationship with their preferred substance and a response of depression could be expected from such a loss. A smaller proportion of the group (14%-23%) appeared to receive from their preferred substance a compensation for underlying insecure attachment, which would be likely, with protracted abstinence, to become particularly obvious. In these people, then, a response of depression may reflect a response to the loss of the sense of self or protection from others, which the substance provided or bolstered. A revival of attachment losses or rejections in the past, which the substance was employed to mask, is also possible.

7.3.2. Anxiety

Some of the potential situational stressors that could occasion anxiety in the substance-dependent group were mentioned above, and could have contributed to the greater anxiety reported in that group. However, it is argued here that the anxiety observed is ongoing and likely to be related to attachment insecurity. This study has provided much evidence of insecure attachment organisation in people with a problem of substance dependence, and the qualitative data gathered from this group indicate in many cases considerable anxiety about relationships, particularly about how others view the self. It appears that, for many substance-dependent people, defensive strategies against the inner experience of attachment insecurity may not be effective, so that external (pharmacogenic) support is sought. In a great many other cases, the substance-dependent person has found in the substance a means of obtaining emotional security and other provisions of attachment relationships which are apparently lacking in his or her life.
Abstinence from substances, therefore, is likely to expose the underlying attachment insecurity. Various aspects of residential treatment programs are likely to do the same. Exposure to large numbers of other people, the encouragement of attention to relationships with family and other significant people, the restrictions on visiting hours and the limited availability of family or other attachment relationships, can all be seen as challenging the strategies adopted by people with insecure attachment (identified by Main, 1995). Dismissing attachment organisation, or defensive disconnection (Bowlby, 1973), is challenged by having to focus on attachment relationships. Preoccupied (or anxious) attachment is challenged by having to turn away from attachment relationships, or having proximity restricted (e.g. by limited visiting hours). As was noted in Chapter Three, such challenges can create anxiety (Main, 1995). Thus the anxiety observed in the substance-dependent people in this study is considered to be associated with prevailing insecure attachment, as well as other situational stressors.

7.4. Experience of close relationship

Attachment insecurity in substance-dependent people was expected to impair the experience of close interpersonal relationships. Specifically, substance-dependent people were expected to show evidence of impaired intimacy and greater vulnerability to loneliness (Hypotheses 9 and 10). The results supported these hypotheses. Compared to the control group, the substance-dependent participants reported significantly less intimacy in their closest non-familial relationships, and greater attachment-related loneliness, that is, loneliness in their relationships with partners and family members. They also reported more social loneliness.
7.4.1. Intimacy

The internal models of others hypothesised in the substance-dependent group were argued to be based on a lack of confidence in others' availability and a lack of confidence in the self's worth. This is likely to prevail in close relationships to mitigate against trust and the development of closeness, thus impairing the experience of intimacy. The results of the Miller Social Intimacy Scale (MSIS) bear this out. The substance-dependent people reported significantly less intimacy in their current closest relationship than the control group. For the majority of people in both groups, the person they were currently closest to was the same person as the (non-familial) attachment relationship indicated on the Reciprocal Attachment Questionnaire (65% of the substance-dependent group and 80% of the control participants). Thus the intimacy reported was connected in many cases with an attachment relationship.

West and Sheldon-Keller have argued for a distinction between attachment relationships and affiliative relationships, proposing that intimacy is an aspect of affiliative relationships, and protection from danger the function of attachment relationships (Bowlby, 1969; Sheldon & West, 1989; West & Sheldon, 1988; West & Sheldon-Keller, 1994). According to these authors, danger can include, in the sophisticated environment which we have now inherited, threats to the ego as well as relatively infrequent physical dangers. Attachment relationships by definition provide security and protection from danger; affiliative relationships are argued to be those which promote exploration and expansion of interests from a secure base provided by attachment relationships. The authors found a considerable degree of overlap in the functions of both kinds of relationship, and many attachment relationships of course provide both (Sheldon & West, 1989). The point is that intimacy can be experienced in relationships which are not attachment relationships, and so is not diagnostic of them.
The social psychology literature has generally assumed that adult romantic relationships are attachment relationships. Differences in the desire for intimacy (e.g. comfort or discomfort with closeness) are included among the attachment behaviours manifested in the different styles of attachment (e.g. Hazan & Shaver, 1988).

The view taken in this thesis is that the comfort and security provided in healthy attachment relationships, and the self-worth and self-confidence they nurture, serve to promote intimacy that then becomes a component of the relationship. However, it is acknowledged that intimacy may also be experienced in other significant relationships, such as those that Ainsworth (1989) terms affectional bonds, which may not necessarily provide the security distinctive of attachment relationships.

The *Miller Social Intimacy Scale* items enquire about the amount of time spent with the person one is currently closest to, the importance of closeness, of encouraging and understanding the other, being encouraged and understood, confiding in the person and being confided in, feeling and showing affection and having it returned, the importance of the relationship, and the damage caused by a typical disagreement.

The endorsement of these at lower levels by the substance-dependent participants indicates that they perhaps place less importance on, and are less equipped for, closeness in their relationships, including the capacity for confiding and being confided in, giving and receiving encouragement and affection, and constructive conflict. This would appear to reflect a more avoidant attitude in close relationships, including attachment relationships.

However, the attachment questionnaires indicated a high level of emotional involvement in attachment relationships: greater preoccupation with relationships, fear of loss of the attachment figure, greater anger, a greater need for approval and for the attachment figure's care, and possibly a greater need for proximity and a stronger
reaction to separation. Discomfort with closeness and a perception of relationships as secondary were also indicated and may reflect a more avoidant sub-group among the substance-dependent participants, or may be consistent with greater anxiety about relationships than previously found, as Feeney and her colleagues discovered (Feeney, Noller, & Hanrahan, 1994). Overall, the findings concerning attachment relationships appear to conflict with the apparent level of emotional involvement indicated on the Miller Social Intimacy Scale. It appears that a high level of emotional involvement can occur along with an experience of less intimacy.

This finding is consistent with that of Feeney and her colleagues that the preoccupied group in their study indicated ambivalence about closeness and intimacy, rather than an unreserved seeking of it (Feeney et al., 1994). It suggests that attachment behaviours are over-riding the behaviours that build intimacy; that attachment needs dominate over other concerns in insecure attachment, and may need to be satisfied before intimacy can be attained in attachment or other relationships. West and his colleagues (cited above) suggest that intimate affiliative relationships promote exploration from a secure base provided by attachment relationships. These results seem to indicate that a secure base is essential, not only for exploration, but to enable the development of genuine intimacy.

7.4.2. Loneliness

Greater romantic loneliness, as identified by the items of the Social and Emotional Loneliness Scale for Adults (SELSA), reflects the absence currently of someone who meets the individual's need for love, intimacy, support, and a shared life together, whether the individual is involved in a romantic relationship or not. This is considered to be loneliness for an adult attachment relationship (DiTommaso & Spinner 1993). In the substance-dependent group, loneliness for an adult attachment relationship was significantly greater. Some of the SELSA items relate to having a current partner, so
that single people (as most of the substance-dependent participants were) are likely to endorse a higher level of loneliness. This is defensible in that both theory and empirical evidence indicate greater loneliness without an attachment relationship (DiTommaso & Spinner 1993; Weiss, 1973). However, these items may not sufficiently allow the possibility that attachment needs can be met by a non-partner relationship.

Many of the control group, in the absence of a current partner, appeared to have developed relationships with friends that met attachment needs. Forty-five per cent (45%) identified a friend as their non-familial attachment figure on the Reciprocal Attachment Questionnaire, 50% nominated their current partner, and 3% a former partner. In the substance-dependent group, the figures were 27%, 27%, and 42% respectively. A considerable number of the substance-dependent participants therefore appeared to have a continuing attachment or reliance on a former partner, so that the current loneliness reported by these people may partly derive from attachment to someone who is no longer available. Overall, it appears that the current non-familial attachment relationships of this group are not meeting their attachment needs to the same extent as those of the control group.

This also appeared to be the case with family relationships. Substance-dependent people were significantly more lonely in their family relationships. SELSA items relate to feelings of not belonging in the family, feeling alone in the family, not feeling cared for, not having a sense that family members are concerned, and a desire for closeness but not having it.

These feelings of loneliness and alienation from a partner relationship and family relationships contrast markedly with what the substance provided for many of this group. For many, greater attachment loneliness may well have initially driven a search for security that ended in the experience of it from ingestion of a substance. The
loneliness reported may reflect, for the substance-dependent participants, the exposed absence of security-providing attachment relationships, and, for those who had an attachment relationship with the substance, the loss of that as well.

The greater social loneliness reported by the substance-dependent group implies a current lack of an enriching social network. SELSA items reflect not feeling a part of a group of friends, not having friends who understand or share one's views, or that one can turn to for help, or to confide in. The substance-dependent participants in this study had removed themselves from their previous social network which was associated with substance use. Return to it was considered by many of them inappropriate, as they were trying to maintain abstinence from substance use and to change their lifestyles accordingly. What is noteworthy in these results is that the current environment of the substance-dependent people was not experienced as providing for their social friendship needs, despite it consisting of many people with the same goals and the encouragement and help of staff to pursue them.

Overall, the loneliness and isolation of the substance-dependent participants seem very complete, by contrast with the control participants.

7.5. Concluding comments

This thesis has proposed a model of substance dependence that identifies it as a search, or substitute, for an attachment relationship in people who are deeply insecurely attached. When attempts are made to moderate or abstain from substance use, behaviours are observed which can be explained, according to the model, as the loss of an attachment relationship, the exposure of underlying attachment insecurity, and exposure of an impaired capacity for close relationships, including attachment relationships, to which insecurity in attachment organisation has given rise.
The aim of the study was to empirically examine this model by testing the propositions on which it rests, in relation to the four components: attachment organisation, the relationship with the substance, mood and the experience of close relationship. Several hypotheses were developed in relation to each component of the model and were tested comparing a group of substance-dependent people with an appropriately matched non-clinical group.

All hypotheses relating to three components of the model - attachment, mood and the experience of close relationship - were supported. The findings were elaborated and alternative explanations considered in the discussion of each, presented above.

The relationship with the substance was investigated by means of a semi-structured interview. A large proportion of the substance-dependent participants was judged to have had an attachment relationship with the substance, or to indicate that they obtained from it compensation for major deficits in the self arising from attachment insecurity. Judged from the qualitative data, the proportion of the group supporting the hypotheses varied between 39% and 65%, depending on the question asked.

As noted in Chapter Four, it was never expected that the proposed model would account for all substance dependence. The physiological dimension of substance dependence, as well as the psychological, contributes to the behaviour observed, and is not accounted for by attachment theory. Attachment theory also does not have a ready explanation of the gratificatory aspects of substance use, which were observed in a number of the substance-dependent participants. The fact that the relational role of the substance was demonstrated for a considerable proportion of the substance-dependent participants is considered adequate evidence that this component of the model applies in many cases of substance dependence.
Overall, then, the proposed model of substance dependence was supported, with the proviso that the first component - the relational nature of the substance use - is likely to apply to approximately 40% to 65% of a severely substance-dependent population. The results indicate that attachment theory can provide a unifying construct underlying some of the suggested heterogeneity of the substance-dependent population. They also suggest that treatment appropriate to the proposed model should be considered, particularly where an attachment relationship with the substance is suspected. The clinical implications of support for this model are discussed in more detail below.

7.5.1. Clinical implications of the results

Substance use was shown to confer attachment benefits for approximately half the substance-dependent group, who reported, from their substance use, the experience of a secure relationship and a secure base from which they could engage confidently with the environment. This suggests that, when substance use is ceased, a protracted loss reaction will be experienced by many substance-dependent people which may be inaccessible to conscious control (Weiss, 1991). We know that people often do not realise how fundamental their attachment relationship is to their security and well-being, until there is an extended or unaccountable separation or death. Feelings of loss and mourning for the comfort and security of the substance, and the loss of the sense of self that the substance conferred, ought to be expected for a considerable time.

A high risk of relapse, or resort to a substitute object of addiction, exists, in these cases, from the possibly unexpected intensity of distress at the loss of the substance, the protracted nature of the distress, a (normal) desire to restore the attachment relationship with the substance, and the fact that, unlike an interpersonal loss, the substance is still available. Practitioners should, therefore, be aware of the depth of the emotional involvement with the substance experienced by many of their clients, so that it is not minimised, and is incorporated into treatment.
As argued above, abstinence from, or moderation of, substance use is likely to expose the underlying attachment insecurity in substance-dependent people. Bowlby (1973) suggested that the work of treatment was to detect the existence of influential models, of which the person may or may not be aware, and invite him or her to examine them and consider whether they are still valid. Modern formulations of attachment-based therapy view the role of the therapist as the provision of a secure base which allows the person to explore aspects of his or her inner world that are anxiety-laden and defended against (Eagle, 1997). This study has provided much evidence of such internal states in substance-dependent people, which would need to be addressed in treatment.

Treatment itself is likely to create anxiety for the insecurely attached person by challenging the adaptive strategies adopted, whether the form of adaptation is anxious (preoccupied) or avoidant (dismissing). Moreover, some people may indicate lapses of organisation in discourse that indicate unresolved trauma. Being aware of the nature of the attachment insecurity in the particular person can assist the practitioner to direct treatment appropriately. Present-day attachment theoreticians argue that preoccupied people are seeking to recover an earlier attachment relationship and need to learn to relinquish it; dismissing individuals are seen as needing to connect with their feelings of loss, sadness and disappointment in earlier attachment relationships (Eagle, 1997; West & Keller, 1994). The resolution of such past painful attachment experiences implies therapy which focuses on working models of the other.

This study has provided evidence, as well, that suggests that therapy focusing directly on models of the self may be useful. Substance-dependent people were found to use the substance in many cases to provide what is lacking in the self - feelings of self-worth and a capacity to engage with the environment - as well as to obtain the comfort and security of an attachment relationship. Their substance-using behaviour indicated a preparedness to seek out a source of feelings of self-worth and security in order to
engage with the external world. The role of the therapist in this case would be the provision of availability and responsiveness which communicates to the person a sense of being valued that can be internalised. Self-models manifested in the person’s attitude to the self, the impairment of the capacity to function in the external world, and self-worth in relation to others could be directly addressed.

There was evidence, in this study, of some very serious cases of insecure attachment among the substance-dependent participants, where the substance was employed to compensate for extreme deficits in the self or extreme distrust of others. In such cases, the practitioner would need to create the most secure environment possible to assist the person to tolerate the internal state without resort to the substance (or a substitute object) and to stay in therapy long enough to enable the revision of the most potentially destructive working models.

Recovery from substance dependence, therefore, is likely to involve the clinician (and client) addressing the meaning of the substance for the person, the emotional sequelae of the loss of the relationship with the substance, and treatment of the underlying problem of attachment insecurity. Optimally, the latter would come about from the revision of working models of the self and others brought about by a relationship with the practitioner that disconfirms them, a focus on perceived deficits in the self, and the identification and development of appropriate interpersonal attachment relationships in the person’s life, which are a necessary part of healthy adjustment. The role of the practitioner would be the provision of a secure base to enable the person to explore inner working models and new ways of behaving in the external world.

Other implications for the therapeutic relationship with substance-dependent people emerge from this study. Treatment often involves the aspects of intimate relationships investigated above: confiding, receiving encouragement and support, placing importance on the interaction, and spending time in the relationship. The results
indicate that substance-dependent people are likely to have considerable difficulty with these aspects of the therapeutic relationship.

Real intimacy is argued by attachment theoreticians to require awareness of the other person's mental life as well as one's own. This "intersubjectivity" is argued to be a prerequisite for intimacy, and secure attachment is considered a necessary (but not sufficient) condition for intimacy (Holmes, 1997). The achievement of attachment security in substance-dependent people, with deep insecurity, would have to be considered a long-term goal and may not be possible in many treatment settings. However, the results of this study indicate that the security needs of substance-dependent people predominate over other concerns in close relationships, and are likely to shape behaviour and experience in the therapeutic relationship as well (Bowlby, 1973). For the person to benefit from the therapeutic relationship and achieve genuine intimacy in interpersonal relationships, attachment needs would have to be given priority in treatment.

The findings of this study, then, strongly suggest a model of therapy in which the relationship between the therapist and the client is a significant means of addressing the underlying problem. A relationship between therapist and client, of the kind proposed above, would encourage the internalisation of attachment security and self-worth, assist the development of the capacity to relate confidently, effectively and intimately with other people, and foster the capacity to meet challenges, so that ultimately resort to the substance is not necessary.

Chapter One noted that psychoanalytic models have yet to produce effective therapy for substance dependence. Attachment theory has not been included in such appraisals. Its success as a basis of therapeutic intervention with substance-dependent people has yet to be empirically demonstrated. However, this study has shown that attachment theory can account for the phenomena of substance dependence, provide an
integrated meaningful explanation of the complex problems of substance-dependent people, and indicate the nature of the treatment required. The proposed model of substance dependence explains many of the difficulties experienced in work in this field, and suggests that practitioners may need to adjust their own working models of clients or the therapeutic process, at times, to accommodate their experience in the treatment of such clients. The possibilities for future research in this field are discussed in Section 7.5.3 below. However, some shortcomings in the conduct of the present study first need to be addressed.

7.5.2. Criticisms of the study

This study may have been stronger, in some respects, had it been psychometrically comparable with other recent studies of attachment in clinical populations, most of which have used the Adult Attachment Interview to measure attachment organisation. While it would have been instructive and useful to have added to this research, there were good reasons why it was not possible to use the AAI in this study (see Chapter Five). It was also an essential feature of the design of this study that it compare a substance-dependent group, abstinent from substance use, with a normative group (for reasons outlined in Chapter Five). This study is therefore a preliminary comparison of these two populations, rather than having a purely clinical focus.

One problem in the measurement of attachment, as it was conducted in this study, was the failure of the Reciprocal Attachment Questionnaire (RAQ) to achieve an acceptable level of reliability on four of the scales. As noted in Chapter Five, West and Sheldon-Keller (1994) reported adequate internal consistency for all scales in their sample. Within the constraints of this study, it was not possible to identify whether the low scale reliabilities reflected a problem in the measure, or the behaviour of the sample investigated. The four scales were therefore omitted from the analysis. This meant that two theoretically important patterns of attachment - compulsive care-giving and
compulsive self-reliance - could not be investigated in this sample. However, a meaningful portrayal of substance-dependent people, in relation to a current significant figure in their lives, did emerge from the remaining scales. Further validation of the RAQ should be undertaken in future research, including the applicability of all scales to the population under scrutiny here.

This study was conducted on a relatively small sample. Power analyses indicated that most of the statistical analyses could be generalised from, defeating some of the limitations of small sample size. However, a larger sample may have produced a stronger result in relation to proximity-seeking behaviour and separation protest in the substance-dependent and control groups, and may have yielded stronger scale reliabilities on the RAQ. Although a larger sample would have been preferable, there were several factors acting against recruitment of larger numbers. As pointed out in Chapter Five, this study was dependent on voluntary recruitment and both groups had other significant personal and educational priorities which limited enrolment. There were time constraints on recruitment and data collection, and inevitable attrition (12%) between the distribution of questionnaires and interview. Sample sizes in the study of substance dependence vary, but many are small or similar in size to this study.

Studies of adult attachment usually identify subgroups within the population studied, characterised by different kinds of behaviour in relation to attachment. Subgroups are identified from patterns of discourse on the AAI, patterns of disordered attachment on the RAQ, and different attachment styles on the ASQ, to mention three examples. A potential criticism of this study is that subgroups of attachment behaviour have not been identified. It was not possible to identify subgroups on the RAQ, as the scales for compulsive care-giving and compulsive self-reliance were eliminated on the criterion of scale reliability. Subgroups could have been generated from ASQ scale scores, using the constellation of scores on the five scales found in the secure, dismissing, fearful and preoccupied groups by Feeney and her colleagues (Feeney,
Noller, & Hanrahan, 1994). The proportions of each subgroup could have been identified in both the substance-dependent and control groups, and the behaviour of the subgroups on other measures analysed.

Although this was tempting, the ASQ has not been used before in clinical populations and the sample was small. There was, therefore, no way of validating the distribution of the subgroups in the substance-dependent group. Comparative analysis of the subgroups on other measures was impossible for the same reason. The ASQ proved to be a psychometrically strong measure in this study, and yielded meaningful information in terms of the proposed model. However, this study is a preliminary investigation of the model and greater numbers would have to be recruited to investigate attachment groupings.

In relation to the proposed connection between mood states and attachment, investigated in this thesis, there was good reason to believe on theoretical grounds that such an association was likely. However, the design of the study did not sufficiently distinguish the aetiology of mood so that a direct connection could be asserted. As trait mood states are more likely to derive from attachment experiences and state moods from external or non-attachment-related factors, future studies could specifically attempt to distinguish trait from state anxiety and depression.

The findings with regard to the substance-dependent participants' relationship with the substance were based on straightforward interview questions and the replies to them, which were assumed to be a veridical reflection of the person's experience. This is not an unusual assumption in the collection of interview data. The questions may nonetheless appear to be a naive approach to a complex problem. However, there was no other readily available means of examining an attachment relationship with an object, and the participants were considered to be the best informants as to their inner experience. In the analysis of the responses, considerable care was exercised not to
take them just at face value. All replies were independently examined by two psychologists with clinical experience, and judged as to whether they were referring to a relationship and the provision of attachment security, or something else, regardless of the person's assertions.

There are many published measures of self-esteem and self-concept, with good reliability and validity, which could have been used to investigate the attitude to the self and (indirectly) self-worth, instead of the two open-ended interview questions employed in this study. However, qualitative analysis of the open-ended questions yielded extremely valuable information as to the nature of the participants' self-evaluation and self-models, as well as the degree of self-esteem or self-acceptance asserted. Thus, the quality of the data recovered justified the interview approach.

In summary, there were some shortcomings in the conduct of this study. It has, nonetheless, provided ample preliminary evidence of insecure attachment in substance dependent people. The results have provided considerable support for the proposed model of substance dependence and extend the understanding of substance-dependent people in a way that should be clinically and personally useful. The results also suggest some directions for further research which are discussed in the following section.

7.5.3. Directions for future research

The findings of this study suggest fruitful directions for future research in both the study of attachment and the study of substance dependence. There is strong evidence from this study that, where there is severe disturbance in attachment organisation, attachment relationships can be extended to substitute objects. This thesis could be extended to the study of other addictive behaviours, for example, eating disorders. Attachment theory could also prove to have great explanatory power in the analysis of
addictive interpersonal relationships which have usually been researched from the social learning perspective.

Investigation of this model of substance dependence could be refined by comparing groups dependent on different substances with each other. Although a great many substance-dependent people claim to use many substances, most express a preference for a particular substance. These groups may differ in their attachment organisation, and the related mood and interpersonal experience of significant relationships.

This model should also be extended to the study of benzodiazepine dependence. Minor tranquillisers (benzodiazepines) are currently prescribed to 10% of the Australian population according to general practitioner surveys ("Strategy," 1993). Their use in such large numbers, and the findings of this study, suggest that general practitioners may be resorting to pharmacogenic relief of attachment-related phenomena for which they have no conceptual model or alternative methods of treatment.

It would also be useful to extend this proposed model to less severe forms of substance use, along the continuum from recreational use through substance abuse to dependence. If attachment insecurity is a risk factor for dependence, as seems likely, then its early identification and treatment in recreational users, or people beginning to abuse substances, may be able to prevent a progression to dependence. A study of this nature could also examine retrospectively which kinds of attachment experiences incur the greatest risk of dependence, to be followed by prospective studies of the populations at risk.

Longitudinal studies could further validate the findings of this study by investigating whether long-term recovery from substance dependence is associated with the development of greater internal security and self-worth, and improvements in the experience of attachment relationships. There are, however, considerable difficulties
with this kind of design. Large numbers of substance-dependent people relapse during the course of their recovery and become difficult to trace. The required time frame (likely to be over a year) could also make follow-up difficult.

For people with an attachment relationship with their substance, treatment programs based on the provision of security, and support for the emotional sequelae of abstinence (or moderation of substance use) could be evaluated and compared with outcomes of other treatments currently provided, particularly over the long-term.

In the study of attachment in clinical populations, both the Reciprocal Attachment Questionnaire and the Attachment Style Questionnaire need to be further validated, particularly with substance-dependent populations. Future studies, using large samples, could identify the proportions of attachment subgroupings in these populations.

7.6. Conclusion

This thesis has argued that extreme insecurity in attachment organisation should be considered as a factor predisposing to substance dependence, and that treatment, for many substance-dependent people, involves relinquishing an attachment relationship with the substance. This is likely to cause significant distress in its own right. Relinquishment of the substance is also likely to expose the distress associated with the underlying insecure attachment: a greatly lacking sense of self-worth and worth in other people's eyes, a lack of intimacy, and an experience of loneliness in significant relationships in the person's life. This thesis has recommended that the treatment of substance dependence take these considerations into account, and has outlined what this is likely to entail.
In the treatment of alcohol and drug problems, the National Drug Strategy in Australia has recommended:

Supportive and empathic counselling skills ... as the essential bedrock for delivering appropriate treatment interventions that may be required to deal with problems and deficits in the client that predispose to excessive drinking (Mattick & Jarvis, 1993, p. xiv).

Therapists should possess the skills to assist them to quickly form a warm and supportive relationship with the [opiate-dependent] client, and to show empathy towards the client (Mattick & Hall, 1993, p. xiv).

The thesis presented here makes sense of the behaviour of many substance-dependent people in a way that has not been suggested before. Through the analysis of attachment theory, research findings, and the report of substance-dependent people themselves, it has attempted to portray the inner world of many substance-dependent people, the experience of substance use and relinquishment of the substance. It is hoped that this thesis will prove meaningful and useful for other practitioners, and foster empathy for the substance-dependent person. If that has been achieved, even in small measure, then one aim of this study has been met.


Teasdale, J. (1972). The perceived effect of heroin on the interpersonal behavior of heroin-dependent patients, and a comparison with stimulant-dependent patients. *International Journal of the Addictions, 7*, 533-548.


APPENDICES
APPENDIX A
Background documents

Information for participants
Consent form
Demographics questionnaire
Information for participants

Aim of the research:
The aim of the research is to find out what kinds of problems people recovering from substance dependence have in their relationships and what would help.

What will be involved:
1. Signing a form giving your consent to be involved in this project.
2. Providing some brief details of your background history.
3. Filling out questionnaires (described below) in a group, or individually if preferred. The amount of time that takes largely depends on how fast you go - probably between 1 and 3 hours.
4. An interview with Mary Carse who is conducting this research - approx. 20 minutes.

Anonymity:
All information will be anonymous. Apart from the consent form you sign, your name will not appear on anything. You will given a number to use on your questionnaires and your first name only will be used at the interview (or an alias if you prefer).

Confidentiality:
All information will be treated as confidential and will not be released to anybody except one other person involved in the project (see below).

What is involved:
1. The consent form.
The consent form asks for your consent to be involved in this project and your permission to use the information you provide as part of the final report. No-one is identified. The information is used to make general conclusions about people recovering from substance dependence, and their relationships.

2. Background history.
The details requested include education and work experience, diagnoses of mental illness (if any), and whether there was abuse or violence in your family of origin or adult relationships and some general questions about it, to give a sense of how severe it was, without going into detail. The form is at the back of this leaflet. Again no one will be identified. The information will be used to only report the number of people in the project with this in their background. The questions on mental illness and abuse are there because they are
common among people who have alcohol or drug problems and sometimes affect people's relationships, or their ability to have them.

3. Questionnaires.
As well as the questionnaires about relationships, there are questionnaires about your physical and emotional state, and one about your drinking or drug-using. The relationship questionnaires are about particular relationships (e.g. family, current or past partners), and attitudes you have about yourself and others.

4. The interview.
The interview will ask what you think about relationships generally, what your experience has been, what positive things there have been, what problems there have been, and what you think might help with those problems. You will also be asked how alcohol or drugs have affected your relationships. And how you feel generally about yourself and other people.

Mary's conclusions from the interviews - about the experiences and problems of people in recovery - need to be backed up by another person. This means that the interview will need to be taped (on an audiocassette tape) and listened to by another psychologist, looking at Mary's conclusions. These two are the only people who will hear the tape. The tape will be identified only by a number. Your first name only (or an alias if you prefer) will be used in the interview.

Mary will keep a record of who has agreed to participate and what their number is, just to make sure nobody who has agreed to participate gets missed. Nobody else will have access to this record and Mary will not use it, apart from checking that everyone has been included.

The University of Wollongong has a policy that all information gathered in any research project must be kept for five years in a secure place. The information gathered from you in this project will be kept in a locked cabinet in Mary's office for the five years and not released to anybody else. At the conclusion of five years, it will be destroyed.

Questions or concerns about the research:
If you have any questions or concerns at any time about the research or what is involved, please feel free to discuss them with Mary. If she is not around you can leave a message with staff which she will return as soon as possible.

Participation is voluntary. You may withdraw from the project at any time without penalty.
Consent form

Research title:
Quality of relationship in a substance-dependent population

Researcher: Mary Carse
This research is being conducted as part of a Doctor of Philosophy (PhD) degree in Clinical Psychology supervised by Dr Rachael Henry in the Department of Psychology at the University of Wollongong.

The aim of the research is to find out whether substance-dependent individuals have particular problems in relationships which can be identified and assisted.

What is involved is outlined in the Information to participants leaflet attached. Please read this information before signing this form. If you choose to participate you will be free to withdraw at any time without penalty.

If you have any enquiries regarding the conduct of the research please contact the Secretary of the University of Wollongong Human Research Ethics please see print copy for image

I understand that the information collected will be used for research purposes only - to draw conclusions about the capacity for relationship, the quality of relationships that substance-dependent people engage in, and the problems they experience, and that any information I provide will not be identified by name and will be kept confidential. I consent for the information to be used in this manner. I have read the Information for participants and I agree to take part in this research.

NAME:........................................................ DATE:......./....../......
Background history

Subject no:_______

Sex: M/F

Age: ______

Marital status: _____________

Are you a parent? Yes/No

Do your children normally live with you? Yes/No

Education/employment:

Last year of school completed: ________________________________

No. of years employed since school: ___________________________

No. of years unemployed since school: __________________________

Typical occupation: _______________________________________

Psychiatric history:

Have you ever received a diagnosis of mental illness in the past e.g. anxiety, depression, schizophrenia, manic-depression etc? Yes/No

Please specify: __________________________

Do you currently have a diagnosis of mental illness, e.g. anxiety, depression, schizophrenia, manic-depression etc? Yes/No

Please specify: __________________________

Family of origin:

No. of brothers and sisters (stepbrothers and stepsisters) raised with you: _________

Main source of income: ________________________________

Main occupation of adults in family: ________________________________

Did any of your parents or chief caregivers suffer from alcoholism/addiction/compulsive gambling in your family of origin? Please circle which one and indicate which relative it was:_______________
Was there abuse or violence in your family of origin?

Physical violence  Yes/No
Sexual abuse  Yes/No
Emotional abuse or neglect  Yes/No

If emotional abuse or neglect, please describe briefly:

____________________________________________________________________

If yes to any of the above, was the abused person:

Other family member?

Was the abuser:

Other?

How old was the abused person/people at the time (if child or adolescent)?

How long did the abuse go on (in years, months)?

How severe did you consider the abuse at the time?

How severe do you consider it now?

Adult life:

Have you received abuse or violence in your adult sexual or partnership relationships?  Yes/No

Are you still in a relationship where this is the case, or intending to return to one?  Yes/No

Current life:

How long have you been clean?

Are you under a legal order or condition, or facing court for alcohol or drug-related offences?  Yes/No

Why are you doing the [rehabilitation centre] program?
APPENDIX B

Substance-Dependence Questionnaires

1. "Use of alcohol"
   Severity of Alcohol Dependence Questionnaire (SADQ)
   (Stockwell, Hodgson, Edwards, Taylor & Rankin, 1979)

2. "Use of opiates"
   Severity of Opiate Dependence Questionnaire (SODQ)
   (Sutherland, Edwards, Taylor, Phillips, Gossop & Brady, 1986)

3. "Use of other drugs"

NOTE: The five items of the Severity of Dependence Scale (SDS) (Gossop, Darke, Griffiths, Hando, Powis, Hall & Strang, 1995) were appended to each of the questionnaires above.
Use of alcohol
please see print copy for image
Use of opiates
please see print copy for image
Use of other drugs
please see print copy for image
APPENDIX C

Attachment Questionnaires

1. "ASQ"

Attachment Styles Questionnaire (ASQ)
(Feeney, Noller & Hanrahan, 1994)

2. "RAQ (other)"

Reciprocal Attachment Questionnaire (RAQ)
(West & Sheldon-Keller, 1994)
please see print copy for image
APPENDIX D

Mood Questionnaires

1. "BDI"
   Beck Depression Inventory
   (Beck, 1978)

2. "Beck Anxiety Inventory"
   Beck Anxiety Inventory
   (Beck, 1987)
APPENDIX E

Close Relationship Questionnaires

1. "Close Relationship"

*Miler Social Intimacy Scale (MSIS)*

(Miller & Lefcourt, 1986)

2. "SELSA"

*Social and Emotional Loneliness Scale for Adults (SELSA)*

(DiTommaso & Spinner, 1993).
CLOSE RELATIONSHIP
please see print copy for image
SELSA
please see print copy for image
please see print copy for image
APPENDIX F

Interview

1. Relationship with the self
2. Relationship with the substance
INTERVIEW PROTOCOL

You don't have to know the answers to these questions already: you may not have thought about them. Just answer as honestly as you can, thinking about them in here. You don't have to be positive and your answers don't have to be positive, if that's not how you see it.

Just to start us off, I'd like you to tell me for a few minutes how your life is at the moment, the good and the bad things. I'll just be listening for those few minutes without interrupting. Do you have any questions you would like to ask now before we start?

1. Relationship with the self

How do you feel about yourself at the moment?

How would you like to be?

2. Relationship with the substance

How long have you been sober or clean?

Many people feel as if they had a relationship with the drug they preferred. Would you say this was the case for you?

How would you describe your relationship with the drug you preferred?

Did it give you a sense of security? How would you describe that (security)?
APPENDIX G

Interview Responses
**Relationship with the self**

*Q. How do you feel about yourself?*

**Category 1.** Respondents were generally positive about themselves: control group 60%, substance-dependent group 48%.

**Control group**

C01. Good. I think I'm pretty good. I think I've got a pretty good, healthy self-esteem.

C04. Good.

C06. Tired, lack of sleep, pretty stressed with school work but other than that, pretty good.

C08. Restricted because of my car accident. I'm proud of the way I got through. I've stuck at it and I'm proud of that.

C10. Pretty good. I feel fat. Always feel fat. I feel a lot more positive about things than I used to. Tired. I feel cool.

C13. Pretty confident about myself at the moment, because I've been doing so much work. I look at what I've done and think, "Wow, that's really good."

C15. Pretty good. There's a few stressful moments with TAFE [technical college]. I'm a bit worried about my next placement but I have a good social life, good friends, supportive family and boyfriend. So I'm pretty fortunate.
C17. Pretty good. I'm a lot more confident that I used to be. I have a lot more going on in my life.

C18. Pretty good. I'm doing my best at whatever I do. I think I'm happy with myself and what I've achieved this year.

C20. Okay. Good. Quite happy with myself at the moment.

C21. Good. A few ups and downs here and there, no major worries, no major problems.

C22. I sort of feel good about myself, I don't have any major worries.

C23. Very happy with what I'm doing, the way my life's going.

C24. Pretty good. Haven't got any real major problems. Pretty happy with the way things are going, with myself.

C25. A little stressed at work. Work, tech studies, kids are sick at home. Otherwise I feel pretty good.

C26. Pretty good. Generally speaking I've got no problems there. We've had some traumas [with work] but I've got no regrets.

C29. Pretty good, feeling very confident. Study has boosted my self-esteem. I'm finding new skills and abilities I didn't know I had before.

C31. Quite good. I'd like to see my girlfriend a bit more [interstate]. Like a few more close friends.
Disagreement occurred over responses C8 and C25. The difficulties mentioned are considered by the researcher to be external stressors affecting the quality of the person's life currently, rather than affecting their self-esteem. The second rater put them in Category 2.

**Substance-dependent group**

S34. Disgusted at myself at letting my life get so low down. Now with time up [abstinence from drugs], I'm a bit proud of myself. Pretty happy with myself at moment.

S42. Pretty good, pretty positive. I have my good parts and my bad parts. I find when I get depressed there's things I do to compensate for that, whether it's journal writing, talking to someone in recovery.

S47. I feel happy that I'm making progress. My emotions are up and down. One minute I'm happy, the next I'm a bit anxious.

S49. I don't know. Positive. I have suffered a lot of depression and I'm not feeling depressed. I get really anxious as well. I feel really stupid for some of the things I've done. Basically fairly positive.

S51. Really good, excellent actually about things I'm doing about myself to change myself, be a better person. To be able to sit and think about things and not have my emotions jump in on me.

S52. My feelings about myself fluctuate enormously. At the moment I feel quite good about myself. I have a lot of guilt because of my religious upbringing.
S53.  Good, patting myself on the back.

S54.  Pretty good at the moment. A lot better than I did a few months ago.

S59.  Pretty good because I'm doing something that I need to do. I'm more honest, proud. Some days are good, some days are bad.

S61.  I feel great. I've got an inner peace I've never experienced. I understand God now too, I've never understood. I see myself as a strong person, a lot stronger than I was. Focused now. I know myself, I know why I feel how I feel each day.

S64.  Pretty good. A lot more content. A lot more confident. I believe in myself a lot more. I'm a different person.

S65.  Feel better than I did. Feel stronger, mentally and physically. I feel like I've been tramping the long way, and gained a lot of knowledge but I've got an overwhelming feeling that something's missing, that I've missed something, like when you've left the house and feel you've forgotten something. I'm looking for what's missing or what I've forgotten.

S67.  At the moment I feel I know more about myself than I've ever known, there's still a lot more. On thing I've noticed in recovery is I fluctuate in my moods. When I first came in, I didn't think I was worth anything but now I've feeling a lot better about myself, self-worth. Feel pretty good about myself.

S68.  Good in myself. I always thought I was fat and ugly and now I'm starting to accept myself as I am. A bit more at peace instead of all those headmiles and
thinking the worst. More calmer and relaxed. More caring. Showing people that I care for them and love them. And more energy.

S70. Pretty good I suppose. Happy, than I used to be. A lot happier. Bit more protective of myself too. More friends, especially here, which is good for me.

S73. Pretty good about myself at the moment. Because I'm sort of trying to get things together in my life which is something that I've never worried about before. I'm trying to do something for once. I've straightened myself out a lot of times over the years by myself and I always go back to my old ways. So I'm just concentrating on one thing, on me at the moment. I'm not looking further down the track.

S74. I'm pretty happy with myself, for what I've achieved over the last couple of years. I'm a bit hesitant about what I have to do in the future. It's worrying me. I feel pretty pleased with myself.

S79. Feel good. This is the first time I've been off anything since I was 12. Feel good to be doing the right thing for myself, my mother, my kids.

S80. I'm feeling okay although I'm looking at a lot of, how I think about things, where they come from. I'm feeling okay about myself but I know there's a lot of areas I need to look at. Sometimes I don't assert myself, bit fearful to do things etc. Trying to sort out what's normal reaction of an adult! It's a bit difficult sometimes.

S81. Good, a lot better. Just feel more positive. When I first came in, I tended to look at more the negative things. I've realised I can do more than I thought.
My motivation's picked up a lot. I don't mind doing things now, I actually enjoy it.

S82. All right. Starting to feel better within myself, that I'm not expecting an overnight change.

S82. Fairly good. I still have issues that I'm addressing. I feel good because I'm fitter and I've got a lot more confidence but at the same time I know I'm not rehabilitated. I feel good because I feel I've got what I need inside me to keep going and not stop where I am now. I feel pretty good. I feel more capable of doing the right thing now. I still have doubts but I feel more capable.

S84. I feel good about myself, I feel good about how far I've gone. I've improved my back problems, I won't go back into my relationship, where before I would no matter what she did. I'm starting to get responsible for my actions. Confident of myself.

S85. Good actually. I feel proud of myself. I didn't think I'd make it past two weeks. I just feel better about myself even though there's a long way to go.

S86. Pretty good. I've learnt that I can't do heavy lifting for the rest of my life unless I get a new shoulder. It gets me down a lot. I like to lift things in my occupation [welder]. Now I have to look for other avenues. I don't feel too healthy. But I am a bit healthy. I feel confident a lot of the time, a lot more than I have been.

S89. A lot better than when I first came here. I always put myself down. I've done the wrong thing and I'm trying to do the right thing for myself and my mother and father, instead of disappointing [them].
S91. Pretty good with what I'm doing. I'm learning to be a bit more assertive. I don't doubt that I can go out and find a relationship. I just need to take a bit of time about it next time. I do feel good about myself.

**Category 2.** Respondents report qualified self-esteem. Problems identified appear to be in the self, or to affect self-esteem. Also included are some positive responses which were judged by the raters to lack conviction and imply an underlying poorer self-evaluation. Control group 37%, substance-dependent group 20%.

**Control group**

C02. I like myself. I like myself. I'm not afraid to say it. I like what I'm doing. I feel like I'm achieving here, and I'm happy with myself. I'm just not happy with some of my relationships with others. But I don't take that as entirely my fault. I take that as their fault too. I know part of it's probably my fault too. So I'm happy with myself as what I want to be.

C05. Tired, worn out, wish I had more time in the day. Then I'd probably have a bit more patience with the kids. At the moment I'm quite happy.

C07. On one level, I'm very strong because I know what I want and I know who I am, because I've found me. On another level I'm very fragile. I feel I've opened up a can and the worms are out. I feel good but I also feel like a baby trying to do big things.

C11. Pretty good. I feel a bit slack towards TAFE [technical college]. A bit depressed about my work, I wish I had a better job. But apart from that, home life and everything's unreal at the moment.

C12. I get cranky with myself, disappointed, mainly about tech [technical college], that I haven't been putting in the time I should. I'm angry because I'm always tired but otherwise I'm pretty happy.

C16. Good, but there's always a bad. I feel like I haven't done what I wanted to do before I got married [return to Chile]. I have achieved a lot, learning a new language, finishing my studies. I feel good.

C19. Good. I've never had a problem with self-confidence, never, ever. The only time I did have problems was when I denied that somebody like myself could be depressed and that's the only time I fell. I'm always trying to better my situation, adapting or altering.

C23. Swings every couple of weeks. Pretty good on the whole. I don't really have any long-term goals so sometimes that hits me in the face. Sometimes my lack of very formal education. I do get a little bit envious of people who've taken those opportunities.

C27. Content in a way. But I feel I'm not getting anywhere, I've stagnated. I suppose it's the mid-life crisis.

C28. Fairly reasonable. I don't feel overjoyed but I definitely wouldn't go out and kill myself.
Raters disagreed on responses C02, C07, C11, C19. The second rater considered them to belong in Category 1. The researcher felt that Category 1 responses appeared, in content at least, to indicate healthy self-esteem of the kind expected of secure attachment, while these four responses, even though reporting feeling good about the self, are accompanied by other information which casts doubt on it: negative or contradictory feelings about the self, and, in two cases, excessively protested self-esteem. All were considered by the researcher to reflect diminution of self-worth.

**Substance-dependent group**

S43. Pretty good. I do have this self-esteem problem at the moment where I think all my answers are pretty stupid. Apart from that, I'm pretty proud of myself for what I've done so far.

S45. Right now, positive. I feel if I keep doing the suggested things, I'm going to have a strong recovery but that slides away from me when I get using thoughts. It's all about not trusting your own thinking.

S48. I'm not sure. I go through days of feeling quite good about myself and quite proud for where I'm at, and I'm really ashamed for my life and what's happened. I get torn between the two things. I also get scared for the future.

S57. Some days I feel okay but a lot of days I don't. I sort of feel unworthy, seeking approval. But on the good days, I feel okay.

S60. I feel very insecure at the moment. I like me. All my life I know I'm a good person and I do good things but at the same time, I can be a real bastard. I can like me and I can fucking hate my guts.
S61. A lot better than I did. Some days I feel really good about myself, other days I don't feel good at all. It depends what sort of head-space you're in. Sitting there thinking about the past, some of the things I've done, I don't feel good about myself at all. If I'm just in today, living for today, I usually feel pretty good about myself.

S63. Peaceful being me. I feel content. I have my own idea of happiness, which is being okay with me, being in the right place at the right time, projecting into the future will cause me distress. So I'm happy to be where I am.

S69. I'm feeling really good about myself, getting my kids back full-time and at the same time, confused.

S75. A little confused. At times I get really confused and I don't like to get confused because I like to be in control. I've been feeling a little depressed. I feel fairly confident about what I'm trying to achieve. I'm a bit lost about how I'm going to achieve it but my self-esteem is certainly on the up which it hasn't been for some time. On the surface I feel pretty good about myself and what I'm doing.

S76. I don't really like myself really. That's one of my issues. I didn't take responsibility in the past. I'm working to be a better person. I'm not as selfish as I used to be. You don't have all these thoughts and emotions with drugs and now all these emotions and that, you feel different. I'm starting to feel really good, feeling healthy and that which I haven't done for a long time.

S90. Fifty-fifty. I feel quite proud of myself. I've achieved something. I'm doing something about my problems. The other 50% is confused. I really don't
know what I want to do. So it's quite confusing - one step at a time, at the moment.

**Category 3.** Respondents do not feel good about themselves: control group 3%, substance-dependent group 30%.

**Control group**

C30. Everything seems to revolve around work. Work feels like a burden.

**Substance-dependent group**

S35. Liking myself a bit more. Pissed off about wasting years. I haven't achieved what I wanted. Disappointed in myself. I'm a coward, I run away from problems. Scared to get clean and face up to stuff that's there. Hurt, sad.

S36. Don't feel a lot about myself. Don't feel I've done a lot to feel good about.

S38. Don't like myself.

S39. Don't like myself at all.


S44. It's pretty hard without the crutch of alcohol. But it gets better. That's what they tell me. Not too good.

S50. Not all that good. Better than I did while I was still using drugs, at the end. I've found out the sort of person that I have been, and it contradicts the
person I thought I was. That's been a bit of a shock. Have a lot of shame and
guilt about what I've been doing with doing with my life, and the waste.

S55. I don't like myself at the moment. I'm hoping that will change. I don't like
being faced with myself. It scares me.

S56. Not very confident, feeling really fucked about everything. Feeling really shit
about a couple of situations I'm in at the moment.

S58. I couldn't say good. Still very down on myself and obsessed with making
sure I do something right. I've got a good sense of accomplishment for what
I've done here but I'm still quite paranoid about going out into the big, wide
world.

S72. Not too, I have felt better, I'm not feeling too good at the moment but that's
because of the difficulties I'm experiencing in this program. I'm feeling like a
useless, kind of worthless type of person at the moment. Sometimes I think
I'm an idiot for some of the things I do. I know better but I don't do better.
Sort of like a lazy and apathetic attitude but that's only over the last month or
so. Before that I was doing better.

S78. Ratshit. I try not to think about myself much because I don't think I've done
anything great in the world. I've got two kids but my missus raised them. I
don't think too much of myself at all.

S88. Disappointed in myself. Annoyed with myself. I wish I could turn the clock
back and change things. Just basically annoyed.
S89. My self-esteem is quite high, my confidence is very high but I hold virtually no hope for the future. The program is what I'm doing day by day. I'll wait and see what happens in 12-18 months.

S92. Pretty guilty about what's happened with my children, in fact overwhelmed with guilt as to the point that I don't really know what my other issues are. But I feel good too, being clean's nice, to wake up not feeling sick and tired is really nice. I grew just so tired of life.

Unclassifiable  (2%)

S37. Wonderful, as if I can accomplish anything. Proud of myself for my abstinence. Unsure. Willing to try deal with problems and living.

This response was considered unclassifiable since it contains contradictory statements, reflecting both an unrealistic and a realistic evaluation of the self, and insufficient further information to decide where it best fits.
Q. How would you like to be?

Category 1. Respondents reported themselves to be happy with themselves as they are, perhaps desiring minor change: control group 63%, substance-dependent group 11%.

Control group

C01. The way I am. I'm pretty happy with how I am. There's things about me that I don't like but there's always things about everybody that they don't like. But I don't think I can change that because I am who I am sort of thing. I like myself.

C02. I like to be what I am now, I don't mind what I am now. I'd maybe prefer a few better relationships, say with my father. I like what I am now.

C04. I don't know that I'd like to be any different from the way I am, apart from maybe finished study sort of thing. Having a different ability, a different sellability for work.

C05. Not much different. I guess probably a bit more confident in myself to be able to say what you've just been taught is in there and will come out when you need it. I'm quite happy with myself as a person.

C06. I don't know. I'm quite happy with myself. I don't think I want to change.

C07. Exactly like the way I am. A bit more confidence. A bit more clarity.
C09. I wouldn't want to change that much. I'm quite happy the way I am, except for the lingering issue of the slight social phobia. More confident in social situations.

C15. Exactly how I am. A little bit less critical, less argumentative with my partner.

C16. I don't think I would change myself at the moment. I'm happy with how I am. I've got very good values. I know what I want, where I'm going.

C17. A lot more outgoing. More of get on with everyone, more than I do, because of being a quiet person. I'd like to be a little bit more relaxed. Probably a little bit more boisterous. There's nothing that I see in someone else that I'd like to see in myself. I'm pretty comfortable with myself.

C19. No other way than how I am. Oh, patience! Like to have some of that. Not as boisterous, sometimes I wish I was a little bit more quiet, had a bit more control over my mouth. I've done a lot on that, I think the rest will come with maturity.

C20. I think we are what we've done. Where I am now is where I've grown and I'm happy with where I'm going and let the future develop as it may. Parenting is an area of doubt.

C21. Rich! No worries. As I am now, I can't see much, I think I'm alright. I can't see any way I'd want to change.

C23. Less impatient. More peaceful. Calmer. I'm happy that I'm a strong-minded person and voice my views strongly and loudly.
C25. A lot harder. Be able to not worry about what other people will think. Like to just bite the bullet and make a few quick, hard decisions at work. I'd like to not worry about decisions I make at work. I'm happy with the way I am.

C26. No different. Apart from being tired and not having time.

C27. I really wouldn't like to be any different. I think there's a lot of imposed pressures from outside. In many ways, what I am is what I'd like to be but you sort of feel there's a sort of pressure to be a little bit different. I've achieved my personal goals.

C28. I probably wouldn't change myself. Probably healthier and more attractive. I've got used to myself over the years.

C31. Myself. Can't see myself really being anything else. I think I've come to terms with who I am and how I want to live my life. I'm doing what I want to do and being who I want to be.

Substance-dependent group

S53. The way I am now. Keep going with it.

S56. Like I am now. I'm better than I was before. A bit more happy.

S61. The way I am except not the past that I've had. Not dependent on alcohol or drugs. I'd like to settle down and get married. Q. As a person? A. Really honest, I think I am pretty honest. Caring. Realistic and down to earth. But I think I'm like that anyway.
S66. I have strong principles, beliefs. I'm a leader. I'm a lovable, caring person. I'm a softie. I wouldn't want to change.

S73. I don't really know. The way I am. I don't want to be any other way. I'd like to be more rich but that's about all.

S91. I can't really see that I'd like to make much change from what I've just said. I'd just want to learn to live the rest of my life without drugs. I don't really want to change much.

**Category 2.** Respondents desire more change in themselves than respondents in category 1. They indicate a capacity for self-reflection and identification of specific areas of desired change. Control group 23%, substance-dependent group 24%.

**Control group**


C13. I'd like to reach the goals I've set for myself. Positive all the time! Happy. Healthy.

C18. Louder. A bit more outgoing, outspoken. I tend to hold a lot in. I'd like to do a lot more of what I want without feeling intimidated or shy.

C22. Maybe a bit more confident and outgoing.

C23. I'm very busy. I'd like to be able to do a few things really well than a lot of things fairly well.
C24. Probably secure, financially and within myself as well. More in tune with myself. In a good long-term relationship.

C30. I don’t know. More confident.

Substance-dependent group

S42. I’d just like to be me, be myself. Happy with who I am, in what I’m doing, not giving myself such a hard time all the time.

S47. Normal. I’d like to be able to just listen to what people have to say and not take it on in a negative way.

S54. More outgoing. It’s very difficult for me to make friends easily. It takes a lot of time for me to relate to them and for them to relate to me.

S55. I’d like to be able to appreciate myself for what I am, and the other people around me, without trying to change myself, and change them. To have a lot more clean time. I’d like to have a job, to be successful, travel.


S64. I like the way I am. I feel like I could work on a lot more self-esteem stuff, and sometimes people say things to me and I get really hurt and wonder why when I know it’s so minor.

S75. At ease with myself, with other people. Successful, in life, achieving the goals I've set for myself and being content with who I am. Financially secure.

S80. Generally more confident and self-assured of what I do generally. I often question my motives, ask myself what would another person expect.

S82. Probably just like to be myself. Not have to change myself for anyone else.

S86. Financially well off. Really know what I'm doing, have a real sense of direction in life. There's a lot of roundabouts to turn before I know where I'm going.

S89. Just like to be happy. I'm an easy going person and I've got no problems with anybody. My major problem was drugs. Just learn to trust people, I find trust pretty hard. Feel at ease when I talk.

S92. Responsible. Just responsible. I'd just like to be a good mum and have my children back again and make up for lost time.

**Category 3.** Respondents signify a desired self that suggests considerable change from the current self, including multiple areas of change. Responses imply a lack of the desired qualities in the self as currently experienced. Control group 13%, substance-dependent group 65%.

**Control group**

C08. A lot more trusting of people. I'm pretty wary, it takes a long time for me to trust someone and let down the barriers enough for them to become part of
my life. A bit more easygoing, not so much of a perfectionist [academically].
I'm not far off [ideal self]. There's things that need work.

C11. Probably like to be a little bit more self-sufficient, not rely on people so much.
More decisive. More punctual, more organised, more motivated.

C29. More forgiving. Decrease the temper level. Have more confidence when
talking to people.

C12. Rich and brainy! Happy and comfortable. Happier. And not feel as if it's such
a battle all the time, and everything's my responsibility.

There was disagreement between the two raters concerning the control group
responses in the third category, and arose from the statements in each being differently
weighted. The researcher judged them to be relatively less self-accepting than in
category 2. The other rater allocated the first response to category 1, and the remainder
to category 2.

Substance-dependent

S33. At peace with myself, able to accept me warts and all.

S34. Settled. Open up more. Get my point across. Be a good mother to my child,
stable, caring, responsible

around

S36. Open. On the ball. Adventurous
S37. At ease with myself and at ease with the world. I don't want flash cars or a big house.


S39. Easy to get along with. Not violent. Open. Honest


S43. Thin and beautiful and rich! More confident but I'm going to do something about that [self-esteem course].

S44. Peaceful, comfortable inside.

S45. Warm and caring and loving. Happiness, contented with the way I am. Successful.


S49. I'd like to have the happiness and energy of a child, without the naivete or whatever. That purity. I'd like to be totally honest with myself and the world. I'd like to put positive energy out into the world.

S50. Happy. Have a contented feeling. Feel I've found my place in the world. That I have a place in the world. That people can respect me for what I am and that I can respect myself. A spiritual basis for my life.

S51. No faults! None whatsoever! Just to be perfect in every way!
I'd like to be immortal. I'd like to live forever. To never be depressed, to be a constant source of delight to myself and those around me. I'd like not to be angry or depressed. These aren't realistic. I'm human and like it or not, that's the way I am.

Rich! Extroverted. Popular. Full of confidence. I'd like to know myself really well and bring up a child really well.


I'd like to be like people I see who are at peace with themselves and therefore at peace with others and the world around them. People who are confident that no matter what, they're going to be okay. Have peace of mind. Comfortable with me and comfortable with other people.

How I am. Just expanded qualities that I have now. Awareness about me, at the moment I'm working through my past. Just higher awareness, better contact with my higher power, more accepting of where I am, more accepting of other people, more patience, more understanding, more tolerance, the ability to express my love more easily.

Successful in business, builder-bricklayer. I'd like to be in a relationship with a woman, closer to my children. Wealthy. In the right direction. Free of alcohol and people telling what to do. Loved, not conned. Respected as a person, and I am here.
S68. More honest and more honest to my mum if I need more money. Want to have more things for myself. Not worrying about other people. More courage and more strength inside, more acceptance of other people.

S69. More assertive, less aggressive. I'd like to communicate better, even though I'm doing better. I'd like to be able to talk to people better. I'd like to be more of what I just said, more understanding, and some day do something with drugs and alcohol. Being able to care. Still have my feelings even though they're bad sometimes.

S70. Happy, sober, loved.

S72. Rich! A bit more motivated and know where I'm going, be a bit more of a decision-maker, that this is what I want to do for my future and bang, go out and do it. Not just sit back and wait for everything to happen, because I know it won't. More motivated. Bit more considerate to other people. Be a bit more sociable, be able to turn to others instead of relying on myself.

S74. Free. To be able to travel without worrying how much this is going to cost me. Physically I'd like to be a little bit heavier. Little bit more tolerant of others, more punctual. To understand things quicker so I could act quicker at certain times. I'd like to say and do what's on my mind and not worry about the consequences.

S76. This is my long-term goal. I want to be more in shape, put some weight on. I want to be an aerobics instructor. I'd like to not get so angry. Little things I get very angry over. I'd like to have a better presentation of what I do.
S78. How I am when I'm stoned. I can have the sort of attitude that I don't care, but do everything as far as caring for anybody and everybody. Just comfortable in my surroundings. I'd like to feel accepted in places. I'd like to be what I was when I was a kid but most of the time I didn't like that either.

S79. I don't know. For starters I'd like to be able to control my life. When I'm out there [using substances] I let everything go by. When I've had jobs, I blow my money and waste it. I suppose I'd like to be able to enjoy life a bit more than I do. I enjoy myself but I don't enjoy much other things like when I'm out and about in the real world out there. Everything's like a big spin when I'm out there. I'd like to be able to deserve things, own things. Be a good father. Not too many things phase me. I'm happy as I am.

S81. Very open-minded, assertive, very assertive when it's needed, just opinionated, put my opinion across when I think something's wrong, I want to be able to express it there and then. Know between right and wrong, I'm still learning that stuff. Well educated.


S84. A runner again. Successful in some type of job where I'm earning a lot of money, not dishonestly. Be well known. Stay healthy. Do lots of exercises and look good so that people will take notice of me.

S85. Easygoing, polite, well-mannered, good self-esteem. Trying to sort of get rid of that apathetic attitude. Try and be assertive wherever possible when [there is a] need to be.
S87. It never enters my mind. A good D&A [drug and alcohol] counsellor. Somebody who's content with their lot and not chasing rainbows or dreams which never come true. A happier person. A non-drinking alcoholic. I don't want to know anything about the world.

S90. Very happy. Very important to have a lot of confidence. You can make decisions and follow through with it.
Relationship with the substance

Q. Many people feel as if they had a relationship with the drug they preferred. Would you say that was the case for you? How would you describe that relationship?

Category 1. Respondents spoke explicitly of the relationship in terms expected of an attachment relationship, as a partner or dependable friend (16%).

S38. The only friend I had. I could always turn to the bottle. Depended on it. It was always there.

S49. A very abusive one. I use it as an excuse and it used me. I felt I was being used. Even now I think I didn't get to have my parting shot, this good-bye thing. It's really strange. Sometimes I felt it was my only friend and I could depend on it, and I knew how it would make me feel.

S59. Because I felt pretty comfortable being lonely with the drug.

S63. A companion for me that I could rely on. It was always there. No matter how I felt, good or bad, it was always there, always the same. Always gave me the same effect. I could rely on it more than other people.

S66. Basically the most important thing in my life at that time. I loved the drug. It was my partner at the time.

S67. I felt like I lost my best friend [when entered treatment]. I felt like I could depend on it. It was always there for me. Always knew what I'd get out of it. Always knew how I'd feel.
S68. If something happened to you and you got hurt, you’d want to have a smoke [of cannabis], instead of talking to your best friend. [When you stop] it feels like something's gone. You can't depend on it any more, just like you want to depend on a friend.

S75. It's been my first love. It's been really the only thing I've really cared about. It's been the only focus of my life. Something that I felt I needed.

S81. We used to call the bong our wife, or girlfriend ... It's what your life revolves around. It's what you rely on.

**Category 2.** Respondents described qualities of the relationship, or outcomes which would be associated with an attachment relationship, such as security, comfort, or dependability (9%).

S44. Comforting. Destructive but comforting.

S48. The love of my life. It's a comfort when you're feeling anxious or angry or sad or depressed or just uncomfortable.

S52. They [drugs] have taken the place of a relationship. To start with, they gave me what I looked for in relationships. They gave me the warmth, the security, the feelings of esteem ... of belonging, of acceptance, of being part of something. And they gave me an escape from day to day life which I find I can get in a relationship.

S72. It's always there. Whenever you're feeling down, you can have some of it, and it'll take you away from reality. If you're in despair or depressed, you wouldn't feel that. Just as comforting as what a relationship could be.
S89. Very close. Ever since I discovered it, it helps me relax a lot, able to mingle and socialise with people without any problems. Nothing worries me at all.

Category 3. Respondents described the substance as providing qualities they felt they lacked, or, in more severe cases, necessary to function at all. Many of the latter responses described the relationship as addictive, but were judged to be describing a psychological state, not just a physiological dependence (14%).

S47. I just couldn't live without it. I was very dependent on it. I couldn't function properly unless I was stoned. I thought I just couldn't communicate with anybody ... The drugs made me an extrovert.

S51. Felt I had a real dependency on it. Craved it, wanted more and more. If it wasn't there, I'd get upset and down and depressed. And when it was, I felt happy and alive.

S69. When I first went into rehab., I cried for two days. I think you grieve for that front you've been depending on for so long, that you're used to.

S78. Couldn't do without it. It was like medication for everything else. I had to have it to keep going, to get myself motivated, to feel accepted to life, I suppose, hide my problems away.

S83. It gave me the things in myself I wanted at the time, confidence and that. I didn't feel I was anything unless I had speed in me.

S85. Addictive. It was on my thoughts more than anything else whether family, friends or anything ... When I was straight, I couldn't stand it, I had to do something.
S86. It'd bring me out of me at certain times. I could be friendly, I could argue with people. I had more confidence to do things, especially with my relationships as well. I could be a lot more open. It broke the ice, and it'd be a talk point too.

S89. With heroin, it's really addictive. After a while, I thought I needed it. If I didn't have it, I wouldn't talk, stress out, things like that.

**Category 4.** The relationship with the substance was described as a substitute for a sexual relationship, which in this study is distinguished from an attachment relationship, though it may overlap with one; or they used relationship terms but there was insufficient detail to establish whether it was an attachment relationship that was being described (14%).

S33. Quite passionate really.

S36. Good at the time.

S40. Love-hate relationship.

S50. I used to treat heroin as a lover. I haven't had a sexual relationship for going on three years and I didn't feel as if I needed one. For a long time, I saw heroin as my mistress. It took me too long to realise she just kept letting me down.

S53. Very close.

S55. I couldn't deny that I loved it. Bit of a dead end. It was sort of a love-hate. I loved it and I hated it.
S73. It became my sex, everything. After I got fully into it, I didn't worry about a lot of things.

S82. A needy one [relationship]. Always wanting it, needy, greedy.

Category 5 was employed for those responses where the relationship with the substance was described in terms suggestive of addictive behaviour, rather than a relationship: with a focus on the pharmacogenic effect, the gratification of using the substance, domination of the person's life by the substance, or the substance being perceived as necessary without specifying whether the need was physical or psychological (18%).

S60. Love-hate. I loved it but I hated what it did to me. I liked the way it made me feel. It took away the fear. But I didn't like the things it did to me, the things I did whilst under the influence.

S79. I loved it. It was one of the best things I've ever had or tried but after a while I couldn't handle it, being sick. It was something I couldn't go without.

S35. Heroin could live without me. I couldn't live without it. I couldn't be without it. I would do anything to get it.

S37. Sheer bliss. I loved it, the effect.

S43. I really loved being stoned, and drugs. I couldn't survive the days without them. And that was my main reason to be alive, even more than my partner, was just going out to get stoned or drunk.
In the beginning it was just a lot of fun and games. Once I started to get obsessed with it, it was no longer fun and it was sort of a burden. I had to get drugs. Then it became a one-way affair. I had no control over it.

Come before anything - sex, friendship.

Everything was for the drugs, they come first. You got up in the morning and drugs came first and paying the bills later. If you couldn't get on one day, you were so emotional. Your drugs were always with you wherever you went, and whatever you did in life you had to work around the drugs.

Pretty lonely. Made me feel alone. That's all I could think of, drinking and alcohol.

I'd say it was pretty close. I'd find it excitement.

People who did not feel they had a relationship with their preferred substance (29%):

More just a way of life.

It was always there if I was depressed, always there as an upper.

You were too out of it, you never had to think about bills, things like that ... It just took all your problems away. Like [indistinguishable] ... things and people you can destroy along the way.

Towards the end if I was feeling down or frustrated, it was a little bit like that [a relationship]. That's what I'd turn to for help. I neglected relationships.
S80. A deadening of how I was feeling. I did like the drug itself.

S84. Felt I couldn't do without it, every time I had it, it'd numb the pain [chronic back pain]. I was having it for the pain and for the effect too.

S92. For me, it was a medicine to get me through the day. I didn't even used to get stoned.
Q. Did the drug give you a sense of security? How would you describe that security?

Category 1. Responses were consistent with an attachment relationship: the provision of security, comfort, confidence to interact with the environment, self-worth (22%).

S35. [The substance was] a replacement for sex, food, life. It was security, warmth, well-being, everything.

S39. Felt more confident, happier, safer. It made me face things, be more relaxed in a group of people.

S40. Loved the effect. It took away my painful shyness. I could enjoy myself.

S44. Took away the loneliness. I suppose that's some security. I had more confidence. In the end it wasn't secure.

S47. Just gave an illusion that I had no problems, that everything was okay. I thought life was great for those few hours. It just gave me confidence. I felt like I was a worthwhile person. It made me relate to others.

S49. It was always there. It had no expectations of me apart from using it which I wanted to do anyway. So it suited me. It didn't require any effort on my part to keep this relationship going (apart from the effort of getting it). It was just so easy.

S50. A feeling of well-being. I felt that I was more sociable, using it. And I used to enjoy working under the influence. It took away any physical pain I had and
kept me interested in what I was doing. I had a fulfilled feeling that I didn't have without the drug. I had an empty feeling without the drug.

S53. It was always a best friend to me. It was always there for me, never said no to me ... a comfort zone.

S54. A sense of fitting in and being able to fit in. Confidence, I guess.

S63. Knowing that it was always there was a sense of security. When I was under the influence, I see now, it was a false sense of courage. Obviously it was only temporary.

S73. I wouldn't worry about a lot of things, it was sort of a comforting thing.

S81. Whenever you had something come up, some sort of difficulty or problem, you'd just run away from it, and go and use, and just disassociate yourself from everyone else. It's just really easy, you just didn't have to do anything. Just not having to deal with anything. I liked the effects of it too.

S88. Made me feel safe, gave me willpower to carry on, strength sometimes. Later it let me down. Just made me feel needed, like I was part of something.

Category 2. The respondents described the substance as replacing perceived lacks in the self, or providing the confidence or self-worth to do things they normally would not have felt able to do. These benefits are also consistent with the benefits of an attachment relationship (20%).

S43. It made me feel better about myself. I have a self-esteem problem and it made me feel better about myself.
S51. Gave me more confidence to do what I've always liked doing, like associating with people, talking to people, having the courage to actually do what I wanted to do instead of just sitting back and taking things as they come.

S58. My major drug was alcohol. Once I'd had a few drinks, everything else would be fine. But when I was out of it, especially later last year or so, when I was totally wrecked, I wasn't scared. It gave me courage, I suppose. I'd be able to go out and do things, I'd actually go out and meet people. And I'd go to work and actually do work, instead of being scared to go to work. If I hadn't done that, I'd have walked into work, insecure, wondering how I'm going to handle the day. If I'd had a few drinks, I'd pop in: "I'm ready, let's go."

S59. Able to do things I normally wouldn't be able to do, like speak up and say things when I thought they were wrong. Just a sense of security within me, just to get through the day.

S60. Freedom from fear. Comfortable. The removal of fear. And I could communicate with people and I could do things that otherwise I would feel uncomfortable doing.

S62. At the start it did. I couldn't communicate. I had a whole heap of fear. I realise it was fear now. I couldn't go out in the community, I couldn't talk to people, couldn't do nothing without having a drink in me, or a drug in me.

S67. Prior to getting into drugs I always felt empty, didn't belong. Getting into drugs, I felt I belonged, I felt whole, I didn't feel like anything was missing anymore.
S70. Get rid of my problems, I could talk to people which I can't now I'm sober. It's very hard.

S72. I'm a fairly insecure person. When I was on the drug, I was confident.

S73. I've never really had much confidence in myself. When I had it, I'd talk. If I didn't have it, I wouldn't talk to anybody. If I have it, I could talk to people.

S75. A feeling of self-confidence. It got over the way I felt very introverted. I felt I could relate to people a lot easier. I have a lot of trouble relating to people at all. It made me feel the way I wanted to feel. I enjoyed the way it made me feel.

S78. Big sense of security. I felt confident in everything I done. When I was straight, I've got no confidence at all. When I'm on the gear, I feel like I'm in control of myself for a change, I feel like I'm being myself, letting myself come back out again. On alcohol I was doing things I didn't like so I substituted [heroin]. On heroin, it gave me an easy feeling ... I'd just have it to relax and feel normal.

S86. I'd feel confident with it. When I'm not drinking, I'm pretty withdrawn, keep to myself, wouldn't talk much to people. Really short conversations. I could express myself.

Category 3. The respondents described the substance as alleviating unwanted feelings and worry, providing security against an internal state (17%).

S33. Stopped me feeling. I didn't hurt. I didn't feel inadequate. I wasn't randy so sex wasn't a problem.
S48. I didn't have to worry. I didn't have to worry what people thought. I didn't worry too much about responsibilities. It ties in again with an anxiety thing.

S51. Not having to deal with inner feelings, not having to worry about anything when I was out of my head. Nothing worried me, let it go.

S55. Nothing really worried me. I was different around other people and what people said didn't matter.

S57. Just security against feeling feelings I didn't want to feel. Just I'd feel numb, didn't have to feel and deal with things, responsibilities and stuff. Just to feel numb all the time.

S64. In the sense that I didn't have to deal with myself and what I was dealing with, and what I was feeling. Yeah, heaps, I didn't have to think about emotions and that's better. You didn't have to think about your problems, or why you were hurting or things you'd lost in life. I had a lot of trouble with my kids ... and I didn't want to deal with that. It was really hard. The more drugs I took, the less I had to think about it. So it worked out well.

S66. To suppress my emotions.

S68. When I was worried about my children, I'd have a smoke and the worries would go out of my head, I'd be stoned. If I got bashed up by my partner, I'd have a smoke and feel right again. I wouldn't feel as nervous with him. [Drugs were good] just to hide my feelings.

S70. Thought I had no worries, they were there, drink just took them away.
S74. Once I'd had a shot, I wouldn't worry about anything. I didn't have to worry about as much, didn't have to do as much. Didn't have to really fear anything except not being able to get my next shot. Once I had a shot I wouldn't worry about anything until I'd get low or have to get my next shot. Didn't have to worry about everything.

S90. I feel I can do anything I want without having to worry about other people criticising me or making comments about me.

Category 4. The respondents described a security which appears to be excessive emotional self-sufficiency (18%).

S37. Very confident in what I did. I was right and everybody else was wrong. It made me socialise. Went travelling. Broke down my inhibitions.

S42. In the end, it put me in a world of my own, blocked out my emotions, all my feelings. I wasn't really thinking about much. I was just in a world of my own. When I had the stuff I felt comfortable. Didn't have to worry about anything else or anybody, and it made me feel good.

S53. It used to put me in my own world. [I] used to think there was just me around, nobody else. It was good.

S59. The fact that I could do anything I wanted to without answering to anybody.

S67. Nobody could hurt me. I was ten foot tall and bullet-proof. I could do anything I wanted to. I could manipulate my own mind into believing what I was doing was right, even though it was wrong, because I hated being wrong. It made me comfortable in my own skin.
Sure did. I did anything when I was on it, anything I wanted to, needed to.

At the time, I felt on top of everything. I was doing so many things at once that normally I wouldn't be able to do. I could get things done and I knew I could do it. Didn't have to worry about relying on other people because I knew I could do it myself. I could go on forever. I never used to sleep much or read. I just kept powering on.

Self-confidence, felt strong, in control of what was going on around me. I used it to work, I felt smarter, I felt motivated on the drug, motivated to do better.

Sense of confidence in a way. I'd walk the streets, I just felt no shame. Just no shame walking around. I'd walk around off me dial. I just felt brilliant while I was walking around the streets. Everything seemed, myself seemed like the centre of the picture and everything else around me seemed distant, I didn't really care what anyone else thought. I just felt brilliant the way my body relaxed and everything.

Being at home with nothing to eat, in front of the television, I was quite comfortable, quite happy to drink myself to death. The fact that I drank on my own for x amount of years and I enjoyed my own company, I enjoyed being drunk. I feel very secure with grog. I don't feel unhappy or upset or at the brunt of other people's issues.

Category 5. In the final group were placed responses indicating the use of the substance addictively, for gratification or to prevent physical withdrawal (15%).
S40. Complete oblivion, the adrenalin of the life style, excitement, didn't lose control.

S45. I did enjoy going to get it and getting it, mulling it up, the ritual of it all.

S63. It had the power to take me away from stuff I couldn't handle. I couldn't handle life on life's terms. It was good to know whatever happened I could always go and get pissed and stoned.

S69. When I was stoned I felt good. When I got drugs, I thought my girlfriend would stay. I knew a lot of druggoes, I could get credit. I felt good when I used.

S72. The feeling of being high. The excitement of going out and ripping people off. It's an adrenalin rush to go out and do something and not get caught. I had a lot of good times.

S92. Once I'd had a shot, I wasn't sick, I could do my housework, care for [toddler]. I'd get really sick without it. Because I'd been using so long, the good thing was that I wasn't sick. If I got stoned, it was a bonus. It was good if I didn't get sick.

People who did not feel it gave them a sense of security (17%):

S56. No. A sense of insecurity!

S80. No. Have done things when I was stoned that I possibly wouldn't do when I was straight, not being affected by people emotionally.
S84. No. Mainly had it for back pain.

**Unclassifiable** (3%). Three per cent of responses (3%) defeated clear allocation to the above categories.

S66. It was my crutch. I felt like it was an armour. I had no armour, it was my protection, my wall.

In this response, the substance appears to be providing an artificial defense against excessive vulnerability but it is unclear whether, at the time, it constituted a replacement of what the self was lacking (Category 2) or self-sufficiency (Category 4).

S45. Knowing that I knew what I was going to do from day to day. Just knowing that I could get myself into a mind state that I wanted to be in, instead of one that I didn't want to be in. Just the high, I knew what it felt like, I knew what was going to happen. It became a routine so I felt comfortable in that routine.

This response also appears to reflect more than one category of response. The substance appears to provide a state of mind that alleviates an unwanted state (Category 3), although the state is unspecified. However, the primary benefit seems to be the predictability of the routine involved in obtaining the substance, rather than the substance itself. It is possible that this comfort is consistent with a predictable attachment relationship (Category 1), but it appears to be more of an emotional deadening of the kind associated with some Category 6 replies.