Self-compassion amongst clients with problematic alcohol use:
Can mindfulness treatment moderate treatment response?

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This thesis is submitted to the
School of Psychology, University of Newcastle,
in fulfilment of the requirements of the degree of

Doctor of Clinical and Health Psychology

July 2011
Declaration

1. I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a university degree or other similar qualification to any other University or Institution.

Signed: ..........................  Date: ..........................
ACKNOWLEDGMENTS

It is a pleasure to thank the many people who made this thesis possible. I would like to express my sincere gratitude to my primary supervisor, Dr Francis Kay-Lambkin. Your enthusiasm, inspiration, support, knowledge and calming influence made this thesis possible. I am very grateful for all of your assistance and enthusiasm for the project. I would also like to thank my secondary supervisors, Steve Childs and Associate Professor Jenny Bowman your feedback and support was very much appreciated.

Many thanks also to the Team from Central Coast Drug and Alcohol Service who helped with the data collection for this project. Your assistance and support through this process has been much appreciated. My sincere thanks to all of the research participants who agreed to partake in this study.

I wish to thank my friends Natalie and Megan who have been there for me since school and throughout my whole university studies. Also to all my other friends who have supported me throughout this time, you all know who you are.

I am grateful for Masters in Clinical Psychology graduate Jacinta Grima and Doctorate of Clinical Psychology graduate Dr Tony Akers for lending me their theses to read so that I could preview the structure of an APA formatted thesis.

I wish to thank my parents, Lyn and Bob Brooks. Without you, I would not have achieved so much, the support and love you have provided has been instrumental in the completion of my studies. I wish to thank my entire family for providing a loving environment for me including my sister, Nikki and my brothers, Jas, Scotty, Willy and their families – Tim, Gen, Mel, Em, Ava, Mason, Keira, Lani, Millie and Olli. Thank you for being there for me always.
Lastly and most importantly I wish to thank my children, Nathan, Corey and Bianca Brooks who are my life. For the first time in over 11 years, you will finally be able to experience what it is like to have a mother that does not need to spend weekends studying. The next chapter of our lives is about to begin. To my little angels and to my parents I dedicate this thesis.
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Abstract

There have been numerous previous studies examining the relationship between depression, anxiety, stress, self-esteem and alcohol use but the results have been inconsistent and often contradictory. Additionally, other research has found self-esteem difficult to define, measure and improve. Recent research has focused on self-compassion which is comprised of six facets including Self-Kindness, Self-Judgement, Mindfulness, Over-identification, Common Humanity and Isolation. The aim of the present study was to examine the relationship between self-compassion, depression, anxiety and stress among individuals who are alcohol dependent as there had not been any published research examining this to date. Seventy Seven participants from the Central Coast Drug and Alcohol Service were recruited for the present study. A number of questionnaires were used including the DASS, the Self-Compassion Scale and the Opiate Treatment Index. The baseline results from this study found that participants were significantly higher in depression, anxiety, stress, alcohol use and lower in self-compassion than the general population. The 15 week follow-up data indicated that mindfulness based treatment is a efficacious intervention for reducing symptoms of depression, anxiety, stress and improving self-compassion particularly for people with alcohol dependence problems. Additionally, the self-judgement component of self-compassion appears to show the most gain through the intervention that was employed in this study. Taken together, these results suggest a mindfulness intervention may be a useful tool in the treatment of alcohol use disorders and improving self-compassion, depression, anxiety and stress. Future studies should focus on the effectiveness of a structured mindfulness intervention in increasing self-compassion in both a clinical population and a non-clinical population and on examining the antecedent of the
relationship between self-compassion and depression, anxiety, stress and alcohol consumption.
“Self-compassion amongst clients with problematic alcohol use: Can mindfulness treatment moderate treatment response?”

Alcohol Misuse is a Significant Problem

Alcohol is a depressant drug which is found in some drinks that are intended for human consumption (ABS, 2006). Alcohol acts as an inhibitor and reduces anxiety in low doses but can result in death in extreme doses (ABS, 2006). Alcohol misuse can be separated into chronic or long term risky /harmful drinking and acute or short term risky/ harmful drinking. In males, an average daily consumption of five or more standard drinks reflects long term risky/high risk drinking and the consumption of seven or more standard drinks is acute or short term risky drinking (ABS, 2006). For females, an average daily consumption of three or more standard drinks reflects long term risky/high risk drinking and the consumption of five or more standard drinks is binge or short term risky drinking (ABS, 2006).

High, chronic alcohol consumption is associated with cancer, liver cirrhosis, vascular disease, heart disease and strokes (ABS, 2006). Alcohol is the second largest cause of hospitalisations and drug-related deaths in Australia (AIHW, 2005a). Binge or short term risk drinking has been found to lead to an increase in motor vehicle accidents, falls and other accidents (NHMRC, 2001).

A clear progression from alcohol use to alcohol abuse and from alcohol abuse to alcohol dependence can be seen in some individuals (Sartor, Lynskey, Heath, Jacob & True, 2006). Alcohol abuse is described as those who drink despite recurrent, interpersonal, social and legal problems as a result of alcohol use (American Psychiatric Association, 1994). Alcohol Dependence can be defined as a cluster of cognitive,
behavioural and physiological symptoms reflecting the problems associated with the ongoing use of the substance. The pattern of ongoing use can result in withdrawal, tolerance and compulsive alcohol seeking (American Psychiatric Association, 1994).

Alcohol use disorders (abuse/dependence) have also been associated with disabilities such as problems with physical functioning, emotional state, high fatigue levels, problems in cognitive functions, speech impairments, depression, anxiety, visual problems, social relationships, poor co-ordination and difficulties with fine motor skills (Samokhvalov, Popova, Room, Ramonas & Rehm, 2010). Additionally, other research has found anxiety, depression and severity of alcohol related problems to be negatively correlated with Quality of Life and age of onset of regular alcohol use (Everen et al., 2010).

Alcohol has been found to contribute to a number of serious legal, personal, relational and other problems for individuals (Collins & Lapsey, 2008). Many studies have found it to be a factor in violent crimes such as homicide, sexual assault and violence (WHO, 2009). The most obvious effects of alcohol use are injuries, particularly motor vehicle injuries (Collins & Lapsey, 2008). In the Australian community, the total aggregate social costs of alcohol abuse in 2004/05 has been determined to exceed $15 billion and includes issues such as health costs, morbidity, mortality, crime levels, road accidents and workplace productivity (Collins & Lapsey, 2008).

Teesson et al. (2010) completed a study examining the prevalence of alcohol abuse and dependence in Australia using 8841 Australian adults aged from 16 to 85 years. The results obtained from this study suggest that there was a lifetime prevalence of 18.3% for alcohol abuse and 3.9% for alcohol dependence. Additionally, the prevalence for 12 month disorders was 2.9% for alcohol abuse and 1.4% for alcohol dependence. Males
and younger adults reported a higher rate of current alcohol abuse or alcohol
dependence. Anxiety and alcohol use disorders were found to be significantly related, as
was current alcohol use and other drug use disorders. However, affective disorders were
no more likely among those with an alcohol use disorder than the general population.
Additionally, 77.6% of those who reported having an alcohol use disorder were not
receiving treatment for the disorder. The researchers concluded that of significant public
health concern is the low rate of effective interventions available to individuals
suffering from an alcohol use or dependence disorder.

Co-morbidity of Depression, Anxiety, Stress and Alcohol Use Disorders

A high co-occurrence between alcohol use disorders and depression has been
consistently found in the research (Hunt, Baker, Michie & Kavanagh, 2009). Andrews,
Henderson, & Hall (2001) found that 40% of Australians with a diagnosis of alcohol use
disorder also meet the criteria for at least one other disorder such as depression. Burns
and Teesson (2002) found that 16% of people with depression in the previous year had a
recent alcohol use disorder.

Several different models have been proposed to explain the co-occurrence of
any mental disorder with an alcohol use problem and these can be applied to the
relationship between depression, anxiety, stress and alcohol misuse, with a view
towards planning treatment approaches for these comorbid conditions.

Research on the stress response has suggested that when there is a challenge to
an individual’s normal state such as a perceived threat, the hypothalamus is activated
(Pratt & Davidson, 2009). The paraventricular nucleus in the hypothalamus then
releases hormones such as corticotropin-releasing hormone (CRH) and arginine
vasopressin hormone (AVP) which stimulates the release of adrenocorticotropic
hormone (ACTH) and eventually the stress hormone, cortisol (Koob, 2009; Holsboer & Ising, 2010). To ensure this response in turned off after the perceived threat is no longer present; a regulatory system called the limbic-hypothalamic-pituitary-adrenal (HPA) axis is used (Koob, 2009). Research has found that alcohol intoxication results the HPA being activated (Heilig and Koob, 2007; Adinoff, Junghanns, Kiefer & Krishnan-Sarin, 2005) with women experiencing a greater stress-activating effect than men (Larkin, Binks, Li & Selvage, 2010, Olgilvie & Rivier, 1997). Dawson, Grant & Ruan (2005) found that experiencing stressful life events significantly predicts the amount and frequency of alcohol consumed. Those participants who reported experiencing six or more significant life stressors in the past year were found to consume more alcohol per day than those participants who had not experienced as many stressful life events in the same time period. Consistent with these findings, Lloyd & Turner, (2008) found that exposure to stressful life events, either distal or proximal, predicted the onset of alcohol dependence. Taken together, previous research suggests that stress plays a key part in the development of alcohol use disorders.

In clinical settings, the co-morbidity of alcoholism and psychiatric disorders has been found to be very common (Almeida-Filho et al., 2007). In particular, numerous studies have found alcohol abuse is associated with psychological variables such as anxiety and depression (Desimone, Murray & Lester, 1994; Kushner, Shar, & Bietman, 1990; Regier et al., 1990; Sullivan, Fiellin & O’Connor, 2005).

There have been a number of causal explanations attempting to account for the high incidence of co-morbidity between depression, anxiety and alcohol use (Khantzian, 2003; Krushner, Abrams & Borchardt, 2000). One of these explanations is that anxiety or depression promotes the pathological use of alcohol (Krushner, Abrahams & Borchardt, 2000). This is often referred to as the self-medication hypothesis (Khantzian,
2003), which is a psychoanalytically informed theory that suggests that substance addiction functions to self-soothe and to modulate the effects of distressful psychological states (Suh, Ruffins, Robins, Albanese & Khantzian, 2008). Suh et al. (2008) retrospectively tested the self-medication hypothesis using 6 Minnesota Multiphasic Personality Scales-2 special scales and found that depression and repression was prominent in the alcohol dependent group. Cooper, Frone, Russell & Mudar (1995) tested a motivational model of alcohol use and found that individuals drink alcohol to regulate positive and negative emotions including euphoria, depression and anxiety. A pattern of alcohol dependence is created when these negative emotions are present over a period with no effort being made to heal them and the individual uses alcohol to cope (Peterson & Cangemi, 1993).

Research has found that nervous mood states lead to increased alcohol consumption, which is associated with lower nervousness, at least in the short term (Swendsen et al., 2000), reinforcing the use of alcohol as a coping mechanism. For example, Sloan, Roache & Johnson (2003) found that participants, who on their last day of treatment reported a lower consumption of alcoholic drinks, were also more likely to report a reduction in their anxiety symptoms. Supporting the suggestion of a relationship between anxiety and alcohol dependence, Buckner et al. (2008) found that social anxiety disorder served as a risk factor for the subsequent onset of alcohol dependence. However, this study also found that neither mood disorders nor other anxiety disorders predicted future alcohol dependence.

Supporting this theory, research has suggested that alcohol is often used as a coping mechanism when faced with unpleasant situations and depressive feelings (Kushner et al., 1996) as it relieves tension and stress in the short term (Kushner, Shar, & Bietman, 1990; Kushner et al., 1996). Research has found an association between
self-medication and increased co-morbidity with other mental health disorders and with suicide attempts (Bolton, Cox, Clara & Sareen, 2006; Robinson, Sareen, Cox & Bolton, 2009, a & b). Robinson et al. (2009) examined the quality of life of individuals with anxiety who self-medicated with drugs or alcohol. The results of this study suggest that individuals with anxiety who self-medicate rely more heavily on mental health services and had a lower mental health related quality of life compared to those individuals who did not self-medicate.

However, other research has suggested that alcoholism promotes the development of anxiety and depressive disorders (Krushner, Abrams & Borchardt, 2000). The theory behind this view is that anxiety and depressive symptoms are a consequence of withdrawal from alcohol (George, Nutt, Dwyer & Linnoila, 2007). The view that heavy alcohol consumption leads to a dramatic alteration in brain function was referred to as organic mental syndrome (Anthenelli, 2010; Nunes & Rounsaville, 2006).

This model has had equivocal support in the literature; Hasin & Grant (2002) found that the strong association between prior alcohol dependence and depression indicated that the association is not entirely due to the withdrawal effects of alcohol and misdiagnosed intoxication. The researchers of this study suggested that future research should be aimed at determining a better understanding of the nature of the relationship between depression and alcohol dependence as this will impact significantly on public health. Others have suggested that this co-morbidity between alcohol dependence, anxiety and depression is a specific subtype of alcohol dependence they have referred to as anxiety-depressive alcohol dependence (Huang et al., 2004; Lu et al., 2005).

Other research has examined the relationship between anxiety disorders and relapse to alcohol use after alcoholism treatment. Kushner, et al. (2005) concluded
patients with co-morbid anxiety and alcoholism should be considered a high risk for relapse, and as such screening for anxiety disorders should be undertaken for patients that are being treated for alcohol dependence.

Koob & LeMoal (2005) suggest that alcohol seeking behaviours are employed in an attempt to reduce a state of negative affect. Supporting this, Driessen et al. (2001) examined the association between anxiety and depression in participants who were treated for alcohol dependence using data obtained at baseline, through detoxification and their drinking behaviours after discharge from treatment. The results indicate there are a number of factors associated with relapse including co-morbid anxiety and depressive disorders, moderate to severe current anxiety and depression, and severe trait anxiety three weeks after abstinence. Additionally, Willinger et al. (2002) found that high anxiety and personality traits such as low harm avoidance and high novelty seeking predicted relapse in detoxified alcohol-dependent patients.

Contrary to the proposed relationship between alcohol dependence and anxiety, Schuckit and Hesselbrock (2004) found that prospective studies of individuals and children of alcoholics do not indicate a high rate of anxiety disorders preceding alcohol dependence. The researchers concluded that the high rates of co-morbidity in some studies was possibly due to a mixture of anxiety disorder at a normal/slightly higher than normal rate than the general population plus individuals with a substance-induced anxiety disorder. Brook, Brook, Zhang, Cohen & Whiteman (2002) used a prospective longitudinal study to investigate the association between early alcohol use and the incidence of later psychiatric disorders. The researchers found that earlier alcohol use predicted later alcohol dependence and predicted a future diagnosis of major depressive disorder.
Other research has suggested that the relationship between anxiety and alcohol use disorders appears to vary depending on the type of anxiety disorder. Kushner, Sher & Beitamn (1990) found that agoraphobia and social phobia appear to precede alcohol use. However, generalised anxiety disorder and panic disorder are more likely to occur after pathological alcohol consumption. Additionally, the result from Krushner et al. (1990) indicates that there appears to be no relationship between simple phobia and alcohol use.

In opposition, Kushner, Shar & Erickson (1999) examined the relationship between anxiety disorders and alcohol use disorders prospectively using college students and found that there is a reciprocal causal relationship between these two disorders with alcohol dependence leading to anxiety and vice versa.

Conversely, Schuckit and Hesselbrock (2004) evaluated the available literature and found that the data did not prove a close relationship between alcohol dependence and lifelong anxiety disorders. Haynes et al. (2005) examined whether anxiety and depression were risk factors for excessive alcohol consumption and vice versa. The results from this study found that alcohol use was not associated with the onset of depression or anxiety but abstinence was found to be related to a lower risk of depression and anxiety. Additionally, a weak association was found between new onset alcohol dependence and sub threshold anxiety and depression symptoms.

Other research has suggested that there is an increased risk of both depression and alcohol use disorders when there are one of more factors present such as stressful events, genetic predispositions, social problems etc. (Crum et al., 2001; Mueser et al., 1998). Another model suggested that alcohol use disorders and depression are unrelated and are commonly found together due to sampling bias in the population/clinical studies.
or due to the overlap in the diagnostic classification systems for these disorders (Hall, 1996; Kendall & Clarkin, 1992; Lynskey, 1998).

Little firm evidence exists to support the adoption of one of the above causal models over another in explaining the relationship between anxiety, depression, stress and alcohol use problems, and each model has inherent problems when applied to individuals in real world clinical settings. The conflicting results in the available studies may be related, in part, to the complexities of comorbidity, to a general lack of research attention devoted to this population, and the inconsistent methods of estimating and measuring anxiety, depression and alcohol use comorbidity within each study population (i.e. formal diagnosis of conditions versus levels of symptomatology and distress). Many studies also differ in the reporting of alcohol use, some using estimates of quantity and frequency of current use, while others report lifetime and current rates of abuse and dependence among their samples. These differences are important, as some researchers contend that using current symptom severity, as opposed to lifetime rates of depressive, anxious and alcohol use disorder, provide better predictions of treatment outcomes. However, given the increasing prevalence (and co-occurrence) of alcohol use disorders with anxious and affective disorders, this area remains an important issue to explore.

Much stigma is associated with mental health illnesses such as depression, anxiety and alcohol dependence (Rüsch, et al., 2009, Baldwin & Marcus, 2011). This stigma impacts on the individual’s acceptance of having a disorder, the likelihood of the individual seeking support from family and friends, the uptake of treatment and the compliance with prescribed medication (Katona & Livingston, 2000; Corrigan, 2004; Gary, 2005; Rüsch et al., 2009). Pescosolido et al., (2010) examined how readily the general community accepted a neurobiological understanding of mental illness and
whether this leads to more support for treatment from providers such as psychiatrists and the effect on acceptance of people mental health disorders. The results indicate that a neurobiological understanding lead to a greater endorsement for treatment e.g. there was increase in the endorsement of psychiatric intervention for Major Depression and Alcohol Dependence. However, there was not a significant decrease in perceived danger, social distance and stigma. In fact, having a neurobiological understanding resulted in an increase in community rejection. Undoubtedly, the combination of anxiety, depression and alcohol use disorders will impact significantly on the individual, and have a damaging effect on their self-esteem. This will clearly compound the challenges with treatment seeking for this important population.

Self-esteem and Alcohol Use

There have been many attempts at providing an accurate definition of self-esteem (Swann, Chang-Schneider & Larsen McClarity, 2007) generally suggesting that self-esteem is an overall feeling of self-worth that affects psychological functioning (Tafarodi & Swann, 1995). However, in the scientific community, there is no complete agreement as to the precise explanation of self-esteem (Elmer, 2001).

Branden (1969) described self-esteem as a basic human need that involves a feeling of personal worth (self-respect) and personal capacity (self-confidence). Self-esteem has been linked to both positive and negative affective states (DeSimone & Murray, 1994; Lyubomirsky, Tkach & DiMatteo, 2006).

Numerous studies have examined the relationship between alcohol use and self-esteem and some researchers have argued that low self-esteem poses a high risk for substance abuse (Baumeister, 1993; Bushman & Baumeister, 1998) and that non-alcohol drinkers have higher self-esteem than those who drink alcohol (Butler, 1982).
Chaudhury et al. (2010) found that male inpatients with alcohol dependence have lower self-esteem than the general population.

However, other research has found opposing, incomplete and inconclusive evidence regarding the relationship between self-esteem and alcohol use (Lapp, 1984). DeSimone, Murray & Lester (1994) examined self-esteem, depression and alcohol use among students below and above the legal drinking age. The results from this study found that for high school students, alcohol use was positively associated with depression and contrary to previous research, high self-esteem was related to greater alcohol use. The researchers posited that individuals with depression descend into maladaptive negative thinking patterns that are self-perpetuating, repetitive and ruminative which, over time, increases the probability of alcohol use.

In contrast, other research has provided support for the notion that among people with alcohol use problems have higher self-esteem than those who do not (Corbin, McNair & Carter, 1996). One reason behind the disconcordant research findings in this area may lie in the different populations targeted in the literature examining relationships between alcohol use problems and self-esteem. For example, among College and younger students, engaging in risky drinking practices may be associated with social acceptance and inclusion, thereby explaining the increased rates of self-esteem reported by those using alcohol in such studies. In contrast, people with more severe alcohol use problems (e.g. dependence), many more personal, social, economic and other costs may have been incurred, having a flow-on effect to how the person perceives and feels about themselves, and consequently, their self-esteem.

In support of this notion, Leary (1990) proposed that the self-esteem system is a Sociometer that is involved in the preservation of interpersonal relations. According to this theory, the individual’s feelings of state self-esteem are an internal subjective
measure of the amount to which the person is included, rather than excluded, by their social group. Thus, the purpose of self-esteem is to protect against exclusion and social rejection.

Supporting the Sociometer theory; Leary, Tambor, Teridal & Downs (1995) found that a participant’s reaction to events corresponded to their suppositions about acceptance by their social group. The results of this study also found that there was a high association between self-esteem and feeling of social inclusion. Additionally, self-esteem decreased when an individual was excluded for personal reasons. Furthermore, trait self-esteem was found to be linked with a person’s feeling of inclusion within the group, rather than exclusion from the group.

Baumeister (1997) suggested that there is a relationship between low self-esteem and negative emotions and the individual, in an attempt to escape from self-awareness, employs dysfunctional behaviours. Supporting this, Crocker & Park (2004) suggested that individuals might engage in maladaptive behaviours in an attempt to maintain their self-esteem. Seeman and Seeman (1992) found that low self-esteem influences alcohol use, as it heightens positive feelings of self-worth and validates poor performance.

Glindemann, Geller & Fortney (1999) examined 44-college student’s level of self-esteem and their consumption of alcohol. The results of this study show that those students with lower self-esteem consumed more alcohol, as measured by their Blood Alcohol Concentration (BAC) than those with high self-esteem. Additionally, there was a gender difference found in this study with women who reported having high self-esteem becoming less intoxicated than men who reported having high self-esteem. However, women who reported having low self-esteem became more intoxicated than men who reported having low self-esteem. Supporting this, Mitic (1980) also found a
gender effect, with females who reported having low self-esteem reporting a high alcohol intake and males who reported having high self-esteem reporting a high alcohol intake.

Aside from the difficulties in synthesising results across different groups within the population, other research has suggested that self-esteem is a problematic construct resulting in the inconclusive and contradictory results (Croker & Park, 2004). Deci and Ryan (1995) suggested that there are two closely related types of self-esteem, global self-esteem and contingent self-esteem, with contingent self-esteem being one’s evaluation of self and the extent that self-worth is based on external criteria such as appearance, performance and social approval (Neighbors, Larimer, Gesiner & Knee, 2004). Rosenberg, Schooler, Schoenbach & Rosenberg (1995) suggested that global self-esteem refers to an individual’s psychological wellbeing and contingent (specific) self-esteem appears to be related to behaviour.

Some research has found a relationship between contingent self-esteem and alcohol consumption (Neighbors, Larimer, Gesiner & Knee, 2004). Luhtanen and Crocker (2005) found that contingent self-esteem is positively associated with alcohol abuse. Additionally, in college students, contingent self-esteem acts a mediator because these individuals have a greater tendency to base self-worth on contingencies such as social approval (Luhtanen & Crocker, 2005).

**Self-esteem, Depression and Anxiety**

Low self-esteem has been found to be commonly related to negative emotions such as depression, anxiety and poor adjustment (Cutrona, 1982; Goswick & Jones, 1981; Leary, 1983; Munford, 1994; Taylor & Brown, 1988; White, 1981). Leary & McDonald (2003) suggested that virtually every behavioural and emotional disorder is
related, albeit some weakly, to low self-esteem including anxiety disorders, major depression, pathological shame, suicide attempts, a number of personality disorders, dysthymia, sexual disorders and eating disorders.

Depression has been found to involve both cognitive and interpersonal dysfunctions that are theorised to play an important role in the formation and maintenance of the disorder (Barnett & Gotlib, 1988; Gotlib & Lewinsohn, 1992; Joiner, Alfano & Metalsky, 1993; Teasdale & Barnard, 1993). Gotlib & Robinson (1982) found that there was an association between depression and interpersonal rejection. Davila, Hammen, Burge, Paley & Daley (1995) suggested that negative social interaction may lead to low self-esteem, which then leads to depression. Depression then leads to greater difficulty in social interaction thus decreasing self-esteem further.

Negative thought patterns including dysfunctional attitudes are a symptom of depression (Barnett & Gotlib, 1988; Haaga, Dyck & Ernst, 1991). Negatively biased views of oneself, the world and the future are examples of such dysfunctional attitudes and typify the experience of depression (Beck, 1976). Low self-esteem can be characterised by the following dysfunctional attitudes and behaviour: low self-confidence, self-consciousness, depression, being overly concerned with protecting against a threat (anxiety) rather than enjoying life, pessimism, isolation, loneliness, hypersensitivity, instability, and lack of risk taking (Rosenburg & Owens, 2001).

Other research has found that high self-esteem improves coping skills, promotes physical heath and provides a buffer against feelings of anxiety. (Baumeister, 1993; Greenberg et al., 1992; Taylor & Brown, 1988). Greenberg, Pyszczynski & Solomon (1986) suggested that high self-esteem functions to buffer people from the anxiety they experience when they contemplate their own mortality and fragility.
Emler (2001) noted that measures of depression and self-esteem consistently produce similar results, with individuals who score low on depression typically scoring high on self-esteem and vice versa. Furthermore, the researcher questioned whether depression and self-esteem might be measuring identical constructs.

The Measurement of Self-Esteem

According to Blaskovich and Tomaka (1991), at least 200 different measures of self-esteem have been developed. The Rosenberg Self-Esteem Scale is a measure most frequently used to assess global self-esteem (Rosenberg, 1979). However, other research has found a gender difference with this scale, with males rating themselves more highly than females (Hagborg, 1993). Additionally, researchers have suggested that there may be some susceptibility to socially desirable responding with the Rosenberg Self-Esteem Scale (Blascovich & Tomaka, 1991), bringing into question its reliability and validity.

Schmitt & Allik (2005) found that collectivist cultures, such as in Asia, had a bias toward neutral responding when assessed with the Rosenberg Self-Esteem Scale and thus that it may not translate well across different cultural groups. Additionally, the results from this study indicate that across different nations, negatively worded items on the Roseburg Self-Esteem Scale can be interpreted differently by respondents, further threatening its reliability.

Heatherton & Polivy (1991) developed a State Self-Esteem Scale, which measures three self-esteem factors including academic performance, social evaluation and appearance. Previous research has found the State Self-Esteem Scale to be a reliable and valid measure of self-esteem (Heatherton & Polivy, 1991; Vohs & Heatherton, 2004). Ziegler-Hill (2010) found that the State Self-Esteem Scale captured the form of self-esteem that is highly consistent with humanistic, interpersonal and modern
conceptualisation of self-esteem. State self-esteem has been found to correlate highly with state anxiety (Spivey, 1989).

Crocker, Karpinski, Quinn, & Chase (2003) developed the Contingencies of Self-Worth scale, which measures the seven domains that previous research had hypothesised as providing important internal and external sources of self-esteem. These seven domains include the support of family, academic competence, physical attractiveness, gaining the approval of others, the love of God, virtue and competition. Previous research has found mixed results with some of the external domains contributing negatively to wellbeing and possibly being involved with the promotion of depression (Jambekar, Quinn, & Crocker, 2001). Further to this, Sargent, Crocker, & Luhtanen (2006) found that some of the internal contingencies unrelated or positively related to self-worth.

With all the difficulties in defining, measuring and developing a theory to explain self-esteem, a different psychological construct called self-compassion has been proposed (Neff, 2003a, 2003b). Self-compassion is not based on self-evaluations or set standards like self-esteem. Rather, self-compassion involves feeling compassion and kindness for oneself because one is a person, not because of a particular characteristic they possess that is highly desirable to others (Neff, 2004). As self-compassion does not involve an unrealistic self-view, it should be stable, unlike self-esteem which often fluctuates due to a range of confounding factors (Kernis, Cornell, Sun, Berry & Harlow, 1993). Since self-compassion is a more stable construct to measure than self-esteem, changes observed over time would arguably be more reliable and less affected by other factors such as social desirability (Neff, 2004). Furthermore,
Neff & Vonk (2009) compared global self-esteem and self-compassion and found that both were equivalent predictors of positive affect, optimism and happiness.

**Self-compassion**

Self-compassion involves being kind and understanding to oneself, awareness that pain and failures are unavoidable common experiences among humanity, and having a balanced awareness of one’s emotions (Neff, Rude & Kirkpatrick, 2007). A self-compassionate disposition is thought to promote health and wellbeing (Gilbert, 2005; Neff, 2003a). Kelly, Zuroff & Foa (2010) suggested that the trait of self-compassion promotes adaptive functioning and appears to provide a buffer from emotional distress.

Neff (2003a, 2003b) suggests that there are three main components to self-compassion including self-kindness verses self-judgement, common humanity verses isolation and mindfulness verses over-identification. Self-kindness is being kind to oneself rather than judging oneself harshly or being self-critical. Common humanity is viewing one’s experiences as part of larger human experience and not viewing them as isolating or separating. Mindfulness is paying attention in a different way, involving a conscious direction of awareness (Kabat-Zinn, 1994). Neff (2003a, 2003b) describes mindfulness as taking a balanced approach to negative emotions and neither suppressing nor exaggerating emotions.

The self-kindness facet represents an alternative to rumination, blaming, self-condemnation and self-criticism, which are commonly found in depressive disorders (Beck, Rush, Shaw & Emery, 1979) and other disorders such as anxiety (Forsyth & Eifert, 2008). The common humanity domain appears to be related to general well-being.
but lacks theoretical associations with specific psychiatric diagnostic symptomology (Neff, 2003a). The mindfulness factor represents a state of mental balance with a stance of composure towards difficult and painful thoughts and feelings, therefore suggesting mindfulness may play an important role in adaptive and maladaptive emotion regulation (Van Dam, Sheppard, Forsyth & Earleywine, 2010).

While these three aspects of self-compassion are conceptually distinct, research has suggested that they also interact and enhance one another (Neff, 2003). Jopling (2000) suggested that the non-judgemental approach of mindfulness reduces self-criticism and increases self-understanding, which could directly enhance self-kindness. Additionally, mindfulness involves balanced perspective-taking which is considered to directly reduce the feelings of isolation from common humanity and increase the feelings of interconnectedness (Elkind, 1967). Other research has shown that feeling part of common humanity and being kind to oneself has a bi-directional influence (Brown, 1999) and can lead to an increase in mindfulness (Fredrickson, 2001).

Self-compassion can be assessed using the Self-Compassion Scale (SCS, Neff, 2003a) which consists of 24 items representing six facets of self-compassion including Self-Kindness, Self-Judgement, Mindfulness, Over-identification, Common Humanity and Isolation. Initial validation studies on the full SCS have found that the scale has good psychometric properties such as reliability (test-retest and internal), factor structure and convergent validity (Neff, 2003a).

The Relationship between Self-Compassion, Depression, Anxiety and Alcohol Use

Self-compassion can be thought of as a coping strategy that assists one to remain emotionally balanced when in a stressful situation (Rendon, 2007) and provides emotional resilience (Neff, 2011). Moeller & Crocker (2009) completed a study testing
self-image goals and goals relating to high self-compassion on heavy episodic alcohol use and alcohol related problems using 258 undergraduate college students. The results from the study found that self-image goals found to be associated with alcohol related problems, but goals relating to high self-compassion were not.

Other research has indicated that there is increasing evidence that exercising compassion (with oneself and with others) can influence neurophysiological and immune systems (Davidson et al., 2003; Lutz et al., 2008). Additionally increased self-compassion was also found to increase social connectedness and satisfaction with life (Leary, Tate, Adams, Allen & Hancock, 2007; Neff, 2003).

Self-compassion has been found to be a predictor of mental health. Neff (2003a) suggested that self-compassion is positively associated with social connectedness and life satisfaction and negatively associated with anxiety, depression, rumination, thought suppression, self-criticism and neurotic perfectionism. Neff, Rude & Kirkpatrick (2007) examined the relationship between self-compassion, positive psychological health and the Five Factor Model of Personality using 177 undergraduate students (68% female, 32% male). The results from this study suggested that increased self-compassion resulted in enhanced psychological health.

People who are high in self-criticism and shame have difficulty in self-kindness, self-compassion and self-warmth (Gilbert, 2009). Problems with shame and self-criticism have been suggested to be related to a history of trauma such as neglect, high expressed emotion in the family of origin, abuse and bullying (Kauffman, 1989; Andrew, 1998; Schore, 1998). Gilbert (2009) suggested that when individuals who have experienced these environments become very sensitive to rejection or criticism from others and blame themselves.
When faced with negative events, individuals high in self-compassion are more resilient (Kelly, Zuroff & Foa, 2010) and when asked to recall personal failures, they report a less anxious self-evaluation (Neff, Kirkpatrick & Rude, 2007). Additionally self-compassionate individuals when given ambiguous performance feedback respond with less negative emotion particularly when their self-esteem is low (Leary, Tate, Adams, Allen & Hancock, 2007). Other research has supported past findings of a significant negative relationship between self-compassion, depression (Raes, 2011; Neff, 2003a), anxiety and rumination (Neff, 2003a).

Van Dam, Sheppard, Forsyth & Earleywine (2010) completed a study on the ability of the Mindful Attention Awareness Scale and the Self-Compassion Scale to predict worry, depression, anxiety and quality of life using 504 participants that were seeking help for anxious distress. The results from this study indicated that the self-judgement and isolation subscales of the Self-Compassion Scale were significantly correlated with quality of life and symptom severity in mixed anxiety and depressive disorders. The researchers concluded that self-compassion is an important predictor of psychological health and may be an important element that needs to be considered in interventions aimed at treating depression and anxiety.

Neff & Vonk (2009) found that self-compassion is a significant predictor of positive affect, optimism and happiness and compared to self-esteem, it is less dependent on external outcomes. Leary, Tate, Adams, Allen & Hancock (2007) found that self-compassionate individuals were more precise regarding their own abilities/achievements and were more emotionally resilient than those that had low self-compassion. The researchers concluded that self-compassion reduces an individual reaction to a negative experience in a different and more beneficial way than self-esteem does.
To date, there has been no published research examining the relationship between alcohol use and self-compassion among alcohol dependent populations. Rendon (2007) completed a study examining the relationship between alcohol use, self-compassion, mindfulness and self-esteem using three hundred psychology students. The results indicated that alcohol use was negatively correlated to self-esteem, self-compassion and psychological symptoms with psychological symptoms partially mediating the association between these constructs. Additionally, self-compassion was found to be a stronger predictor of psychological health than mindfulness.

**Improving Self-Compassion**

Davis, Strasburger & Brown (2007) conducted a preliminary study examining the efficacy of an 8 week mindfulness based stress reduction program which incorporated a self-compassion component, for individuals with schizophrenia. The researchers reported that as self-compassion develops, self-critical inner dialogue decreases and acceptance is enhanced resulting in improved ability to cope with distressing emotions and thoughts in a non-judgemental manner. Additionally, there was no evidence of any increase in psychotic symptoms related to participation in this study. The researchers suggested that mindfulness focuses on what is right with the individual rather than what is wrong with the individual unlike some other interventions.

Kelly, Zuroff & Foa (2010) examined the moderators of self-compassion training in improving self-regulation of cigarette smoking. The results of this study suggest that participants who were high in self-criticism, low in readiness to change and used vivid imagery during the intervention were more likely to have a rapid reduction in smoking. Gilbert (2009) has suggested that the research in the value of self-compassion
training is limited but it is increasing for both clinical populations (Gilbert & Proctor, 2006; Mayhew & Gilbert, 2008) and students (Leary, Tate, Adams, Allen & Hancock, 2007).

**Mindfulness as a Mechanism for Increasing Self-Compassion**

Mindfulness was developed using various meditation techniques that were from Buddhist Spiritual practices (Hanh, 1976). Silananda (1990) stated that in Buddhist traditions, mindfulness occupies a central role in a path that was designed to alleviate personal suffering. In the field of psychology, there has been a substantial interest in mindfulness for the past 30 years both in a clinical aspect and also in empirical psychology (Bishop et al., 2004).

Mindfulness is somewhat different from other therapeutic approaches commonly used in the treatment of alcohol dependence. Cognitive Behaviour Therapy aims to change the content of maladaptive thoughts whereas mindfulness has been described as the practice of commanding a particular attribute of attention to moment-by-moment practice (Kabat-Zinn, 1990) and it is a quality of consciousness that involves a non-judgemental and accepting awareness which is present-centred (Bishop et al., 2004). Germer (2005) added to experience mindfulness, all of these components need to be present.

Davis, Strasburger & Brown (2007) suggested that mindfulness enhances the individual’s ability to monitor their thoughts and emotions enabling a more constructive reflective manner and a more effective response choice. In mindfulness, the mind is seen as the sources of distress not the distressful experience itself, which is similar to the view held by practitioners of cognitive behaviour therapy.
Gerner (2009) suggested that an important part of the positive mental states associated with mindfulness based interventions may be self-compassion. In various mindfulness-based interventions, an attitude of non-judgement and gentleness with one’s behaviour is promoted (Hayes, Strahl & Wilson, 1999; Kabat-Zinn, 1990). Other research has suggested that the efficacy of mindfulness based intervention in the treatment of depression and anxiety may be partially due to the radical alternative self-compassion offers to the harsh self-criticism, rigid self-imposed standard and excessive self-control commonly found in these disorders (Germer, 2009; Gilbert, 2009).

Birnie, Speca & Carlson (2010) examined the impact of mindfulness based intervention on spirituality, self-compassion, stress symptoms, empathy, mindfulness and mood disturbance. The researchers found that the use of mindfulness-based intervention increased mindfulness, self-compassion and spirituality and results in significant reductions in mood and stress symptomology.

Kuyken et al. (2010) completed a randomized controlled trial using 123 participants who had three or more previous episodes of depression. In this study, participants that had been successfully treated with antidepressants were either allocated to a 15 month Mindfulness Based Cognitive Therapy group or continued with maintenance antidepressants for the same period of time. The results from this study indicated that 15 months after clients were treated with a mindfulness-based intervention; increases in mindfulness and self-compassion were still evident.

Theoretical rationales for the use of mindfulness-based interventions in the treatment of a range of disorders affecting mental health have been suggested including Generalized Anxiety Disorder (Roemer & Orsillo, 2002; Wells 2002; Orsillo, Roemer & Barlow, 2003), Eating Disorders (Safer, Telch & Agras, 2001), substance abuse...
(Marlatt, 2002; Breslin, Zack & McMain, 2002) and Post-Traumatic Stress Disorder (Wolfsdorf & Zlotnick, 2001).

There have been several published research articles on the efficacy of mindfulness in the treatment of schizophrenia. Lavay et al. (2005) found that there was a reduction in negative emotions when individuals with schizophrenia are given mindful yoga in a group format. Other research found mindfulness in a group setting resulted in improved behavioural and emotional function for individuals with schizophrenia (Chadwick, Taylor & Abba, 2005).

Bowen, Witkiewitz, Dillworth & Marlatt (2007) completed a study assessing the mediating effects of thought suppression in an incarcerated population by examining the relationship between course participation and subsequent alcohol use using 173 participants (57 meditation course, 116 treatment as usual). The results of this study indicate that the use of mindfulness meditation results in a decrease in avoidance of unwanted thoughts suggesting that a more accepting and non-judgemental manner was adopted by participants.

Mindfulness Based Cognitive Therapy has been found to be effective for the prevention of relapse of depression (Segal, Williams & Teasdale, 2002) with a 50% reduction in relapse of depression after treatment (Teasdale et al., 2000; Ma & Teasdale, 2004). Finucane and Mercer (2006) concluded that the use of mindfulness based therapy in the treatment of active depression and anxiety may be an acceptable and beneficial intervention. Cash & Whittingham (2010) found that higher levels of the non-judgemental aspect of mindfulness predicted improvement in depression, anxiety and stress. Additionally, reduced depressive symptomology was predicted by a higher degree of the mindfulness aspect of acting with awareness in the present moment experience.
Mindfulness has also been found to be an effective treatment for Social Phobia (Bogels, Sijbers & Voncken, 2006), Borderline Personality Disorder (Van Den Bosch, Koeter, Stunen, Verheul & Brink, 2005) and for reducing ruminative thinking (Ramel, Goldin, Carmona & McQuaid, 2004). In addition, mindfulness has been found to improve feelings of general wellbeing in healthy populations (Astin, 1997; Williams, Kolar, Reger & Pearson, 2001).

Ivanoski and Malhi (2007) completed a review of the mindfulness mediation literature and found that mindfulness-based interventions are useful in the treatment of personality, anxiety and affective disorders but further research regarding the effectiveness in psychiatric disorders is needed. However, the researchers did note that other research appears to suggest that mindfulness meditation leads to attentional improvement including concentration, increase inhibition regarding distracting stimuli, openness to experience and improved sensitivity.

Breslan, Zack & McMain (2002) suggested that mindfulness intervention in the treatment of addiction involves instrumental and Pavlovian responses together which foster the extinction of a maladaptive reaction that originated from the activation of a memory. Bowen et al. (2006) found that the use of mindfulness meditation for substance use in incarcerated populations resulted in significant reduction in substance use after release from jail. Additionally, psychiatric symptoms and alcohol related problems were reduced and there was an increase in positive psychosocial outcomes.

Bowen et al. (2009) completed a randomized-controlled trial which evaluated an 8 week outpatient Mindfulness-Based Relapse Prevention program compared to treatment as usual using 168 participants with substance use disorders that had recently completed intensive treatments either as inpatients or outpatients. The results showed that participants who were given a mindfulness intervention had reduced cravings and
decreased substance use when compared to those participants who were given treatment as usual. The researchers suggested that mindfulness intervention lowered the cravings and the symptoms of depression which then decreased the incidence of substance use.

Zgierska et al. (2008) completed a 16 week pilot study which incorporated mindfulness mediation for alcohol relapse prevention. The results indicated that mindfulness meditation resulted in a reduction in alcohol use, improved mental health including reported depression, reported anxiety symptoms and reduced feelings of stress. Participants reported being highly satisfied with the mindfulness meditation intervention and found it to be a helpful and important tool in their recovery. There were no reported side effects due to the mindfulness meditation intervention. However, as this was a pilot study a small sample size of 19 was used and the researchers suggested that further research needs to be conducted using a larger sample size.

Garland, Gaylord, Boettiger & Howard (2010) completed a study using 37 alcohol dependent adults who were either given mindfulness training or a support group. The results from this study indicated that mindfulness training reduced stress and thought suppression, increased physiological recovery from the cues associated with alcohol use and modulated alcohol attentional bias. The researchers concluded that mindfulness appears to assist in the treatment of alcohol dependence and may be useful in the treatment of alcohol relapse precipitated by stress particularly among vulnerable members of society.

Present Study

The present study will recruit clients of a Drug and Alcohol Clinical Service to a study of the relationship between self-compassion, depression, anxiety and alcohol use, thereby addressing a significant gap in the available research literature. Given
mindfulness is a component of the treatments offered by the service, this study will also examine the impact of exposure to mindfulness strategies on self-compassion, depression, anxiety and the use of alcohol.

The first hypothesis is that high levels of self-compassion will be associated with lower levels of depression, anxiety and alcohol use at entry to treatment. The second hypothesis is that clients who receive a mindfulness intervention will report improved self-compassion at follow-up relative to baseline. The third hypothesis is that clients whose self-compassion improves over treatment will also report improvement in depression, anxiety and alcohol use at follow-up.
Abstract

Self-compassion is a topic of growing research interest and is represented by six facets including Self-Kindness, Self-Judgement, Mindfulness, Over-identification, Common Humanity and Isolation. Recent research interest has begun to examine the use of self-focused compassion and mindfulness as a way of alleviating the distress associated with psychological disorders. Little research exists to examine the relationship between self-compassion, depression, anxiety and stress among individuals who are alcohol dependent. The present study aimed to address this gap by examining whether high levels of self-compassion will be associated with lower levels of depression, anxiety and alcohol use at entry to treatment. We also examined whether clients who are exposed to meditative practices during treatment, which may have incorporated mindfulness-based approaches, reported improved self-compassion at follow-up relative to baseline, and if clients whose self-compassion improved over treatment also reported improvement in depression, anxiety and alcohol use at follow-up. Participants in this study were clients of a publicly-funded Drug and Alcohol Service, who completed a baseline and 15-week independent clinical assessment that corresponded with their entry into and exit from treatment with the Service. At baseline, study participants were significantly higher in depression, anxiety, stress, alcohol use, and lower in self-compassion than the general population. Between baseline and 15-week follow-up, participants received a range of psychosocial treatments for their alcohol dependence, including training in meditative practice (which may have incorporated mindfulness-based approaches). At the 15 week follow-up, significant improvements in self-judgement were observed, with those participants exposed to meditative practices reporting significantly reduced self-judgement. Taken together, these results suggest that training in meditative practice (which may
incorporate mindfulness-based approaches) may be a useful clinical tool for people with alcohol dependence in reducing their self-judgement.

**Keywords**

Mindfulness, Self-compassion, Depression, Anxiety, Alcohol dependence
Introduction

Alcohol is a depressant that acts as an inhibitor, reducing anxiety in low doses but resulting in death in extreme doses (ABS, 2006), and it is the second largest cause of hospitalisations and drug-related deaths in Western societies (AIHW, 2005a). A clear progression from alcohol use to alcohol abuse and dependence can be seen in some individuals (Sartor, Lynskey, Heath, Jacob & True, 2006). Alcohol use disorders (abuse/dependence) have also been associated with disabilities including depression, anxiety, and cognitive problems (Samokhvalov, Popova, Room, Ramonas & Rehm, 2010)

In clinical settings, the co-morbidity of alcoholism and psychiatric disorders has been found to be particularly common (Almeida-Filho et al., 2007). In particular, numerous studies have found alcohol abuse is associated with psychological variables such as anxiety and depression (Suh et al., 2008; Sullivan, Fiellin & O’Connor, 2005).

There have been a number of causal explanations attempting to account for the high incidence of co-morbidity between depression, anxiety and alcohol use. One of these is that anxiety or depression promotes the pathological use of alcohol (Kushner, Abrahams & Borchardt, 2000). This is often referred to as the self-medication hypothesis (Khantzian, 2003) which suggests that substance addiction functions to self-soothe and to modulate the effects of distressful psychological states (Suh et al., 2008).

Other research has found that experiencing stressful life events significantly predicts the amount and frequency of alcohol consumed (Dawson, Grant & Ruan, 2005) and the onset of alcohol dependence (Lloyd & Turner, 2008) indicating that stress plays a key part in the development of alcohol use disorders. Research has found an association between self-medication and increased co-morbidity with mental health disorders and suicide attempts (Bolton, Cox, Clara & Sareen, 2006; Robinson, Sareen,
Cox & Bolton, 2009, a & b). However, other research has suggested that alcoholism promotes the development of anxiety and depressive disorders (Kushner, Abrams & Borchardt, 2000) and the associated symptoms are a consequence of alcohol withdrawal (George, Nutt, Dwyer & Linnoila, 2007).

Low self-esteem has also been found to pose a high risk for substance abuse (Baumeister, 1993; Bushman & Baumeister, 1998) and alcohol dependence (Chaudhury et al., 2010,) and is commonly related to negative emotions such as depression, anxiety and poor adjustment (Munford, 1994). Conversely, DeSimone, Murray & Lester (1994) found that alcohol use was positively associated with depression and, contrary to previous research, high self-esteem was related to greater alcohol use in students. Supporting this, Corbin, McNair & Carter (1996) found that people with alcohol use problems have higher self-esteem than those who do not.

As many studies have found difficulties in defining, measuring and developing a theory to explain self-esteem (Croker & Park, 2004), a different psychological construct has been proposed; self-compassion (Neff, 2003a, 2003b) which involves feeling compassion and kindness for oneself because they are a person, not because of a particular highly desirable characteristic (Neff, 2004). It has been suggested that as self-compassion does not involve an unrealistic self-view, it should be stable unlike self-esteem, which often fluctuates (Kernis, Cornell, Sun, Berry & Harlow, 1993). Since self-compassion is more stable than self-esteem and is less influenced by social desirability, increases in this domain should be more reliable than increases in the domain of self-esteem (Neff, 2004)

Self-compassion involves being kind and understanding to oneself, awareness that pain and failures are unavoidable common experiences among humanity and a balanced awareness of one’s emotions (Neff, Rude & Kirkpatrick, 2007). A self-
Compassionate disposition is thought to promote health and wellbeing (Gilbert, 2005; Neff, 2003a). Kelly, Zuroff & Foa (2010) suggested that the trait of self-compassion promotes adaptive functioning and appears to provide a buffer from emotional distress. Neff (2003a) has also reported that self-compassion was strongly inversely related to psychological health such as depression, anxiety, rumination, thought suppression, self-criticism and neurotic perfectionism. Neff, Kirkpatrick & Rude (2007) found that increased self-compassion resulted in reduced depression, anxiety, thought suppression, rumination and self-criticism.

Neff (2003a, 2003b) suggests that there are three main components to self-compassion including self-kindness versus self-judgement, common humanity versus isolation and mindfulness versus over-identification. Self-kindness is being kind to oneself rather than judging harshly or being self-critical. Common humanity is viewing one’s experiences as part of larger human experience and not viewing them as isolating or separating. Mindfulness is paying attention in a particular way involving a conscious direction of awareness (Kabat-Zinn, 1994). Neff (2003a, 2003b) describes mindfulness as taking a balanced approach to negative emotions and neither suppressing not exaggerating emotions.

The self-kindness facet represents an alternative to rumination, blaming, self-condemnation and self-criticism, which are commonly found in depressive disorders (Beck, Rush, Shaw & Emery, 1979) and other disorders such as anxiety (Forsyth & Eifert, 2008). Common humanity appears to be related to general well-being but lacks theoretical associations with specific psychiatric diagnostic symptomology (Neff, 2003a). Mindfulness represents a state of mental balance with a stance of composure towards difficult and painful thoughts and feelings, therefore suggesting mindfulness
may play an important role in adaptive and maladaptive emotion regulation (Van Dam, Sheppard, Forsyth & Earleywine, 2010).

Self-compassion can be thought of a coping strategy that assists one to remain emotionally balanced when in a stressful situation (Rendon, 2007) and provides emotional resilience (Neff, 2011). Germer (2009) suggested that an important part of the positive mental states associated with mindfulness-based interventions may be self-compassion. In various mindfulness-based interventions, an attitude of non-judgement and gentleness with one’s behaviour is promoted (Hayes, Strasahl & Wilson, 1999; Kabat-Zinn, 1990). Other research has suggested that the efficacy of mindfulness-based intervention in the treatment of depression and anxiety may be partially due to the radical alternative self-compassion offers to the harsh self-criticism, rigid self-imposed standard and excessive self-control commonly found in these disorders (Germer, 2009; Gilbert, 2009).

Research evidence is beginning to emerge, examining the relationship between mindfulness-based treatment, self-compassion, and mental health and illness. For example, Davis, Strasburger & Brown (2007) examined the efficacy of an 8 week mindfulness-based stress reduction program which incorporated a self-compassion component, for individuals with schizophrenia. The researchers hypothesised that as self-compassion develops, self-critical inner dialogue decreases and acceptance is enhanced which results in improved ability to cope with distressing emotions and thoughts in a non-judgemental manner. In this study, there was no evidence of any increase in psychotic symptoms related to participation.

Birnie, Speca & Carlson (2010) found that the use of mindfulness-based intervention increased mindfulness, self-compassion and spirituality and resulted in significant reductions in mood and stress symptomology. Kuyken et al. (2010) further
reported that 15 months after clients were treated with mindfulness-based intervention; increases in mindfulness and self-compassion were still evident.

Bowen et al. (2009) found that participants who were given a mindfulness intervention had reduced cravings and decreased substance use when compared to those participants who were given treatment as usual. Zgierska et al. (2008) found that mindfulness meditation resulted in a reduction in alcohol use, improved mental health including reported depression, reported anxiety symptoms and reduced feelings of stress.

In one of the few existing studies of self-compassion in the drug and alcohol field, Moeller & Crocker (2009) completed a study testing self-image goals and goals related to high self-compassion on heavy episodic alcohol used and alcohol related problems using 258 undergraduate college students. The results from the study found that self-image goals found to be associated with alcohol related problems but goals relating to high self-compassion were not.

Similarly, Rendon (2007) completed a study examining the relationship between alcohol use, self-compassion, mindfulness and self-esteem using three hundred psychology students. The results indicated that alcohol use was negatively correlated to self-esteem, self-compassion and psychological symptoms, with psychological symptoms partially mediating the association between these constructs. Additionally, self-compassion was found to be a stronger predictor of psychological health than mindfulness. To date, there has been no published research examining the relationship between alcohol dependence, hazardous alcohol use and self-compassion, a clear gap that this study seeks to address.

The present study will recruit clients of a Drug and Alcohol Clinical Service to examine the relationship between self-compassion, depression, anxiety and alcohol use.
There has been limited published research on the relationship between self-compassion and treatment outcomes including depression, anxiety and alcohol use. Given clinicians working within the Service have received professional development incorporating the training and delivery of meditative practices including mindfulness for their clients, this study will also examine the impact of exposure to meditative practice (which may have incorporated mindfulness-based approaches) on self-compassion, depression, anxiety and the use of alcohol.

The first hypothesis is that high levels of self-compassion will be associated with lower levels of depression, anxiety and alcohol use at entry to treatment. The second hypothesis is that clients who receive training in meditative practices (which may have incorporated mindfulness-based approaches) will report improved self-compassion at follow-up relative to baseline. The third hypothesis is that clients whose self-compassion improves over treatment will also report improvement in depression, anxiety and alcohol use at follow-up.

Method

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

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

In 2006-7, 2,632 calls were received by the central intake service with 64% of these being referred to Central Coast DACS. Within the service, 3,329 treatment episodes were commenced, with 73% of clients completing treatment (NSCCHS, 2008). The majority of these (61%) were for males, aged 20-39 years (51%), with alcohol being the most common primary drug of concern (49%). On average, clients commencing treatment with the counselling service within DACS attended an average of 4.5 treatment sessions.

Participants

One hundred and twenty three participants were referred to the study. Of these, 5 (4%) were uncontactable, and 41 (33%) refused participation once contacted directly by the study team. No further information was collected on people who refused to participate in the study. Seventy seven participants (42 male and 35 female), aged from 19 to 69 years, with a primary presentation of alcohol abuse or dependence based on a DSM-IV diagnosis from the referral agency, were recruited for this study. Participants were both new and existing clients of the Central Coast Drug and Alcohol Counselling Service (which consisted of three teams – Cannabis Clinic, MERIT (Magistrates Early Referral into Treatment) or Counselling). Participants in this study ranged in age from 19-69 years. Age was divided into four categories which included 19-30 years (n=24), 31-40 years (n=15), 41-50 years (n=25) and 51-69 years (n=13.). For the purposes of this study, a score of more than 1 on the OTI was determined to be daily alcohol use and a score fewer than 1 was determined to be non-daily alcohol use. Participant’s other
drug use was recorded but no further information about other co-morbid DSM-IV diagnoses was collected.

Clinicians working with the Service were also participants in the current study, to the extent that they delivered all treatment provided to clients, and completed session checklists summarising the content of each treatment session for review by the research team. Clinicians were all tertiary trained counsellors, nurses or psychologists, who had also received professional development in the range of treatment strategies recommended for use with alcohol/other drug clients. This included specific training in cognitive behaviour therapy, motivational interviewing, alcohol/other drug management, case management, meditative practices (which may have incorporated mindfulness-based approaches), and brief solution-focused therapy.

Procedure

Clinicians from the Central Coast Drug and Alcohol Counselling Service discussed with current clients the possibility of providing their contact details to the project Research Team during a standard treatment session. Newly referred clients to the Counselling Team were contacted by a Researcher/Clinician and asked for consent to release their contact details to the independent research assistant for formal consent and completion of assessments. Clinicians were unaware whether or not their client was completing the study.

Clients were then contacted by the researcher, who remained independent to the DACS, to discuss consent, and a baseline interview was arranged and conducted via the telephone. A second phone-based assessment occurred 15-weeks post-baseline. Up to $40 reimbursement was given to participating clients who completed the baseline and follow-up
assessments as compensation for their time which was approximately 30 minutes each assessment.

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

**Measures**

**Clients:** The baseline questionnaire consisted of a range of demographic information including gender, education, income, date of birth and involvement in drug and alcohol rehabilitation services. The baseline and 15 weeks post-baseline questionnaires both included the Depression, Anxiety and Stress Scale (DASS-21; Lovibond, & Lovibond, 1995), the Opiate Treatment Index (OTI; Darke, Ward, Hall, Heather & Wodak, 1991) and the Self-compassion scale (Neff, 2003a).

The alcohol scale of the OTI was used to assess alcohol intake and, based on participant self-report of their last three use occasions in the month prior to assessment, assigned a score (OTI q score) indicative of both quantity and frequency of alcohol consumption. The 26 item Self-compassion scale was used to measure self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification. Neff (2003a) found the overall total of the SCS to be a reliable measure of self-compassion (α=.93), and general population scores have been established for Self-Compassion (Neff, 2003a), Depression, Anxiety and Stress (Lovibond, & Lovibond, 1995).
Clinicians: Clinicians completed a Session Checklist after every treatment session throughout the study period, regardless of whether their clients were participating in the research project. The session checklist was purpose-developed for this study, and designed to provide information regarding type of session provided, such as assessment or ongoing scheduled appointment, and the type of intervention by clinician. Clinicians used this measure to indicate whether meditative practices (which may have incorporated mindfulness-based approaches) were used during a treatment session.

Analysis: The statistical package SPSS 18.0 for Windows was used for all the analyses. Pearson Correlation analysis between the DASS-21 scores, the self-compassion subscale scores and the OTI scores were performed. T-tests examined the difference between the general population and current study scores for the DASS-21 and the Self-Compassion Subscales (see Neff, 2003a and Lovibond & Lovibond, 1995). One-way analysis of variance was used to examine the effect of gender and age on DASS-21 and Self-Compassion Scores. The change in DASS-21 scores, Self-compassion Scores and OTI scores from baseline to 15 weeks was then computed and Correlation analysis and T-tests were then performed. Multivariate tests examined the difference between the DASS-21 scores, Self-compassion scores and OTI scores for those participants who received meditative practice (which may have incorporated mindfulness-based approaches) and those who did not.
Results

Participants

There were 77 participants in the current study (42 Males, 35 Females), all of whom were seeking treatment for Drug and Alcohol Dependence. For the purposes of this study, a score of more than 1 on the OTI was determined to be daily alcohol use and a score fewer than 1 was determined to be non-daily alcohol use. Participants in this study ranged in age from 19-69 years. Age was divided into four categories which included 19-30 years (n=24), 31-40 years (n=15), 41-50 years (n=25) and 51-69 years (n=13.)

Baseline Depression, Anxiety and Stress

One sample T-tests were used to examine depression, anxiety and stress scores for participants in this study compared to the norms for the general population (Crawford & Henry, 2003). The results indicated that study participants were significantly more depressed (M(study) = 17.481, SD = 12.767) than the general population (M(general)=5.550, SD=7.480) t (76) = 9.568, p = 0.000. Participants in this study were significantly more anxious (M(study) = 10.571, SD =10.346) than the general population (M(general)=3.560, SD=5.390, t (76) =4.259, p = 0.000) and were significantly more stressed (M(study) =21.203, SD =11.218, M(general)= 9.270, SD=8.040) t (76) = 9.334, p = 0.000). Comparing participants in the current study with another alcohol-dependent sample accessing public treatment services for alcohol/other drug use in Australia (Hammerbacher & Lyvers, 2005), our participants scored significantly higher on the depression (M(study) =17.481, SD =12.767, M(general)= 11.730, SD=10.560, t(76)=6.549, p = 0.000) and stress subscales of the DASS-21 (M(study) =21.203, SD =11.218, M(general)= 12.830, SD=10.300, t(76)=6.549, p =
0.000). No significant differences were evidence between the two samples on the anxiety subscale.

A one-way ANOVA found that there was no significant effect of gender on depression, anxiety, stress scores at baseline. A one-way ANOVA found that there was a significant effect of age on baseline depression \([F (3, 73) = 6.923, p= 0.000]\) but not on anxiety \([F (3, 73) = 1.758, p= 0.163]\) or stress \([F (3, 73) = 2.270, p=0.083]\), with Bonferroni posthoc analysis indicating that people aged 19-30 and 31-40 were significantly less depressed than those aged 41-50 and 51-69 years.

**Baseline Self–compassion**

One sample t-tests were used to examine the components of self-compassion for participants in this study with the norms for the general population (Neff, 2003a). The results indicated that study participants were significantly lower in their overall self-compassion score than the general population \([(M(study) = 2.752, SD =2 .072, M(general)=18.25, SD=3.75), t (76) =-65.619, p = 0.000]\).

Participants in the present study were significantly higher in the negative subscales of self-compassion than the general population. This included over-identification \([(M (study) = 3.451, SD = 1.101, M(general)=3.05, SD=.096), t (76) = 3.194, p = 0.002]\), isolation \([(M (study)=3.286, SD= 1.195, M(general)=3.01, SD=.92, t (76) = 2.024, p=.046]\) and self-judgement \([(M(study)= 3.391, SD = 1.012, M(general)=3.14, SD=.79, t (76) = 2.181, p=.032]\). Additionally, participants were significantly lower in the positive subscales of mindfulness \([(M(study) = 2.597, SD=.918, M(general)=3.39, SD=.760) t (76) = -7.93, p = 0.000]\), common humanity \([(M(study) = 2.529 , SD =.957), M(general)=2.99, SD=.790, t (76) =- 4.224, p = 0.000]\)
and self-kindness [ (M (study) = 2.107, SD = .848, M(general)=3.05, SD=.750, t (76) =- 9.767, p = 0.000] than the general population.

A one-way ANOVA found that there was not a significant effect of gender on any of the subscales of self-compassion. A one-way ANOVA found that there was a not a significant effect of age on self-kindness [F (3, 61) = 1.717, p=.171, common humanity [F (3, 73) = 1.417, p= .245], isolation [F (3, 73) = 1.077, p= .364], mindfulness [F (3, 73) = 1.551, p= .209] and over-identification [F (3, 73) = 2.452, p= .070]. The grand average of self-compassion was found not to be affected by age [F (3, 73) = 1.504, p= .221]. However, age was found to have a significant effect on self-judgement [F (1, 63) =2.829, p= .044], with Bonferroni posthoc analysis indicating a trend for participants aged 19-30 and 31-40 to score significantly lower on self-judgement than their older counterparts.

A one-way ANOVA found that there was a significant effect of alcohol use (daily/ non-daily) on self-judgement [F (1, 75) = 6.072, p= .015], isolation [F (1, 75) = 4.079, p=.047 and over-identification [F (1, 75) = 6.549, p=.013], indicating that daily users of alcohol reported significantly lower scores on these negative subscales of self-compassion than did their non-drinking counterparts. There was no significant relationship found between alcohol use (daily/non-daily) and self-kindness [F (1, 75) = 1.456, p=.231], common humanity, [F (1, 75) = 0.000, p=.998], mindfulness [F (1, 75) = .201, p=.655] and the grand average of self-compassion [F (1, 75) = 1.442, p=.234].

Depression, Anxiety, Stress, Self-compassion and Alcohol use

Pearson correlations were used to examine the association between depression, anxiety, stress, alcohol consumption and the subscales of self-compassion. Depression was significantly positively related to self-kindness, self-judgement, isolation and over
identification (see Table 1), indicating that higher depression scores were significantly associated with higher scores on these subscales of self-compassion. Anxiety was also significantly positively correlated with self-kindness, self-judgement, over-identification, isolation, mindfulness and common humanity, as was Stress with self-judgement, isolation, and over-identification (see Table 1). There was a significant negative correlation between anxiety and the overall score for self-compassion. No significant correlations were found between any of the subscales of self-compassion and alcohol consumption (OTI q scores).

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**15 week post-baseline self-compassion scores**

One sample t-tests were used to examine 15 week post-baseline self-compassion scores compared to the norms for the general population. The results indicated that in the present study, participants remained significantly lower in their overall self-compassion score than the general population at our follow-up assessment [(M(study) = 2.747, SD =0.513, M(general)=18.25, SD=3.750), t (52) =-220.159, p = 0.000].

Participants in the present study were significantly higher in over-identification [(M(study) = 3.311, SD = 0.940), t (52) = 2.024, p = 0.048] than the general population (M(general)=3.05, SD=0.96) and significantly lower in mindfulness [(M(study) = 2.893, SD =0.720, M(general)=3.39, SD=0.760), t (52) =-5.024, p = 0.000], common humanity [(M(study) = 2.682 , SD =0.917, M(general)=2.99, SD=0.790), t (52) =-2.443 p = 0.018] and self-kindness [ (M(study) = 2.355, SD = 0.747, M(general)=3.050,
In contrast to the baseline results, no significant differences were found between the study and general populations at 15 week post-baseline assessment for the subscales of isolation \[(M_{\text{study}})=3.135, SD=1.022, M_{\text{general}}=3.010, SD=0.920\], \(t (52) =0.889, p=0.378\] and self-judgement \[(M_{\text{study}})=3.004, SD = 0.927, M_{\text{general}}=3.140, SD=0.790\], \(t (52) = -1.070, p=0.290\].

15 week post-baseline Depression, Anxiety and Stress

One sample t-tests were used to examine 15 week post-baseline depression, anxiety and stress scores compared to the general population. The results indicated that participants remained significantly higher in depression than the general population \[(M_{\text{study}}) = 11.226, SD =0.9.768, M_{\text{general}}=5.55, SD=7.48\], \(t (52) =5.714, p = 0.000\], as they did for stress \[(M_{\text{study}}) = 14.528, SD =9.217, M_{\text{general}}=9.27, SD=8.04\], \(t (52) =4.153, p = 0.000\]. Study participants were not significantly different in anxiety \[(M_{\text{study}}) = 8.076, SD =9.372, M_{\text{general}}=3.56, SD=5.39\], \(t (52) 1.962, p = 0.055\]. In addition, there were no significant differences between the current study participants and those in the Hammerbacher and Lyvers (2005) study of Australian alcohol-dependent treatment clients on depression, anxiety and stress scores at 15 weeks post-baseline.

Changes in depression, anxiety, stress, alcohol use and self-compassion between baseline and 15 week post-baseline assessments

A paired sample t-test was used to examine the difference between the baseline and 15 week post-baseline scores on depression, anxiety, stress, alcohol use and the subscales of self-compassion. There was a significant difference found between the baseline and 15 week scores for depression, anxiety, stress and alcohol use, indicating
improvement in each of these variables at follow-up assessment (see Table 2). There was also a significant improvement between the baseline and 15 weeks scores for self-compassion subscales of self-judgement and overall self-compassion (see Table 2).

Pearson correlations were performed to examine whether changes in the self-compassion subscales were associated with changes in depression, anxiety, stress and alcohol. To facilitate this, change scores were calculated by determining the difference for each of these variables between baseline and 15 weeks. The results showed that an improvement in depression was significantly associated with a reduction in self-kindness (p=0.002), self-judgement (p=0.003), mindfulness (p=0.031), isolation (p=0.015), anxiety (p=0.000) and stress (p=0.000).

An improvement in anxiety was significantly associated with a reduction in self-kindness (p=0.000), self-judgement (p=0.016), common humanity (p=0.005), mindfulness (p=0.018), isolation (p=0.027), depression (p=0.000) stress (p=0.000), and alcohol consumption (p=0.017). Reductions in stress were significantly associated with reductions in self-kindness (p=0.022), self-judgement (p=0.005), isolation (p=0.028), depression (p=0.000) and anxiety (p=0.000). Reductions in alcohol use between baseline and 15 week follow-up were correlated with improvements in self-kindness (p=0.010) and isolation (p=0.000).

*Exposure to meditative practices (which may have incorporated mindfulness-based approaches) and impact on self-compassion*
Clinicians reported using a range of treatment strategies with clients involved in the study. Of the 329 session checklists submitted by clinicians in the study, the treatments delivered to clients included: brief solution-focused strategies (n=77, 23%), case management (n=35, 11%), cognitive restructuring techniques (n=87, 26%), communication skills (n=22, 7%), basic counseling for mental health issues (n=78, 24%), relationships counseling (n=95, 29%), education about alcohol use (n=116, 35%), goal setting for alcohol use (n=111, 34%), managing cravings for alcohol (n=84, 26%), managing high risk situations for alcohol use (n=84, 26%), managing slips and relapses (n=44, 13%), meditative practice (which may have incorporated mindfulness-based approaches, n=71, 22%), and motivational enhancement (n=60, 18%).

Based on clinician session checklists, the number of treatment sessions in which meditative practices (which may have incorporated mindfulness-based approaches) were used was calculated for each study participant and if a participant had one or more meditation session, they were classified as having exposure to meditative practice (which may have incorporated mindfulness-based approaches). In the current study, there were 41 participants who did not have exposure to meditation and 10 participants who did. At baseline, there were no significant differences between participants who received meditation training versus those who did not on any of the measures of interest (depression, anxiety, stress, self-compassion subscales, alcohol consumption), with one exception. Oneway ANOVA indicated that participants who received training in meditative practice (which may have incorporated mindfulness-based approaches) reported significantly higher baseline self-judgement than their counterparts who did not receive mindfulness [(M(meditation) = 3.85, SD = 0.873, M(no meditation) = 3.280, SD = 1.018, F (1,75) = 4.033, p = 0.048]. Pearson correlations examined changes in self-compassion, depression, anxiety, stress and alcohol consumption with the number
of sessions in which mindfulness was used. Results indicated that, as the number of sessions of exposure to mindfulness strategies increased, reductions in self-judgement (Pearson’s $r=0.403$, $p=0.013$) and stress (Pearson’s $r=0.334$, $p=0.017$) were also evident.

Exposure to meditative practice (which may have incorporated mindfulness-based approaches) between baseline and 15 week post-baseline assessments was further categorised into a dichotomous variable (any meditation/no meditation). Repeated measures multivariate analysis of variance was conducted to examine whether changes in the self-compassion subscales between baseline and 15 week post-baseline assessments was associated with any exposure to meditative practice (which may have incorporated mindfulness-based approaches) over the same time period. Whilst the main effect of time was significant for all of the self-compassion subscales, the only significant interaction between time and exposure to meditation was for the self-compassion subscale of self-judgement. As indicated in Figure 1, exposure to at least one treatment session that included meditative practice (which may have incorporated mindfulness-based approaches), was associated with significantly greater reductions in self-judgement between baseline and 15 week post-baseline assessments ($F(1,49)=6.776$, $p=0.012$). Participants who did not receive any meditation training reported a 0.26 reduction in average self-judgement between baseline and 15-week follow-up, whereas those who were exposed to meditative practice (which may have incorporated mindfulness-based approaches) reported a 1.2 point reduction over the same time period.
Discussion

This study is among the first to examine the self-compassion of people with alcohol dependence, who were currently using alcohol at hazardous levels and who, for the most part, were also experiencing depression and anxiety at higher levels than the general population, and depression and stress levels at higher levels than another Australian study of alcohol-dependent treatment clients.

There has been limited published research comparing the sub-scales of self-compassion among alcohol dependent populations with that of the general population (Rendon, 2009). The results indicated that the participants in this study were significantly lower in mindfulness, common humanity and self-kindness than what would be expected in the general population. Participants were also significantly higher in over-identification, perceived isolation and self-judgement than the norms for general population.

A previous study by Neff (2003a) found that self-compassion was inversely related to depression and anxiety. Supporting Neff’s (2003a) findings, the results from the present study indicate there is a significant associated between higher levels of anxiety, and higher levels of self-judgement, perceived isolation and over-identification. However, contrary to prediction, we found a significant positive relationship between anxiety, self-kindness, mindfulness, and common humanity at baseline. The nature of this relationship is unclear, and may be confounded by the participant’s relationship to alcohol, with use attributed to reasons that often include avoidance of rumination, to cope with stress and anxiety and to self-medicate against everyday problematic thoughts and feelings. These results are worthy of further exploration to determine the nature of the relationship between anxiety reported by alcohol-dependent treatment seekers and self-compassion.
An inverse relationship was found between depression and the overall score for self-compassion but this was not found to be significant. When examining the sub-scales of self-compassion and depression, those participants who reported greater symptoms of depression, also reported feeling more isolated, judged themselves more harshly, and felt more responsible for negative consequences, but, counter to hypotheses, were kinder to themselves. Again, it may be that the use of alcohol to self-medicate these key symptoms of depression may have been interpreted by participants as an act of kindness towards themselves, albeit that they seem to have felt guilt and shame about resorting to alcohol use for this purpose.

Stress was found to be significantly negatively correlated to the overall score for self-compassion (e.g. the higher the level of stress reported by the individual, the lower the self-compassion). Stressed individuals judged themselves more harshly, felt more isolated from others and felt overly responsible for negative events that occurred in their lives.

When used as a continuous variable, alcohol consumption in the month prior to baseline was not significantly correlated with overall self-compassion or any of its subscales. However, when alcohol use was dichotomized into daily/non-daily consumption, oneway ANOVA revealed a significant relationship between the self-judgement, perceived isolation and over-identification subscales of self-compassion and daily alcohol use. That is, participants who drank alcohol on daily basis reported lower feelings of isolation, lower tendencies towards self-judgement and over-identification than non–daily users, possibly again due to the reasons for use of alcohol commonly reported by alcohol-dependent treatment seekers. The difference in results for alcohol use on a continuum versus the classification of alcohol use as daily/non-daily is interesting to consider. The distinction between daily and non-daily drinking is a
significant one to make, as it generally represents the point at which people drink in excess of recommended guidelines for non-hazardous consumption of alcohol. All participants in the study met criteria for alcohol dependence for the prior 12 month period, irrespective of whether they were current daily drinkers, indicating that their alcohol consumption was affecting several areas of functioning in their daily lives. The observation that for some, daily use of alcohol (which is in excess of recommended guidelines) persisted despite these problems suggests an additional level of severity of alcohol use may have existed these participants, perhaps with additional cognitive distortions around the role of alcohol in social situations, and as a means of numbing the person to the true nature of the problems caused by continued drinking.

Additionally, Neff, Kirkpatrick & Rude (2007) found that when self-compassion is increased, anxiety and depression is reduced, thereby suggesting that there is a relationship between self-compassion, anxiety and depression. While the finding from the relationship between the overall score for self-compassion and anxiety and depression do not appear to support this suggestion in the current study, further examination of the relationship between depression, anxiety and the components of self-compassion among alcohol-dependent individuals may provide a better understanding of these relationships.

It was also hypothesised that clients who received training in meditative practice (which may have incorporated mindfulness-based approaches) as part of their treatment provided by the Service would report improved self-compassion at follow-up relative to baseline. In general, the study results indicated that participants had made some improvements in self-compassion as a result of treatment, and were closer to the general community norms on some subscales at post-baseline assessment. For example, after 15 weeks of treatment, participants in the present study were still significantly lower in
self-compassion, mindfulness, common humanity and self-kindness than the general population and significantly higher on over-identification. However, self-judgement and isolation were not significantly different from the scores obtained from the general population in other research (Neff, 2003).

The results indicated that there was a slightly larger improvement in self-compassion for those participants who did receive meditative practice (which may have incorporated mindfulness-based approaches) relative to those who did not. However this was not statistically significant. These results are contrary to previous research which suggested that self-compassion can be increased by mindfulness-based interventions (Birnie, Speca & Carlson, 2010, Kuyken et al., 2010). Additionally, Kuyken et al. (2010) found that after mindfulness-based intervention improvements in self-compassion were still evident 15 months later.

Interestingly, both participants who received training in meditative practice (which may have incorporated mindfulness-based approaches), and those who did not, reported improvements in their self-judgement, with significantly greater improvement evident for those who were exposed to meditation. This is consistent with other research which has suggested that mindfulness-based interventions, for example, foster an attitude of non-judgement and encourages gentleness to one’s behaviour (Bowen, Witkiewitz, Dillworth & Marlatt, 2007; Cash & Whittingham, 2010; Hayes, Strosahl & Wilson, 1999; Kabat-Zinn, 1990). Our results also revealed that those who received training in meditative practice (which may have incorporated mindfulness-based approaches) in our study were significantly higher in self-judgement at baseline than those who did not receive mindfulness. Perhaps clinicians who provided meditation training during the course of the study were attuned to increased self-judgement in their clients, and felt that meditation was an appropriate, targeted intervention to provide for
these issues. The study results indicated that meditative practice (which may have incorporated mindfulness-based approaches), as a targeted intervention for higher self-judgement among participants with alcohol use problems was effective, with significant reductions over time in self-judgement evident for those participants who received training in these techniques. Considering that self-judgement was related to alcohol consumption at baseline, efforts to reduce a person’s problematic alcohol consumption, particularly via the use of meditative practice, incorporating mindfulness-based approaches, could be a powerful combination in promoting positive self-judgements, and perhaps more enduring change.

It is interesting that the effect of meditative practice on the other subscales of self-compassion was not significant, especially for the subscale of mindfulness. This finding contradicts previous research which has found that the use of mindfulness-based interventions results in increased mindfulness and spirituality (Birnie, Speca & Carlson, 2010) and this increased mindfulness can still be seen 15 months after treatment (Kuyken et al., 2010). However, it may be that mindfulness measured in the self-compassion scale is different from the type of meditative practice that participants in the present study were receiving, given it was typically introduced as an adjunct to other strategies, rather than as a focussed, stand alone intervention. Also there was no assessment of the participant’s meditative skill, mindfulness skill or understanding of mindfulness at the end of treatment.

Taken together, these results indicate that participants in this study reported a significant increase in self-compassion, mindfulness, common humanity and self-kindness between baseline and 15-week follow-up and involvement in treatment with a Drug and Alcohol Clinical Service. Additionally, there was a significant decrease in self-judgement, isolation and over-identification. The reduction in self-judgement and
isolation was such that at the 15 week follow-up stage, participant scores for these subscales were equivalent to what other research has suggested is representative of the general population. The results also suggest that those participants who received training in meditative practice (which may have incorporated mindfulness-based approaches) appeared to benefit most in terms of a reduction in their self-judgement.

Thirdly, we sought to examine the relationship between changes in self-compassion and concomitant changes in depression, anxiety, stress and alcohol use at follow-up. As indicated previously, overall self-compassion significantly increased from baseline to 15 weeks into treatment. Additionally, there was a significant improvement in the results for all the self-compassion subscales; an increase in mindfulness, common humanity, self-kindness and a decrease in over identification, self-judgment and isolation.

Over the same time period, there was a significant reduction in the alcohol consumption and this was significantly correlated with improvements in self-compassion. This is consistent with the findings of Rendon (2007), the only other study examining self-compassion and alcohol use. Rendon (2007) found a relationship between self-compassion and alcohol use with improvements in self-compassion being associated with a reduction in stress, anxiety, depression, tension and painful affective states which leads to a reduction in drinking behavior. Neff (2003) concluded that individuals who are self-compassionate are less likely to cope by using drugs or alcohol. Therefore, it may be that as participant’s self-compassion increased, their use of alcohol decreased. In support of results found from other research, improvements in self-compassion in this study were associated with a reduction in depressive symptomology (Raes, 2011) anxiety, and stress (Neff, 2003a).
The change in depression was found to be significantly associated with self-kindness, self-judgment, mindfulness and isolation. This is consistent with the findings of Van Dam, Sheppard, Forsyth & Earlywine (2010) who found that self-judgement, self-kindness, mindfulness and isolation subscales were significantly positively correlated to depression.

Reductions in anxiety was found to be significantly associated with self-kindness, self-judgment, common humanity, mindfulness and isolation. Other research has found similar results, with anxiety being significantly positively correlated to isolation and self-judgement (Van Dam, Sheppard, Forsyth & Earlywine, 2010).

The change in participant’s stress was found to be significantly associated with self-kindness, self-judgment, isolation and the number of sessions in which meditative practice (which may have incorporated mindfulness-based approaches) was used by clinicians. Taken together, these results provide support for the notion that significant increases in participant’s overall self-compassion, self-kindness, mindfulness and common humanity can be observed in people with alcohol dependence over a 3-month treatment period. This group also reported significant improvements in self-judgment, over-identification, isolation, depression, anxiety, stress and alcohol use between baseline and 15 weeks into treatment.

There were a number of limitations associated with the present study, which need to be considered when examining the results discussed in this paper. Firstly, and most significantly, this study was part of a larger, naturalistic research study, of which mindfulness and self-compassion was not a focus. We were not able to purposively select a study sample who had received meditation training exclusively, nor were we able to accurately determine the content, length and quality of meditative interventions delivered to study participants. A significant limitation was that there were no
treatment integrity checks possible for the current study and treatment sessions were not audio or video taped. Therefore, we relied upon the accurate reporting of the clinician in terms of the use of meditative practice (which may have incorporated mindfulness-based approaches) and other treatment strategies delivered to project participants. For example, we do not know (and cannot determine) how much of a treatment session focussed on meditative strategies, how much mindfulness training, for example, people received and practiced, and we cannot accurately determine the dose of meditation received by participants. Clinicians reported that, in general, meditative practices used with clients included education about what mindfulness was, an exercise involving mindfulness and mindfulness homework being set. Future studies should focus on the effectiveness of a structured mindfulness intervention in increasing self-compassion and in the treatment of depression, anxiety, stress and alcohol use disorders in both a clinical population and a non-clinical population, using both an active treatment (mindfulness) and control (treatment as usual, or no treatment).

Other limitations related to sample size considerations, particularly in comparing participants on different characteristics. For example, participant data was separated according to those individuals who used alcohol and those who did not. However, these groups were uneven in number with only 11 participants reporting no alcohol use and 60 participants indicating that they used alcohol. Another limitation was related to the mindfulness analysis with 41 participants not receiving mindfulness and only 10 receiving the intervention. This may have impacted on our ability to detect differences between groups. This study also did not examine temporal relationships between self-compassion and depression, anxiety, stress and alcohol consumption. Future research focusing on the antecedent of this temporal relationship would be beneficial in determining the most effective treatment intervention and the timing of the intervention.
to improve self-compassion, to improve coping strategies when faced with stressful situations and reduce the risk of the development of an alcohol dependence disorder.

Further studies examining the efficacy of mindfulness intervention as a treatment for improving self-compassion may help to establish the preliminary findings from this study; that meditative practice (which may have incorporated mindfulness-based approaches) is a potentially efficacious intervention for improving negative self-judgement, a component of self-compassion, and reducing alcohol consumption among people alcohol dependence problems. This population report significantly lower self-compassion than do the general population, but our results suggest that this deficit can be addressed via effective treatment of the alcohol dependence, and in particular, the use of meditative practice (which may have incorporated mindfulness-based approaches). It is also possible that the motivational approach taken in many of the treatment sessions with clients might have impacted on self-compassion. Motivation enhancement is non-confrontational, non-judgemental in relation to considering alcohol use. A key technique within this approach is to separate the person from their use, and this may also have encouraged participants to reflect differently about their use and what it means about them. The relationship between motivational techniques and self-compassion among alcohol-dependent individuals may also be an important direction for future research.
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Table 1.

Pearson Correlations showing the relationship between Depression, Anxiety, Stress, Alcohol consumption and the Subscales of Self-Compassion.

<table>
<thead>
<tr>
<th>Self-Compassion Subscales</th>
<th>Depression (Pearson’s r)</th>
<th>Anxiety (Pearson’s r)</th>
<th>Stress (Pearson’s r)</th>
<th>Alcohol (Pearson’s r)</th>
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</thead>
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<tr>
<td>Self-Kindness</td>
<td>.364 **</td>
<td>.579**</td>
<td>.268*</td>
<td>.057</td>
</tr>
<tr>
<td>Self-Judgement</td>
<td>.509**</td>
<td>.361**</td>
<td>.463**</td>
<td>.021</td>
</tr>
<tr>
<td>Common Humanity</td>
<td>.211</td>
<td>.391**</td>
<td>.196</td>
<td>.103</td>
</tr>
<tr>
<td>Isolation</td>
<td>.401**</td>
<td>.404**</td>
<td>.385**</td>
<td>.015</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>.173</td>
<td>.338**</td>
<td>.127</td>
<td>.021</td>
</tr>
<tr>
<td>Over identification</td>
<td>.372**</td>
<td>.256*</td>
<td>.331**</td>
<td>.003</td>
</tr>
<tr>
<td>Grand Average</td>
<td>-.108</td>
<td>.064</td>
<td>-.251*</td>
<td>.007</td>
</tr>
</tbody>
</table>

*Note. * p<.05; ** p<.01; Depression, Anxiety and Stress is measured by the Depression Anxiety Stress Scale (DASS-21) from Henry, J. D. & Crawford, J. R. (2005); Alcohol is measured by the Opiate Treatment Index from Darke et al. (1991); Self-compassion (and its associated subscales) are measured by the Self-Compassion Scale by Neff (2003a).
Table 2.

Comparison of baseline scores (1) compared to 15 weeks scores (2) for self-compassion, depression, anxiety, stress and alcohol use

<table>
<thead>
<tr>
<th>Domain</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>t(50)</td>
<td>p</td>
</tr>
<tr>
<td>Alcohol Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>6.447</td>
<td>10.834</td>
<td>2.826</td>
<td>.007</td>
</tr>
<tr>
<td>15 week post-baseline</td>
<td>2.899</td>
<td>3.607</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>19.255</td>
<td>12.573</td>
<td>4.781</td>
<td>.000</td>
</tr>
<tr>
<td>15 week post-baseline</td>
<td>11.431</td>
<td>9.872</td>
<td></td>
<td></td>
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<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>12.196</td>
<td>11.259</td>
<td>2.782</td>
<td>.008</td>
</tr>
<tr>
<td>15 week post-baseline</td>
<td>8.118</td>
<td>9.452</td>
<td></td>
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<tr>
<td>Stress</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>22.823</td>
<td>10.801</td>
<td>5.663</td>
<td>.000</td>
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<tr>
<td>15 week post-baseline</td>
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<td>9.124</td>
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<tr>
<td>Self-Kindness</td>
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<tr>
<td>Baseline</td>
<td>2.259</td>
<td>.853</td>
<td>-.622</td>
<td>.536</td>
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<tr>
<td>15 week post-baseline</td>
<td>2.337</td>
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<tr>
<td>Self-Judgement</td>
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<tr>
<td>Baseline</td>
<td>3.478</td>
<td>.932</td>
<td>2.963</td>
<td>.005</td>
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<tr>
<td>15 week post-baseline</td>
<td>3.031</td>
<td>.924</td>
<td></td>
<td></td>
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<tr>
<td>Common Humanity</td>
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<td></td>
</tr>
<tr>
<td>Baseline</td>
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<td>.948</td>
<td>-.478</td>
<td>.671</td>
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<tr>
<td>15 week post-baseline</td>
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<td>.915</td>
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<td>Isolation</td>
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<td></td>
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<tr>
<td>Baseline</td>
<td>3.436</td>
<td>1.148</td>
<td>1.764</td>
<td>.084</td>
</tr>
<tr>
<td>15 week post-baseline</td>
<td>3.165</td>
<td>1.023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>2.779</td>
<td>.833</td>
<td>-1.064</td>
<td>.292</td>
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<tr>
<td>15 week post-baseline</td>
<td>2.884</td>
<td>.732</td>
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<tr>
<td>Over-Identification</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>3.466</td>
<td>1.063</td>
<td>.923</td>
<td>.361</td>
</tr>
<tr>
<td>15 week post-baseline</td>
<td>3.353</td>
<td>.934</td>
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</tr>
<tr>
<td>Self-Compassion Total Score</td>
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<td>-2.722</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>2.547</td>
<td>.934</td>
<td></td>
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</tr>
</tbody>
</table>

Note. Depression, Anxiety and Stress are measured by the Depression Anxiety Stress Scale (DASS-21) from Henry, J. D. & Crawford, J. R. (2005); Alcohol Use is measured by the Opiate Treatment Index from Darke et al. (1991); Self-compassion (and its associated subscales of self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification) are measured by the Self-Compassion Scale by Neff (2003a).
Figure 1: Changes in Self-judgement between baseline and 15 weeks post-baseline assessment as a function of exposure to meditative practice (which may have included mindfulness-based strategies) over the same time period.
Discussion

This study is among the first to examine self-compassion amongst people with alcohol dependence, who were currently using alcohol at hazardous levels and who, for the most part, were also experiencing depression and anxiety.

Hypothesis 1

The first hypothesis was that at entry to treatment, higher levels of self-compassion would be associated with lower levels of depression, anxiety and alcohol use. All of the participants in this study had problematic drinking behaviour and were using alcohol above the recommended Australian National Guidelines for Alcohol Consumption. Additionally, alcohol use was assessed using the Opiate Treatment Index (OTI) and all participants met the criteria for alcohol dependence in order to access the Drug and Alcohol Service.

Alcohol Use, Depression, Anxiety and Stress

Previous research has found a relationship between alcohol use, anxiety and depression (Desimone, Murray & Lester, 1994; Kushner, Shar, & Bietman, 1990; Regier, Farmer, Raw, Locke, Keith, Ludd & Goodwin, 1990; Sullivan, Fiellin & O’Connor, 2005) and these findings have suggested that individuals who meet the criteria for an alcohol dependence disorder are more likely to be depressed and anxious than individuals who do not meet the criteria for an alcohol dependence disorder.

Our results supported the findings of numerous studies have found a relationship between alcohol use and anxiety. Schmidt, Lang, Small, Schlauch and Lewinsohn (2007) found that social anxiety served as a risk factor for future alcohol use. The present study found evidence supporting the relationship between anxiety and alcohol...
use with participants in this study being higher in anxiety than the general population. However, no significant differences were found in anxiety levels between daily alcohol users and those who used alcohol less than daily in the month prior to baseline assessment.

Similarly, although our sample scored significantly higher than the general population on our measure of depression at baseline, daily drinkers did not significantly differ from non-daily drinkers on this measure.

In the present study, our alcohol-using participants reported a significantly higher level of stress than that found in the general population, with daily drinkers significantly higher in self-reported stress levels than were non-daily drinkers. This result supports other research examining the relationship between alcohol use and stress. For example, Dawson, Grant & Ruan (2005) found a positive relationship between stress and alcohol use, with the greater the number of stressful life events in the past year the higher the daily alcohol intake.

Additionally, other research has suggested that alcohol is used as a coping mechanism as it relieves stress and reduces tension (Kushner, Shar & Beitman, 1990; Kushner et al, 1996). Lloyd & Turner (2008) found that being exposed to stressful events predicted the onset of alcohol dependence and this was regardless of the length of time since exposure to the event. The population used in the present study was significantly more stressed than those in the general population and stress was found to be significantly related to depression and anxiety. However, the present study did not assess the precedent or antecedent of this relationship.

Taken together, this study added further evidence to suggest a significant association between depression, anxiety and stress, with our alcohol-using population reporting significantly higher levels of these symptoms than the general population.
However, there is no evidence that individuals who report being more depressed or anxious consumed alcohol more regularly than those who report having lower levels of these symptoms, although levels of stress were significantly higher for daily drinkers in our sample. Given the high levels of depression, anxiety and stress in our sample, there may have been a ceiling effect which limited the chance of this study finding a difference between daily and non-daily drinkers.

Self-Compassion, Depression, Anxiety and Stress (see Table 1 in the results section for the results of the analyses reported in this section)

Neff (2003b) suggested that there are six components to the self-compassion scale – self-kindness verses self-judgement, common humanity verses isolation and mindfulness verses over-identification. This was examined in the present study with the norms of the general populations obtained from the literature (Neff, 2003a) being compared to the Self-compassion scores for participants in the present study. The overall self-compassion score for participants in this study was significantly lower than that which is expected among individuals in the general population.

There has been little published research examining the sub-scales of self-compassion among alcohol dependent populations compared to the general population (Rendon, 2006). The results indicated that the participants in this study were significantly lower in mindfulness, common humanity and self-kindness than what would be expected in the general population. Therefore these participants were less kind to themselves, were less likely to focus on one moment at a time and they did not feel that events in their life were part of a shared human experience.

Additionally, the results from this analysis showed that participants in the present study were significantly higher in over-identification than what would be
expected in the general population. Participants were also significantly higher in perceived isolation and self-judgement than the norms for general population.

Within our sample, the overall score for self-compassion was not significantly associated with any of the subscales. In general, however, as the overall score increased, so too did scores on the self-kindness and common humanity subscales. In contrast, participants reporting lower total self-compassion scores tended to report higher self-judgement, perceived isolation, mindfulness and over-identification but this relationship was not found to be significant.

Self-kindness was found to be significantly positively associated to common humanity, perceived isolation and mindfulness. Thus the participants in the present study who were kind to themselves, also felt that their experiences were similar to events that happened to others, they lived for the present and did not get caught up in thinking about the past or the future. However, they also felt that they were isolated from other people in the community.

Self-judgement was found to be significantly positively correlated with perceived isolation and over identification. Therefore, participants who judged themselves harshly also felt very isolated from others and felt responsible for events that were beyond their control.

Common humanity was found to be significantly positively linked to mindfulness and self-kindness. Therefore, individuals who felt that their experiences were common to the general community tended to be kinder to themselves and were ‘present in the moment’. Perceived isolation was found to be significantly positively linked to self-kindness, self-judgement, mindfulness and over-identification. Thus indicating that participants who felt that they were isolated from others tended to judge themselves harshly and blamed themselves for events beyond their control. However
they were also living ‘one moment at a time’ and were kind to themselves. These results appear to be contradictory, as it is difficult to image how one could judge oneself harshly and be kind to oneself. However, participants can be kind to themselves in one situation and in a different situation judge themselves harshly, and this may be what is being reflected in our results.

A previous study by Neff (2003a) found that self-compassion was inversely related to depression and anxiety. Consistent with Neff’s (2003a) findings, the results from the present study indicate there was a significant inverse association between anxiety and self-compassion.

However, when the sub-scales of self-compassion were correlated with anxiety, the results showed that there was a significant positive relationship between anxiety, self-kindness, self-judgement, mindfulness, perceived isolation, common humanity and over-identification. This result implies that study participants reporting higher levels of anxiety also became more judgemental about themselves, but kinder to themselves; they felt their experiences were more connected to others in the general community, yet they felt more isolated; they over-identified with their experiences but they were more mindful.

An inverse relationship was found between depression and the overall score for self-compassion but this was not found to be significant. When examining the sub-scales of self-compassion and depression, the results showed that there was a significant positive relationship between self-kindness, self-judgement, perceived isolation and over-identification. Therefore those participants, who reported greater symptoms of depression, also reported feeling isolated, judging themselves more harshly, being kinder to themselves and feeling more responsible to negative consequences.
Stress was found to be significantly negatively correlated to the overall score for self-compassion e.g. the higher the level of stress reported by the individual, the lower the self-compassion. The results from the present study also showed that individuals who reported high stress symptoms were also significantly higher in self-judgement, high in perceived isolation and high in over-identification. Therefore, these individuals judged themselves more harshly, felt isolated from others and felt overly responsible for negative events that occurred in their lives.

When used as a continuous variable, alcohol consumption in the month prior to baseline was not significantly correlated with overall self-compassion or any of its subscales. However, when alcohol use was dichotomized into daily/non-daily consumption, one-way ANOVA revealed a significant relationship between the perceived isolation and over-identification subscales and daily alcohol use. That is, participants who drank alcohol on daily basis reporting lower feelings of isolation and over-identification than non–daily users. This result suggests that individuals who drank alcohol on a daily basis may have using alcohol as a way of avoiding painful emotions and numbing their experiences and as a result they reported lower feelings of isolation and over-identification. This result suggests that individuals who drank alcohol on a daily basis were less likely to feel that they were the only ones feeling a sense of separation when they experience difficult life circumstances compared to other people who they believe are leading normal happy lives. It may be that these individuals often get caught up in by the pain they are experiencing leading to rumination and fixation upon negative thought and emotions about oneself.
Age, Gender, Self-compassion, Depression, Anxiety and Stress (see Appendices L & M for the results of the analyses reported in this section)

Additionally, we examined the effects of age and gender on self-compassion, subscales of self-compassion (perceived isolation, common humanity, self-kindness, self-judgement, over-identification and mindfulness), depression, anxiety and stress. Age was divided into four groups consisting of those participants in the age ranges of 19-30 years, 31-40 years, 41-50 years and 51-69 years.

The results showed a significant relationship between age and depression. Upon further examination of the relationship between depression and each of the age groups, the results indicated that the younger two age categories reported significantly lower depressive symptoms than participants in the older two age categories. These findings provide support for previous research which has suggested that over time, drinking behaviour may become more part of the individual’s lifestyle, consequently the individual feels powerless in making changes, stressful life events occur and alcohol may be used as a coping mechanism (Krushner, Mackenzie, Fiszdon, Valenntiner, Foa, Anderson & Wangensteen, 1996) as it relieves stress in the short term (Krushner, Shar & Beitman, 1990; Krushner, et al, 1996).

Participant’s anxiety was not found to be significantly related to age. However, older participants reported slightly higher anxiety symptoms than younger participants though this difference in anxiety scores was not significant. The relationship between stress and age was significant. Generally, as age increased, so too did self-reported stress, however post-hoc analysis indicated that stress scores for the 19-30 year old participants was significantly lower than for the 41-50 years age group.

Self-compassion scores were not found to be significantly related to age and the average score for each of the age categories was similar except for the 51-69 years
group where there was a slight increase in the self-compassion score. Upon examination of the effects of age on the components of self-compassion, the results from this study indicate that age was not significantly related to mindfulness, over-identification, self-kindness, common humanity, isolation. However, age was significantly related to self-judgement with participants being more self-judgmental as age increased. At the time of writing this report, no previous research examining the relationship between age and self-compassion could be found.

The relationship between gender, depression, anxiety, stress and self-compassion was also examined. Gender was not found to be significantly related to any of the variables tested. However, the average males score for depression, anxiety and stress was slightly higher than the score obtained from female participants. The average female score for self-compassion, over-identification, and self-judgement was slightly higher than males but this was not significant. Males scored slightly higher for self-kindness, common humanity, perceived isolation and mindfulness but this difference was not significant. These results provide support for the use of the self-compassion scale rather than other self-esteem scales where a gender bias has been found (Hagborg, 1993).

Alcohol use, number of drugs used, self-compassion and the sub-scales of self-compassion (see Appendix P for the results of the analyses reported in this section)

The relationship between the self-compassion scores for participants who drank alcohol on a daily basis and those who did not was explored, with results suggesting no significant difference existed between daily drinkers, non-daily drinkers and the overall score for self-compassion.
The relationship between the frequency of alcohol use and the six sub-scales of self-compassion was also compared. A significant relationship was found between the perceived isolation and over-identification scores and frequency of alcohol use with participants who drank alcohol on a daily basis reporting lower feelings of isolation and over-identification. This result suggests that individuals who drink alcohol on a daily basis were more likely to feel that they were the only ones feeling a sense of separation when they experience difficult life circumstances compared to other people who they believe are leading normal happy lives. The individuals often get caught up in by the pain they are experiencing leading to rumination and fixation upon negative thought and emotions about oneself. Participants who drank alcohol on a daily basis were lower in self-kindness, lower in self-judgement and higher in mindfulness and common humanity than those who did not drink alcohol every day. However, this difference was not statistically significant.

The number of different types drugs used (hallucinogens, inhalants, tobacco, cannabis, heroin, amphetamines, tranquilizers, barbiturates and other opiates) by each participant was then used separate participants into two groups – those who used two or fewer drugs and those who used three or more drugs. In the present study, the number of drugs used was not found to effect depression, anxiety, stress or self-compassion. Participants who used three or more drugs were as depressed, anxious, stressed and scored similarly in self-compassion than those participants who used two or fewer drugs. Therefore the extent of polydrug use was not an indicator of how depressed, anxious or stressed a participant was nor did it related to how self-compassionate the participant was. The relationship between anxiety, depression, stress, self-compassion, sub-scales of self-compassion and the type of drug used was assessed. There was no significant difference found between the type of drug used, depression, stress, self-
Compassion and the sub-scales of self-compassion. However, anxiety was found to be significantly positively related to alcohol use.

Conclusions from the baseline data

One of the most consistent and robust findings in the research literature is that low self-compassion is linked to depression and anxiety. However, this was not replicated in the present study. Depression and anxiety were found to be related to each other but not to the overall score for self-compassion. The researchers speculate that the complication of alcohol dependence might have moderated the relationship between depression, anxiety and self-compassion, as alcohol is often used to self-medicate these thoughts.

The participants in the present study were found to be significantly lower in self-compassion than those in the general population. This supports the finding of Neff (2003) who suggested that individuals who were self-compassionate were less likely to cope by using alcohol. In the present study all the participants met the criteria for an alcohol dependence disorder and were low in self-compassion.

Additionally, Neff, Kirkpatrick & Rude (2007) found that when self-compassion is increased, anxiety and depression is reduced, thereby suggesting that there is a relationship between self-compassion, anxiety and depression. While the finding from the relationship between the overall score for self-compassion and anxiety and depression do not appear to support this suggestion, further examination of the relationship between depression, anxiety and the components of self-compassion provide a better understanding of these relationships.

Anxiety was found to be significantly linked to all six components of self-compassion. Depression was found to be significantly linked to self-kindness, self-
judgment, and perceived isolation and over-identification. These findings provide additional support to the conclusions drawn by Van Dam, Sheppard, Forsyth & Earleywine (2010) who found that the self-judgement and perceived isolation subscales from the self-compassion scale were significantly correlated with symptom severity in mixed anxiety and depressive disorders.

Other studies have suggested that individuals who have high anxiety and are exposed to stress have a greater risk of relapse to alcohol and other drugs (Krushner, et al, 2005; Koob & Le Moal, 2005). Therefore, participants in this study are potentially at greater risk of relapse and it is important that any intervention used is easy to understand and is easily accessible particularly in times of stress.

Taken together, these results support the first hypotheses as participants upon entry to treatment had high levels of alcohol use, high levels of depression, anxiety and stress and also scored lower in self-compassion than did the general population. Self-compassion was found to be significantly affected by depression, anxiety and for the subscales of isolation and over-identification among daily alcohol users.

**Hypothesis 2** (see Appendix O, Q & Table 2, 5 in the results section for the results of the analyses reported in this section)

The second hypothesis was that clients who receive a mindfulness intervention will report improved self-compassion at follow-up relative to baseline.

Baseline scores for age, depression, anxiety, stress and self-compassion for those participants who received mindfulness intervention were compared to those who did not receive mindfulness intervention. The results suggest that those participants who received mindfulness interventions were significantly higher at baseline in self-
judgement at baseline than those who did not receive mindfulness. Perhaps clinicians who provided mindfulness interventions during the course of the study were attuned to this in their clients, and felt that mindfulness was an appropriate, targeted intervention to provide for these issues. The study results indicated that mindfulness, as a targeted intervention for higher self-judgement, was effective, with significant reductions over time in self-judgement evident for those participants who received mindfulness.

Self-compassion scores were also obtained 15 weeks post-baseline and this was compared to the self-compassion scores found in the general population. There were differences found between the self-compassion scores for participants in the present study and the self-compassion scores of the general community, and indications were that study participants had made some improvements in self-compassion and were closer to the general community norms on some subscales. After 15 weeks of treatment, participants in the present study were still significantly lower in self-compassion, mindfulness, common humanity and self-kindness than the general population and significantly higher on over-identification. However, self-judgement and isolation were not significantly different from the scores obtained from the general population in other research (Neff, 2003). Given these subscales were associated with daily alcohol use at baseline, it might be that treatment for alcohol use, promoting non-daily consumption, had a flow-on benefit of bringing our study participants more in line with the general population on the extent to which they judge themselves harshly and feel isolated from the community.

Further analyses were conducted to determine the strength of these changes in participant’s self-judgement and isolation scores and to further examine the grand average of self-compassion and the other self-compassion subscales. The baseline self-compassion scores were compared to the 15 week follow-up self-compassion scores for
overall self-compassion and the subscales of self-compassion. Overall self-compassion was found to have significantly improved from the scores obtained at baseline to the 15 week follow-up scores. Furthermore, there was a significant difference between the baseline scores and the 15 weeks scores for all components of self-compassion. Participants were significantly less isolative, judged themselves to a lesser degree and scored lower in over-identification. The results also showed that participants were significantly more mindful, kinder to themselves and score higher in common humanity. Therefore, within the 15 weeks of treatment, something caused a significant change in the compassion participants felt towards themselves and this was reflected in an improvement in all the self-compassion sub-scales that were measure in this study.

The overall change in self-compassion between baseline and 15-week follow-up was found to be positively associated with self-kindness, common humanity and mindfulness and negatively associated with self-judgement, over-identification and isolation. So while participants became more self-compassionate, they were also kinder to themselves, more mindful and felt that they were part of common humanity. Participants were also less judgmental, felt less isolated and did not over-identify with things as readily. This is in line with previous research which has linked these psychological constructs (Brown, 1999; Elkind, 1967; Fredrickson, 2001; Jopling, 2000; Neff, 2003a, 2003b).

A positive change in self-kindness was found to be associated with an increase in common humanity, mindfulness and isolation. Therefore while the individual became kinder to themselves, they were also feeling increasingly part of common humanity and became more mindful. However, at the same time they also felt more isolated. Another interesting finding was that the positive change in self-kindness was also linked to a positive change in alcohol use.
Interestingly, a significant association was found between isolation and all the sub-scales of self-compassion. Participants reported that as their feelings of isolation increased, they became kinder to themselves, became more mindful, increasingly felt like part of common humanity, judged themselves more harshly and reported high over-identification. These results appear to contradict one another but if these results are viewed as two ends of a spectrum whereby the individual tend to sway between the two extremes of judging themselves harshly and understanding that they need to self-soothe or be kind to themselves.

At one end of the spectrum the individual becomes kinder to themselves, engage more in the practice of mindfulness and understand that the experiences they have are part of being human and are commonly experience by other people. However, when they are at the other end of the pendulum, they start to judge themselves harshly and over-identify with things. This may be due to the individual being torn between knowing that other people have negative things happen in their lives but feeling as though they experience more negative things than other people and may be part of the rumination and automatic negative thoughts which are commonly found in anxiety and depressive disorders (Beck, Rush, Shaw & Emery, 1979; Forsyth & Eifert, 2008).

Self-judgement was found to be significantly associated with over-identification. Therefore, while participants were less judgemental towards themselves, they were also less prone to over-identifying with things. This can be understood in terms of an individual who is not judging themselves would be more likely to feel that bad things happen to everyone and would be less likely to take things personally.

Supporting other research, the results from the present study indicate that an increase in mindfulness was found to correlate significantly with an increase in common humanity (Elkind, 1967; Fredrickson, 2001). Elkind (1967) suggested that the use of the
practice of mindfulness directly reduces the feeling of isolation from common humanity and fosters feeling of inter-connectedness. On the other hand, Fredrickson (2001) suggested that mindfulness can be increased by feeling part of common humanity.

Mindfulness Intervention

Data was separated into those participants who received at least one session of mindfulness and those participants who did not receive any mindfulness during the course of the study. The number of mindfulness sessions was also correlated with the change in overall self-compassion, self-judgement, self-kindness, over identification, mindfulness, common humanity and isolation from the baseline score to the 15 week follow-up score.

The results from the analysis indicate that there was a slight increase in the grand average for self-compassion from baseline to 15 week follow-up for those participants who did not receive any mindfulness intervention and there was a slightly larger improvement in self-compassion for those participants who received mindfulness intervention. However the improvement in self-compassion between the two groups from baseline to the 15 weeks follow-up was not significantly different. Therefore, self-compassion increased in both groups but the results suggest it was not solely related to whether or not the participant received mindfulness intervention. These results are contrary to previous research which suggested that self-compassion can be increased by mindfulness-based intervention (Birnie, Speca & Carlson, 2010, Kuyken et al., 2010). Additionally, Kuyken et al. (2010) found that after mindfulness-based intervention improvements in self-compassion were still evident 15 months later.

Interestingly, both participants who received training in meditative practice (which may have incorporated mindfulness-based approaches), and those who did not,
reported improvements in their self-judgement, with significantly greater improvement evident for those who were exposed to meditation. This is consistent with other research which has suggested that mindfulness-based interventions, for example, foster an attitude of non-judgement and encourages gentleness to one’s behaviour (Bowen, Witkiewitz, Dillworth & Marlatt, 2007; Cash & Whittingham, 2010; Hayes, Strasahl & Wilson, 1999; Kabat-Zinn, 1990). Our results also revealed that those who received training in meditative practice (which may have incorporated mindfulness-based approaches) in our study were significantly higher in self-judgement at baseline than those who did not receive mindfulness. Perhaps clinicians who provided meditation training during the course of the study were attuned to increased self-judgement in their clients, and felt that meditation was an appropriate, targeted intervention to provide for these issues. The study results indicated that meditative practice (which may have incorporated mindfulness-based approaches), as a targeted intervention for higher self-judgement among participants with alcohol use problems was effective, with significant reductions over time in self-judgement evident for those participants who received training in these techniques. Considering that self-judgement was related to alcohol consumption at baseline, efforts to reduce a person’s problematic alcohol consumption, particularly via the use of meditative practice, incorporating mindfulness-based approaches, could be a powerful combination in promoting positive self-judgements, and perhaps more enduring change.

It is interesting that the effect of meditative practice on the other subscales of self-compassion was not significant, especially for the subscale of mindfulness. This finding contradicts previous research which has found that the use of mindfulness based intervention results in increased mindfulness and spirituality (Birnie, Speca & Carlson,
and this increased mindfulness can still be seen 15 months after treatment (Kuyken et al., 2010). However, the researchers of the current study speculate that it may be that the type of mindfulness measured in the self-compassion scale is different from the mindfulness that participants in the present study were receiving and to which this previous research refers.

The effect of mindfulness intervention of self-kindness was examined and it was found that regardless of whether the participant received mindfulness, their self-kindness score improved slightly from baseline to the 15 week follow-up result. Those participants who received mindfulness intervention had a slightly greater improvement in their self-kindness than those participants who did not receive any mindfulness intervention.

From baseline to the 15 week follow-up, there was no change at all in the common humanity scores for participants who received mindfulness intervention. However there was a slight increase in common humanity for those participants who did not receive any mindfulness intervention. Therefore it appears that mindfulness intervention does not have any effect on common humanity and that common humanity is a separate construct measuring something that is unrelated to mindfulness.

Mindfulness intervention appeared to have little effect on isolation with participants reporting a decrease in isolation at the 15 week follow-up period and those participants in the no mindfulness intervention group also reporting a result in the same direction. The difference between the changes in isolation between the two groups was not significant indicating that the mindfulness intervention had minimal effect on the isolation subscale.

Participants who received no mindfulness intervention reported slight lower scores in over-identification at the 15 week follow-up. There was a slightly greater
reduction in over identification for those participants who received mindfulness intervention. Therefore, whether or not participants received mindfulness intervention, their over-identification scores decrease suggesting that the mindfulness intervention administered in the present study did not affect their feelings of over-identification.

Contrary to the anticipated finding, it was found that participants who were exposed to mindfulness intervention reported a decrease in mindfulness at the end of treatment and participants who did not receive any mindfulness intervention reported a slight increase in mindfulness at the end of treatment. At the start of treatment, there was a slight difference in the mean mindfulness score for those that received mindfulness and those who did not, while this difference was not significant, it may have impacted on the 15week follow up scores.

In summary, these results indicate that participants in this study reported a significant increase in self-compassion, mindfulness, common humanity and self-kindness. Additionally, there was a significant decrease in self-judgement, isolation and over-identification. The reduction in self-judgement and isolation was so great that at the 15 week follow-up stage, participant’s scores in these subscales were equivalent to what other research has suggested is representative of the general population. The results also suggest that those participants who received training in meditative practice (which may have incorporated mindfulness-based approaches) appeared to benefit most in terms of a reduction in their self-judgement. Meditative practice did appear to improve participant’s self-kindness, isolation, over-identification slightly more than no mindfulness but it had no impact on the individuals common humanity and had a negative effect in their mindfulness score. These findings contradict previous research which has found that the use of mindfulness based intervention results in increased mindfulness and spirituality (Birnie, Speca & Carlson, 2010) and this increased
mindfulness can still be seen 15 months after treatment (Kuyken et al., 2010). It may be that the type of mindfulness that is being measured in the self-compassion scale could have been different to the meditative practice (which may have incorporated mindfulness-based approaches) that participants in the present study were receiving. Additionally, participants may not have had an understanding of what mindfulness was and how it can be incorporated into daily life prior to the mindfulness intervention. The mindfulness intervention may have enable participants to become more aware of how much they were actually practicing mindfulness and this may have influenced the results obtained from the mindfulness group at the 15 week follow-up.

Hypothesis 3

Thirdly, we sought to examine the relationship between changes in self-compassion and concomitant changes in depression, anxiety and alcohol use at follow-up. As indicated previously, participant’s self-compassion score significantly increased from baseline to 15 weeks into treatment. Additionally, there was a significant improvement in the results for all the self-compassion subscales – an increase in mindfulness, common humanity, self-kindness and a decrease in over identification, self-judgment and isolation.

Of the 89 baseline participants, 60% completed the 15-week follow-up assessment. With two exceptions, participants who completed the follow-up assessment were not significantly different from those who did not on measures of anxiety, depression, stress, self-compassion and alcohol consumption at baseline. However, participants who did complete the 15-week follow-up assessment scored significantly
higher than did their counterparts on mindfulness at baseline, and were significantly higher on self-kindness.

Participants reported a significant reduction in their alcohol intake between baseline and 15-week follow-up, and this correlated with a trend towards improvements in self-compassion. This is consistent with the findings of Rendon (2007), the only other study examining self-compassion and alcohol use. Neff (2003) concluded that individuals who are self-compassionate are less likely to cope by using drugs or alcohol. Therefore, it may be that as participant’s self-compassion increased, their use of alcohol decreased.

There was a significant improvement in participant’s depression, anxiety and stress scores from baseline to 15 weeks into treatment. This change correlated with changes in depression, anxiety and stress. As depression decreased, stress and anxiety also decreased, thereby providing support for the results found from other research which concluded that improvements in self-compassion predict a reduction in depressive symptomology (Raes, 2011) anxiety and stress (Neff, 2003a).

The change in depression was found to be significantly associated with self-kindness, self-judgment, mindfulness and isolation. At the same time that the individual’s depression decreased, they became less kind to themselves, less judgemental towards themselves, not as mindful and they felt less isolative. This is consistent with the findings of Van Dam, Sheppard, Forsyth & Earlywine (2010) who found that self-judgement, self-kindness, mindfulness and isolation subscales were significantly positively correlated to depression.

Reductions in anxiety was found to be significantly associated with self-kindness, self-judgment, common humanity, mindfulness and isolation. Therefore, the participants in this study became less anxious, less judgemental towards themselves and
felt less isolated from others. However, they also became less mindful, were not as kind to themselves and felt that their problems were not part of what is commonly experienced by humanity. Other research has found similar results with anxiety being significantly positively correlated to isolation and self-judgement (Van Dam, Sheppard, Forsyth & Earlywine, 2010).

The change in participants stress was found to be significantly associated with self-kindness, self-judgment, isolation and the number of mindfulness sessions. Therefore, the participants in this study who became less stressed over the 15 week period, were also less judgemental, felt less isolated from the general community. Providing support to previous research (Birnie, Speca & Carlson, 2010) participants who received mindfulness intervention also reported a reduction in stress.

The depression, anxiety and stress scores from participants 15 weeks after baseline data collection was compared scores that are representative of the scores found in the general population. Participant depression and stress score was found to be significantly higher than what would be expected in the general population. After 15 weeks of treatment, participants were more anxious than other people in the general community though this difference was a trend and was not found to be significant.

Taken together, all these results provide support for the third hypothesis with significant increases in participants overall self-compassion, self-kindness, mindfulness and common humanity from baseline to 15 weeks into treatment. There were also significant improvements in self-judgment, over-identification, isolation, depression, anxiety, stress and alcohol use as the results from these measures decreased from baseline to 15 weeks into treatment. However, it appears that 15 weeks after treatment, this population was significantly more depressed and stressed than other people in the
general community and there was a trend indicating that they had scored higher in anxiety.

Limitations

There were a number of limitations associated with the present study which need to be considered when examining the results.

Sample size generally was an issue for the currently study, and particularly for analyses separating participant data into used alcohol and those who did not use alcohol. These groups were uneven in number with only 11 participants reporting no alcohol use and 60 participants indicating that they used alcohol. Another limitation was with the uneven groups used in the mindfulness intervention with 41 participants not receiving the mindfulness and only 10 receiving the intervention. This may have impacted on our ability to detect significant differences between the study groups, and our failure to find an effect of mindfulness on the relevant self-compassion domains examined in the study. Finally, there were no treatment integrity checks and mindfulness sessions were not audio or video taped. Therefore, the researchers relied upon the accurate reporting of the clinician in terms of the use of mindfulness.

Future studies should focus on the effectiveness of a structured mindfulness intervention in increasing self-compassion and in the treatment of depression, anxiety, stress and alcohol use disorders in both a clinical population and a non-clinical population.

This study did not examine temporal relationships between self-compassion and depression, anxiety, stress and alcohol consumption. Future research focusing on the antecedent of this relationship would be beneficial in determining the most effective treatment intervention and the timing of the intervention to improve self-
compassion, to improve coping strategies when faced with stressful situations and reduce the risk of the development of an alcohol dependence disorder.

**Summary and Conclusions**

The results from this study show that mindfulness based treatment could be a potentially efficacious intervention for improving negative self-judgement, a component of self-compassion, and reducing alcohol consumption among people alcohol dependence problems. This population report significantly lower self-compassion than do the general population, but our results suggest that this deficit can be addressed via effective treatment of the alcohol dependence, and in particular, the use of mindfulness-based strategies. However, further research needs to be conducted to determine if these results can be replicated using a larger sample size.
References


Appendix A:

Journal article showing the full method for the current study

Note: This journal article was not written by the author of this thesis.
Study protocol: a dissemination trial of computerized psychological treatment for depression and alcohol/other drug use comorbidity in an Australian Clinical Service.

*BMC Psychiatry*

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Word Count Abstract: 292
Word Count Manuscript: 2,640

Number of Tables: 1

Number of Appendices: 1
Abstract

Background

The rise of the internet and related technologies has significant implications for the treatment of complex health problems, including the combination of depression and alcohol/other drug (AOD) misuse. To date, no research exists to test the real world uptake of internet and computer-delivered treatment programs in clinical practice. This study is important, as it is the first to examine the adoption of the SHADE treatment program, a DVD-based psychological treatment for depression and AOD use comorbidity, by clinicians working in a publicly-funded AOD clinical service. The study protocol that follows describes the methodology of this dissemination trial.

Methods/Design

19 clinicians within an AOD service on the Central Coast of New South Wales, Australia, will be recruited to the trial. Consenting clinicians will participate in a baseline focus group discussion designed to explore their experiences and perceived barriers to adopting innovation in their clinical practice. Computer comfort and openness to innovation will also be assessed. Throughout the trial, current, new and wait-list clients will be referred to the research program via the clinical service, which will involve clients completing a baseline and 15-week follow-up clinical assessment with independent research assistants, comprising a range of mental health and AOD measures. Clinicians will also complete session checklists following each clinical session with a client, outlining the extent to which the SHADE computer program was used. Therapeutic alliance will be measured at intake and discharge from both the clinician and client perspectives.
Discussion

This study will provide comprehensive data on the factors associated with the adoption of an innovative, computer-delivered evidence-based treatment program, SHADE, by clinicians working in an AOD service. The results will contribute to the development of a model of dissemination of SHADE, which could be applied to a range of technological innovations.

Clinical Trials Registry

ACTRN12611000382976
Introduction

Mounting pressure is exerted on the health system by the increasing prevalence of depression and alcohol/other drug (AOD) misuse. These disorders are ranked 3 and 17 in contribution to the global disease burden, with depression elevated to 1st place and alcohol abuse use to 5th among middle-high income countries such as Australia [1]. Efficacious treatments have been tested with success for both depression [2] and AOD disorders [3], suggesting that this burden can be reduced.

Despite this, the gap between need for and receipt of these treatments is large, particularly for counselling [4], which is often preferred over pharmacotherapy [5]. For example, in the US, 2.1 million people with a 12-month mental disorder did not use services for mental health problems but perceived they had an unmet need [6]. Of these, the highest unmet need was for counselling [6]. Comorbidity, or the co-occurrence of two or more disorders, is the rule rather than the exception in clinical practice [7], with up to 89% of people with AOD use disorders also experiencing depression [8]. The presence of comorbid disorders compounds difficulties in treatment access and provision [9].

Mental health and AOD researchers and clinicians must respond to these issues, by developing and evaluating treatment programs that address depression and AOD use disorders, whilst minimising cost and maximising efficient use of clinician time and client outcomes. Available evidence-based treatments provide for single problems (e.g. depression or alcohol misuse) rather than the comorbidity with which clients typically present [7]. Treatments are often high intensity, require specialist input and training,
and are therefore only accessible to a minority of clients [10]. For these reasons, many clinicians are not able, or willing, to implement these interventions in practice.

The increased availability and use of computer/internet-based programs as a supplement to health care is also a potential solution to well-documented treatment accessibility problems [11], particularly among people with depression and AOD use comorbidity. Interactive and multimedia options offer the potential for higher levels of engagement than other self-help modalities [12]. Computers/the internet offer the opportunity for widespread dissemination of treatments, reaching a large audience in a cost effective and timely manner [13]. Experts also suggest that the integration of internet/computer-delivered interventions into practice, will increase adherence to evidence-based treatment protocols, and increase the number of practitioners who can deliver highly specialized psychological treatments [14].

Internet/computerized CBT treatment programs have established efficacy for a range of mental disorders and other health conditions [15]. Our previous work has reported on the efficacy of computerized psychological treatment for concurrent depression and AOD use disorders [SHADE treatment, 16]. In a recent randomized controlled clinical trial involving 97 participants, SHADE computerized treatment was associated with significantly greater reductions in depression relative to a one-session treatment, and equivalent reductions in depression to a face-to-face treatment combining cognitive behavioural therapy (CBT) and motivation enhancement (ME). There was a significant advantage of computerized SHADE for marijuana use over time, with participants in SHADE reporting twice the reduction in marijuana use as the face-to-face condition and approximately five times the reduction as the one-session treatment at 12 month follow-
up [16]. Computerized SHADE was also associated with similar reductions in alcohol use over 12 months as the equivalent face-to-face-delivered combination CBT/ME program [16].

Whilst it is generally accepted that internet/computer-delivered CBT programs are efficacious, with some indicating equivalent benefits to face-to-face-delivered programs, there is very little real world research that demonstrates the benefits and acceptability of these programs in practice and service settings [14]. There is some evidence to suggest that, in the US, only 48% of primary care patients would consider using internet-delivered CBT, compared to 91% for traditional face-to-face therapy [14]. However, other evidence suggests that clinicians, including psychologists and CBT practitioners, are more open to using these alternatives as supplements to the care they are able to provide [17]. Consequently, the current study was commenced with the aim of exploring clinician and client uptake, accessibility and response to a computerized CBT/ME treatment for depression and AOD use (SHADE treatment) within a publicly-funded Drug and Alcohol Clinician Service in New South Wales, Australia.

Methods/Design

Study aims

The purpose of this original research is to test the effectiveness of the SHADE computerized treatment program, from both a clinician and client perspective, within the real world clinical setting. It is hypothesised that clients exposed to the SHADE program will report superior reductions in depression and AOD use relative to those who are not exposed, and that this response may be moderated by primary drug of
concern (e.g. marijuana vs. other drug use), coercion into treatment and computer comfort. It is also hypothesised that there will be an association between clinician openness to innovation, clinician computer comfort and the use of SHADE in clinical practice.

Study setting

This is a real world dissemination trial, conducted within a publicly-funded Drug and Alcohol Clinical Service (DACS) on the Central Coast of New South Wales, Australia. The DACS forms part of a general health service, and provides a range of clinical interventions to residents within the catchment area with AOD use problems. Services include counselling, detoxification (hospital-based and outreach), needle and syringe programs, pharmacotherapy services, a diversion program for people with AOD use problems and legal issues (Magistrates Early Referral Into Treatment, MERIT), and a specialist service targeting clients with a primary drug of concern of marijuana. A central intake service acts as the point of initial contact for access to DACS, with subsequent referrals made to relevant services as appropriate. Client and Clinician participants will be recruited from the counselling services associated with the Central Coast DACS. There are three counselling teams within this service, AOD Counselling, Marijuana Clinic and MERIT.

Participants – Clinicians

Clinicians working within the Counselling, Marijuana Clinic and MERIT teams will be invited to participate in the study. At a minimum, these clinicians will have a tertiary education in a counselling-related field, with at least an undergraduate degree in nursing or psychology.
**Participants – Clients**

All clients, new and ongoing, will be invited to partake in the study. Participants will be aged 18 years and over and residing on the Central Coast and surrounding areas of New South Wales. Participants will consist of individuals attending counselling with primary presenting issues related to substance abuse or dependence.

**Study design**

This study is designed to observe, and not prescribe, the use of the SHADE computerized treatment program within the Central Coast DACS. Ethics approval for the study has been obtained from several relevant Human Research Ethics Committees, led by the Northern Sydney Central Coast Human Research Ethics Committee (08/HARBR/78/79).

**Clinicians**

At information sessions conducted by the authors, clinicians in each team associated with the DACS were introduced to the study and asked to provide consent to participate. Participation involves five activities:

1. Completion of a baseline focus group discussion regarding the use of innovation in clinical practice.
2. Completion of a baseline questionnaire regarding their openness to innovation and computer comfort.
3. Use of the SHADE treatment program with new and ongoing clients in whatever manner they choose, with delivery of the DVD content of the program either contained within the clinic session or provided to clients to complete in their own home in between clinic sessions.
(4) Referral of contact details for new and ongoing clients to the client-data-collection phase throughout the study period, regardless of their exposure to the SHADE treatment program.

(5) Completion of session checklists following every counselling session with new and ongoing clients, regardless of their exposure to the SHADE treatment program, and therapeutic alliance measures at intake and discharge for all clients.

Current/Ongoing Clients
Following the provision of contact details to the research team via their clinician, current and ongoing clients of the DACS are contacted to discuss consent to participate in the study. Once consent is established, clients complete a baseline and 12-week follow-up assessment delivered over the telephone by research assistants independent from the DACS. Clients are reimbursed $20 AUD for each completed assessment.

Wait-list Clients
New referral to the DACS, via the centralized intake service, who have not been allocated to a clinician, will be contacted by AH, SW or MB (clinicians of the DACS) to discuss study participation and consent to release contact details to the research team. Once these details have been provided to the research team, wait-list clients consent to complete a baseline and 12-week telephone assessment in the same manner as current/ongoing clients. Wait-list clients are reimbursed $20 AUD for each completed assessment.
The SHADE Treatment Program

The SHADE treatment program has been described elsewhere [16, 18], and incorporates CBT and ME strategies to encourage reductions in depression and AOD use. The program is available in two formats: (i) a 10-session program designed to be completed in a linear fashion, once weekly for 10 weeks, with content pre-programmed for each session; and (ii) a skill module program, where a series of shorter modules are presented based on themes related to depression and AOD use problems (e.g. coping with cravings, taking charge of my thoughts, staying well) arising from the 10-week program. Clients and/or clinicians may choose to focus on just one skill module during a session, without having to complete the other skills and strategies contained in the resource. Both versions of the SHADE program appear on the one DVD-Rom from which the program operates. Text is pitched at a reading age of 14 years, with a voiceover available to read out all text contained in the resource. Video case scenarios guide clients through a range of skills and strategies, and a range of handouts and worksheets are also available for clients/clinicians to print out and use during a session or as a homework activity.

Assessments

All assessment instruments are widely used in mental health and/or AOD treatment research and practice.
Clinicians

Clinicians will participate in a baseline focus group discussion designed to elicit their attitudes and concerns about adopting innovation into their clinical practice in general, and the SHADE treatment program in particular. Table 1 displays the structure of this focus group discussion.

Subsequent to completing the focus group discussion, clinicians complete two further self-report measures:

1. Innovativeness Scale [19]: a 20-item measure using a 7-point Likert-type scale assessing the likelihood of an individual to adopt innovative strategies in their work.

2. Computer Opinion Survey [20]: a 26-item measure using a 6-point Likert-type scale, developed as a measure of the trait of computer anxiety rather than the “state” of computer anxiety.

During the course of the study, clinicians complete a session checklist at the conclusion of each session with a client, which outlines the focus and content of the session, including whether or not SHADE or other technologies were used. The checklist was developed by the authors to specifically suit the Central Coast DACS and the range of counselling interventions applied by the clinicians. Please see Appendix A for a copy of the session checklist.

At intake and discharge with a client, clinicians also complete the therapist scale of the Agnew Relationship Measure [21]. This scale asks clinicians to rate, on a 7-point
Likert scale, 28 items relating to the extent to which they feel a bond, partnership, confidence, openness, and client initiative are features of the therapeutic relationship with their client.

Clients

Following the provision of consent, clients complete the following set of assessment measures at baseline and 12-weeks post-baseline via telephone with a trained research clinician, who is independent of the Central Coast DACS. The following questionnaires take between 30-45 minutes to complete:

(1) Demographics: information includes age, gender, occupational and marital status, children, educational experience, ethnicity and current accommodation arrangements.

(2) Service Utilisation: includes current and previous treatments, including self-reported hospitalisations, attendance at clinics, rehabilitation programmes, contact with community mental health teams, psychologists, psychiatrists, other health professionals, involvement in AOD detoxification and counselling, methadone maintenance, 12-step programmes, use of general practitioners, and use of medication (including compliance).

(3) Opiate Treatment Index [22]: a quantity/frequency index to estimate average daily use of 11 drug types (alcohol, marijuana, heroin, other opiates, amphetamines, cocaine, hallucinogens, barbiturates, tranquillisers, inhalants and tobacco) in the month prior to assessment.

(4) Treatment Motivation Questionnaire: is a 26 item self-report measure, examining four components of motivation including internal and external motivation, help
seeking and confidence in treatment. A 7-point Likert scale is used to examine the level of motivation.

(5) Depression Anxiety Stress Scale 21-item version [23]: a 21-item screening tool to for depression, anxiety and stress in the previous 7 days. A 4-point Likert-type scale is used to determine the extent to which a symptom applied to the person.


(7) Self-compassion Scale [25]: is a 26-item measure using a 5-point Likert-type scale assessing the extent to which a person expresses self-compassion towards themselves in difficult times.

(8) Agnew Relationship Measure – Client Version [21]: this client-rated measure of therapeutic alliance is similar in content and structure to the therapist-rated version previously described.

We plan to report the cost of delivering the intervention in real world settings and the cost impacts of the outcomes achieved by calibration of selected instruments used in the study (e.g. Quality of Life Scale, Global Assessment of Functioning) with those achieved in other costing studies.

Sample size calculation

Clients

A 50% consent rate is estimated from the 250 eligible clients passing through the Central Coast DACS within the study timeframe (N=125). Previous research conducted
by the authors has achieved consent rates of 50% for participants recruited from the general community [e.g. via media advertisements, 16]. We obtained higher consent rates (i.e. 82%) when previously recruiting directly from DACS [16], however we have estimated our sample size recruitment rates based on the lowest figure. Previous research with the target population has resulted in an 80% retention rate over a 15-week period [16], translating to a final projected sample size of 100 retained participants at the 15-week follow-up for the current study.

**Clinicians**

All clinicians working with the Central Coast DACS are invited to participate in the study, providing a maximum of 19 clinician participants for the trial. Assuming clients are distributed equally between the clinicians, each clinician will see 13 clients during the study period (250/19). Service data from the Central Coast DACS indicate the average occasion of service for clients engaged with the service is three sessions. Assuming a 50% compliance rate with completion of session checklists by clinicians, we estimate having a pool of 342 session checklists for analysis.

**Statistical Analyses**

**Clients**

For the client sample, primary outcome measures are changes in depression, alcohol and marijuana use between baseline and 12-week follow-up.
Previous research using the SHADE resource among substance users [16] has resulted in effect size differences of 0.42 between clients exposed to the SHADE resource versus not on depression, alcohol and marijuana use. Assuming similar effect size differences will apply to the current study, we estimate that a sample size of 72 is required at 15-week assessment to achieve adequate power (power=0.81) to detect differences of this order using repeated measures analysis of variance with an alpha level of 0.05 (calculated using G*Power, version 3.1.2). Predictors of alcohol use, marijuana use and depression at 15-weeks relevant to the current study (e.g. client rated therapeutic alliance, internal and external motivation and coerced vs non coerced clients, exposure to SHADE) will be modelled using a linear regression analysis. This sample size will also enable us to examine an effect size of 0.15 for a linear multiple regression for these outcome variables, with up to 6 predictors, an alpha level of 0.05 and a power coefficient of 0.80 (actual sample size required = 98).

Clinicians

Given the small sample size of clinicians associated with the DACS, descriptive analyses only will be performed on the clinician measures associated with innovation, computer comfort and reported use of the SHADE resource.
Table 1: Clinician focus group protocol

(1) What sources do you use to inform your clinical practice (e.g. journals, workshops, clinical guidelines)?

(2) What influences you in deciding on when to use a particular strategy, technique, or resource during a session with a client? How do handouts, self-help books and other information for clients fit into this process?

(3) Have you incorporated any technology into your sessions with clients already? How did you do that, and what was the result?

(4) Are there any advantages to using technology, e.g. SHADE, as an adjunct to your clinical practice? And what might the disadvantages or concerns be? What are the main issues?

(5) What are some of the supervision and supports you think that you might need to have in place to assist you in using technology in your clinical practice?

Competing interests
None of the authors have any competing interests arising from this research.

Author contributions
FK-L, AB, AS, AH, SW, MB & SC contributed to the design of the study and developed the protocol. FK-L, AS, AH, SW & MB gained ethical approval for the trial through Northern Sydney Central Coast Human Research Ethics Committee. All authors contributed to manuscript preparation. All authors approved the final manuscript for submission.
References


Appendix B:

Clinician information statement
You are invited to take part in the research project identified above. The research is a part requirement of the degree of Doctorate of Clinical Psychology being undertaken by Mr Aaron Simpson, Ms Michelle Brooks and Ms Samantha Wolfe at the University of Newcastle, a Masters of Psychology (Clinical) undertaken by Ms Alison Healey at the University of Newcastle, and a Masters of Psychology (Clinical) undertaken by Ms Mary Joy at Macquarie University. These projects are under the supervision of Dr Frances Kay-Lambkin from the Centre for Brain and Mental Health Research, A/Prof Jenny Bowman from the University of Newcastle and Dr Andrew Baillie from Macquarie University. You are being asked to participate in this study because you are a member of the clinical staff at North Sydney Central Coast Area Health Service (NSCCAHS) – Area Drug and Alcohol Service.

Why is this research being done? – As clinicians you provide a range of psychosocial interventions to people seeking assistance with modifying problematic drug and alcohol use. Both community and clinical samples have indicated that co-existing substance use disorders and mental health problems are highly prevalent. Supplementing face-to-face treatments with computer-delivered treatments may help people with substance use disorders and/or mental health problems to address the many barriers encountered in accessing treatments matched to their unique and complex set of needs.

The proposed project will pilot test the implementation of a computer-delivered treatment program namely, Self-Help for Alcohol/other drug use and Depression (SHADE), and other available evidence-based multimedia packages from both a clinician and client perspective. This project will endeavour to monitor how and why clinicians integrate SHADE and other multimedia packages into their clinical practice, identify challenges/barriers to multimedia diffusion, and monitor the outcomes associated with the integration of computer-delivered treatment.
If you agree to participate in the study – Initially, you will be asked to participate in a formal focus-group aimed at identifying a number of issues related to the implementation of computer-delivered treatment into clinical practice.

This includes, training/supervision requirements, practical or resource issues involved in implementing and conducting SHADE computer-delivered therapy, as well as current use of other multimedia treatments within the clinical context. Participating clinicians will also be invited to participate in a one-on-one interview with the researcher to collect a range of qualitative data, covering similar issues.

Throughout the implementation trial, participating clinical staff will also be asked to complete a session-by-session checklist summarising the content of their assessment and treatment sessions provided to those clients. This checklist will focus on if, when, and how computer-delivered treatments are utilised during each treatment session for participating clinicians. Completed checklists will be collated by the student researcher and at no time will this form be made available to any of your colleagues or supervisors. Further, all sessional checklist data will be analysed and reported as an aggregate.

At the conclusion of the 6-month implementation phase, clinical staff will also be asked to participate in a follow-up focus-group and one-on-one interview aimed at elucidating their perception and experience of utilising multimedia packages as an adjunct to their clinical interventions, and their preparedness to continue to incorporate these approaches in the future. It is estimated that the focus groups and one-on-one interviews will be of approximately 1-hour duration each.

We would like to ask for your permission to audiotape the focus-group and one-on-one interview sessions you are involved in as part of this project. Audiotapes will be marked with an identification number only, along with the initials of the researchers completing the sessions, and the date of the focus-group or one-on-one interview session. No personal details about you will be associated with the labelling of these audiotapes. All audiotapes will be stored in a locked storage cabinet that is only accessible by the research team. All audio tapes will be erased immediately after a written transcript of the focus-group or one-on-one interview is finalised. Within the written transcript all identifiers will be replaced with a code. Please note that you are under no obligation to consent to the audiotaping of either the focus-group or one-on-one interview sessions. Further, you may participate in the study without having your contribution being audiotaped.

Please take note of item 4 on the Consent Form attached to this information sheet, asks you to specifically consent to the audiotaping of the focus-group and one-on-one interview sessions. You can do this by ticking either “Yes” or “No” at item 4.

If you do agree to have the focus-group and/or one-on-one interview sessions audiotaped, the researcher conducting the interview will give you the opportunity to revise this decision prior to concluding each session. You are also free to stop and edit the audiotape at any time. In addition, at the conclusion of each focus-group and/or one-on-one interview session, you will be given the opportunity to review the audiotape, and make any deletions you feel are necessary. At this time, you are also able to withdraw your consent for audiotaping, either entirely or just for that particular session.

As a clinician you are welcome to participate in any aspect of this project including, the session-by-checklist, focus-group, and/or one-on-one interview sessions, without consenting to participate in this research project. In this case, any information that you provide will not be included into the data utilised as part of this project.

What are your choices? - Participation in this research is entirely voluntary. Only those members of the clinical staff who provide informed consent will be included in the project. Whether or not you decide to participate in the research, your decision will not
disadvantage you in any way. If you do decide to participate, you may withdraw from the project at any time without giving a reason and you have the option of withdrawing all data relating to you. Participants will also be free to withdraw any of their data, without question, at any stage throughout the study period, and up until 2 weeks following their final face-to-face assessment. After this time, all identifying markers will be permanently destroyed leaving unidentifiable data.

What are the risks and benefits of participating? - There are few risks associated with the study. Hopefully this project will expand your clinical repertoire for treating clients with co-existing mental health and drug & alcohol problems. Should you become distressed or have any questions while participating in this study you are encouraged to consult immediately with either your direct supervisor and/or a member of the research team.

Information provided by you for the study will have your name replaced by a code number and will be securely stored in the office of the chief investigator (Dr Kay-Lambkin). Only the researchers listed on this sheet will have access to your information. As Ms Wolfe, Ms Healey and Mr Childs are employees of the NSCCAHS – Area Drug and Alcohol Service, their access to research data will be restricted to aggregate and de-identified data only. Please be assured that none of your colleagues or supervisors will view any information you provide as part of this project, and will not know whether or not you decide to participate in the study. Moreover, all data will be reported as an aggregate.

Information collected in this study may be presented at mental health and drug & alcohol treatment related conferences, and published in professional journals. The students involved in this study (as identified above) will also report summarised, group data as part of their final research report (thesis). Individual Clinicians will not be identified in any reports arising from the project. Feedback about the study will be made available to you at the end of the study if you request it. All data acquired as part of this project will be de-identified and securely stored for a minimum of 15-years. During this time it is possible that this data may be used for further evaluation by the research team.

What do you need to do to participate? - Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or you have questions, please ask your direct supervisor or a member of the research team. If you would like to participate, please complete the attached Consent Form.

Please be assured that all information you provide as part of this project will remain confidential subject to any disclosure requirements established by law and departmental policy.

If you wish, you are free to seek and obtain any advice you may require before agreeing to participate in the study. If you would like to ask any questions that arise during the research study please contact either:

Dr Frances Kay-Lambkin on 4033 5690 or by email at Frances.Kay-Lambkin@newcastle.edu.au

Complaints about the Study

Complaints about the Study

General (ethics related) information about the research study may be obtained from the Deputy Chair of the Northern Sydney Central Coast Health Human Research Ethics Committee, Telephone: 02 9926 8106, Fax: 02 9926 6179.

Should you have any concerns or you are unhappy with the conduct of this trial and do not feel comfortable contacting the research staff, you may contact the Complaints Manager/Patient Representative (Central Coast Health) who is an independent person within the Health Service on 4320 3920. If you do need to contact the Complaints Manager/Patient Representative, please have this form handy so you may readily quote the Protocol Number and Title of the Project to this person.

The ethical aspects of this project have also been approved by:
(a) The University of Newcastle, Human Research Ethics Committee, Approval No. H-2008-0094, and as additional complaints procedures are available to you. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.

(b) Macquarie University Ethics Review Committee (Human Research). If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Research Ethics Officer (telephone [02] 9850 7854, fax [02] 9850 8799, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.
Appendix C:

Clinician Consent Form
Consent Form – Clinician

1. I have read (or have had read to me) and understand all the information describing this study in the attached information sheet. I understand the nature, purpose and possible consequences and that I can leave the study at any time. All my questions have been answered to my satisfaction. I voluntarily consent to participate in this study and acknowledge that I have received a copy of this agreement and information sheet.

2. It has been explained to me that the research project will be carried out according to the principles in the National Statement on Ethical Conduct in Research Involving Humans (1999) and has been approved by both The University of Newcastle - Human Research Ethics Committee and the NSCCH Coast - Human Research Ethics Committee.

3. I consent to undergo and participate in the procedures described in the information sheet as necessary for participation in the research project.

4. I give permission for my contribution in the baseline and follow-up focus-group sessions to be audio taped. I understand that this is only for the purpose of establishing a written transcript of the focus-group. Within the written transcript all identifiers will be replaced with a code. I understand that audiotapes will not contain my name or any other identifying information that links the audiotape to me.

  □ Yes  □ No

5. I give permission for my contribution in the baseline and follow-up one-on-one interview sessions to be audio taped. I understand that this is only for the purpose of establishing a written transcript of these interviews. Within the written transcript all identifiers will be replaced with a code. I understand that audiotapes will not contain my name or any other identifying information that links the audiotape to me.

  □ Yes  □ No

6. I would like a copy of the study’s results sent to me when available

  □ Yes  □ No

7. I give permission for de-identified data I provide as part of my participation in this project to be used by other research students working with the research team at the Centre for Brain & Mental Health Research, University of Newcastle.

  □ Yes  □ No

I have been assured that the answers to the survey questions will remain confidential subject to any disclosure requirements established by law and departmental policy.
Research Project Title: Integrated multimedia psychosocial treatment for co-existing substance use, depression, and anxiety within a stepped care framework: A feasibility pilot study of treatment outcomes.

Participant signature: ________________________________ Age: __________
Date: __________

I have given a verbal explanation of the research project, its procedures and risks and I believe the participant has understood that explanation

Researcher signature: ____________________________________________
Date: __________

Prepared September 1998 - amended March 2005
By the Clinical Drug Trials Sub-Committee
Appendix D:

Human Research Ethics Form
NOTES:

- **When to use this form.**
  For requesting approval for proposed variations to research projects involving humans which have been approved by the University of Newcastle Human Research Ethics Committee (HREC). Students who obtained approval from one of the HREC faculty-based sub-committees which were in operation prior to 31 December 2006, should also use this form.

- **What is a variation.**
  A Variation is any change to the research protocol approved by the HREC. Variations requiring approval may include, but are not limited to, additions to the research plan, or changes to investigators, study population, recruitment of participants, acquisition of human tissue, access to personal records, research instruments, or participant information and consent documentation. Variations must be approved by the HREC before they are implemented.

- **You are expected to have read the National Statement on Ethical Conduct in Human Research and incorporated the ethical principles therein as part of your research plan. The Statement applies to all human research and is not restricted to health research. It is available at http://www.nhmrc.gov.au/publications/synopses/e72syn.htm**

- **Care should be taken in the preparation of the application, ensuring that you answer all questions that are applicable and that the application is professionally presented.**
  - Answers to questions must be:
    - Typed using a font size no smaller than Arial 10pt or Times New Roman 11pt.
    - Expressed in plain English. Prior knowledge should not be assumed. Where it is necessary to use technical terms these must be explained.

    Enter the answer in the space provided – this can be expanded if insufficient although answers should be as concise as possible while at the same time providing the required detail. Do not answer questions with “see attached” or “refer to funding application”.

**Submission:**
Submit the original of the completed application for variation, and attachments as required, to the following. Retain a copy for your files.

**Human Research Ethics Committee**
Research Office
The Chancellery
The University of Newcastle
Callaghan  NSW  2308

**Tel:**  492 18999
**Email:**  human-ethics@newcastle.edu.au
Form HE7:0210

Human Research Ethics Committee

APPLICATION FOR VARIATION
TO APPROVED RESEARCH INVOLVING HUMANS

OFFICE USE ONLY:
Register No:
Date Received:

1 CHIEF INVESTIGATOR or PROJECT SUPERVISOR (at the time of approval)

<table>
<thead>
<tr>
<th>Name: Dr Frances Kay-Lambkin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualifications &amp; position held: B Sc(Psych) Hons PhD</td>
</tr>
<tr>
<td>Organisational unit &amp; mailing address: Centre for Brain and Mental Health Research Level 5, McAuley Centre Calvary Mater Hospital Waratah NSW 2298</td>
</tr>
<tr>
<td>Telephone and Fax: Tel: (02) 4033 5690 Fax: (02) 4033 5692</td>
</tr>
<tr>
<td>Email address: <a href="mailto:Frances.kaylambkin@newcastle.edu.au">Frances.kaylambkin@newcastle.edu.au</a></td>
</tr>
</tbody>
</table>

2 TITLE OF PROJECT (as it appears on the notification of approval)

Integrated multimedia psychosocial treatment for co-existing substance use, depression, and anxiety within a stepped-care framework: A feasibility pilot study of treatment outcomes

3 APPROVAL DETAILS

Please select (X) the ethics committee which granted approval and provide the requested details.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Approval number</th>
<th>Date of approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Newcastle Human Research Ethics Committee</td>
<td>X H-2008-0271</td>
<td>23 Sept 2008</td>
</tr>
<tr>
<td>Arts &amp; Social Science Research Ethics Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business &amp; Law Research Ethics Committee</td>
<td></td>
<td></td>
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<tr>
<td>Education Research Ethics Committee</td>
<td></td>
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<tr>
<td>Engineering &amp; Built Environment Research Ethics Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Research Ethics Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science &amp; Information Technology Research Ethics Committee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4 STUDENT RESEARCH
Has the ethics committee been advised that the research is the project of a student of the University of Newcastle?  
Yes ✗ No

<table>
<thead>
<tr>
<th>Name of student</th>
<th>Uni ID Eg, abc123, c1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If YES:</strong></td>
<td></td>
</tr>
<tr>
<td>Aaron Simpson</td>
<td></td>
</tr>
<tr>
<td>Course of study:</td>
<td>D Psych (Clin)</td>
</tr>
<tr>
<td>Principal supervisor:</td>
<td>Dr Frances Kay-Lambkin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of student</th>
<th>Uni ID Eg, abc123, c1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If YES:</strong></td>
<td></td>
</tr>
<tr>
<td>Samantha Wolfe</td>
<td></td>
</tr>
<tr>
<td>Course of study:</td>
<td>D Psych (Clin)</td>
</tr>
<tr>
<td>Principal supervisor:</td>
<td>Dr Frances Kay-Lambkin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of student</th>
<th>Uni ID Eg, abc123, c1234567</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If YES:</strong></td>
<td></td>
</tr>
<tr>
<td>Alison Healey</td>
<td></td>
</tr>
<tr>
<td>Course of study:</td>
<td>M Psych (Clin)</td>
</tr>
<tr>
<td>Principal supervisor:</td>
<td>Dr Frances Kay-Lambkin</td>
</tr>
</tbody>
</table>

**NOTE:** If adding a student to the project, do NOT enter their details here – see 6.2.

### 5 PROJECT STATUS

Has the project commenced?  
Yes ✗ No

If YES, when did the project commence?  
November 2008

### 6 RESEARCH PERSONNEL

Does the variation involve changes to the research personnel working on the project?  
Yes ✗ No

This might include such instances as the addition of new investigators or research assistants to the research team, removing the names of those who are no longer working on the project, adding a student researcher and his/her project supervisor or perhaps a situation where the project supervisor for a student project is changing.

If YES, go to the next section (6.1)  
If NO, go to Question 7

#### 6.1 Addition of research personnel who are not student researchers (leave blank if not applicable)

**Note:** This includes students employed on the project, eg research assistants, but who are not using the research as part of their studies at the University of Newcastle.

For each new member of the research team please provide the following
6.2 **Addition of a student researcher** *(leave blank if not applicable)*

For each student researcher being added to the project, please provide the following details.

**Note:** If the student’s supervisor is not already recorded as an investigator, ensure they are added by completing section 6.1.

<table>
<thead>
<tr>
<th>Name of student:</th>
<th>Ms Michelle Brooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uni ID eg abc123, c12345678; (if unknown, insert Staff No.)</td>
<td>2001155</td>
</tr>
<tr>
<td>School/Faculty/Campus</td>
<td>Psychology/Science, Information and Technology/Callaghan</td>
</tr>
<tr>
<td>Telephone and Fax:</td>
<td>0401135927</td>
</tr>
<tr>
<td>Email address:</td>
<td><a href="mailto:C2001155@uon.edu.au">C2001155@uon.edu.au</a></td>
</tr>
<tr>
<td>Course of study:</td>
<td>Doctorate of Clinical and Health Psychology</td>
</tr>
<tr>
<td>Principal supervisor:</td>
<td>Dr Frances Kay-Lambkin</td>
</tr>
</tbody>
</table>
| Role on research project: | 1. Obtaining consent-to-contact details from clients of the Cannabis Clinic and MERIT programs of the Northern Sydney Central Coast Drug and Alcohol Service (NSCCDAS). NOTE – as this researcher is also an employee of the Counselling service of the NSCCDAS she will not approach clients of this specific program for participation in the project.  
2. Obtaining de-identified data collected by the paid research staff associated with the project, and analysing this data for reporting in her research thesis. |
6.3 **Deletion of research personnel** *(leave blank if not applicable)*

For each person who is leaving the research team, please provide the following details.

<table>
<thead>
<tr>
<th>Name:</th>
<th>Title / first name / family name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisational unit</td>
<td></td>
</tr>
<tr>
<td>Email address:</td>
<td></td>
</tr>
<tr>
<td>Previous role on research project:</td>
<td></td>
</tr>
<tr>
<td>Reason for leaving project <em>(brief statement)</em></td>
<td></td>
</tr>
</tbody>
</table>

Copy table and repeat for each additional person as required.

7 **DETAILS OF PROPOSED VARIATION**

Using Plain English, provide details of the proposed variation(s) to the research protocol. Where appropriate, present in terms of **from** the existing protocol to **to** the new protocol.

*(Attach an original of any documents that are new or revised as a result of the variation, eg advertisements, participant information sheets, surveys, clinical protocols. For revised documents, highlight changes and update the VERSION # and DATE.)*

1. **Addition of Ms Michelle Brooks to the research team**

   One student researcher is proposed as an addition to the study team; Ms Michelle Brooks. This student will analyse de-identified data collected from the research project for the research component of her degree. The addition of Ms Brooks has been highlighted in the information sheets and consent forms for clinician and client participants in the trial (please see highlighted changes in Attachments 1 and 2).

2. **Addition of assessments to the baseline and follow-up assessment package**

   We propose the addition of one new assessment to the baseline and three-month follow-up assessments for the client participants involved in the trial. This is the Self Compassion Scale (Neff, K. D. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223-250). The scale appears in Attachment 3.

8 **JUSTIFICATION FOR VARIATION**

Why is the variation necessary?

- **Addition of Ms Michelle Brooks to the research team**

  Ms Brooks will assist in ensuring that the study is completed according to the proposed timeline, and that good use is made of the data collected. She is bringing additional research questions to the project, enhancing the potential study outcome and opportunities for communication of study results (e.g. conference presentations, journal publications, research theses).

- **Addition of assessments to the baseline and follow-up assessment package**

  The Self Compassion Scale will take approximately 8 minutes to complete, bringing the total project time for completion of the baseline and follow-up assessments to approximately 45 minutes. As per the original protocol, participants will be offered up to $20 reimbursement for time and effort associated with completing the baseline and follow-up assessments. Self-compassion refers to the ability to hold one’s feelings of suffering with a sense of warmth, connection, and concern, and is
correlated with psychological well being and self-esteem. It is an adaptive way of relating to oneself in times of personal inadequacy and hardship (rather than being harsh and critical), and may be related to the ability to engage in and benefit from treatment. No published research exists that examines self-compassion amongst substance using populations.

9 RESEARCH PARTICIPANTS

Does the variation involve recruiting new participant groups (ie not previously approved), or changing the way in which participants are to be recruited? Yes [ ] No [X]

If YES, provide full details using the following headings:

10 ETHICAL CONSIDERATIONS

What ethical considerations, if any, are raised by the proposed variation? (Refer to the National Statement on Ethical Conduct in Human Research.)

1. Addition of Ms Michelle Brooks to the research team

A conflict of interest exists for Ms Brooks in that she is also an employed clinician of the Northern Sydney Central Coast Drug and Alcohol Service (NSCCDAS). She will potentially have a dual relationship with her own clients of the service who may or may not also be participants in the research trial for which she is seeking to use data for her research theses. We do not wish clients involved with Ms Brooks to be unduly influenced to participate in the trial, nor do we wish to exclude them completely from the opportunity to participate in (and potentially benefit from) the trial. As per other clinicians employed by the NSCCDAS not in a dual relationship with the research team, Ms Brooks will pass on study details to potential participants, and seek to obtain consent for their contact details to be passed onto the research assistant associated with the trial. The research assistant, employed on the trial, will contact the potential participant and offer them the opportunity to participate in the research project. As with all clinicians of the NSCCDAS, Ms Brooks will not know whether their clients are participants in the research trial. Our proposal is that clients involved with Ms Brooks, will be approached by her using the following script: “I need to let you know that, although I am your clinician, I am also involved in this research project, and will be accessing data to analyse for my degree. I don’t want this involvement to make you feel like you have to participate in the research. I won’t know either way whether you have chosen to participate, and we will still work together in the same way regardless of whether you participate in the research. So, today I’m asking for your permission to pass on your contact details to the research team, and to discuss with them the possibility of participating in the study.” Ms Brooks will be excluded from all other data collection phases of the project related to client participation in the study, and will only have access to de-identified data for analysis of her research questions.

Other clinicians of the NSCCDAS may also feel pressurised to participate in the research project by virtue of the involvement of Ms Brooks as student researchers. In an attempt to manage this situation, the following measures will be taken:

- Ms Brooks will be excluded from all clinician-based recruitment for this project;
- Ms Brooks will not participate in any data collection for the duration of this project;
- Ms Brooks’s access to research data will be restricted to aggregate and de-identified data only; and
- Clinician staff will be invited to partake in all forms of data collection irrespective of their participation in this project. All data collected from non-participating clinicians will be anonymously removed from the data subset. For example, non-participating clinicians would be encouraged to submit incomplete (“dummy”) session-by-session checklists in an effort to preserve their anonymity surrounding their choice not to participate in the project.
2. **Addition of assessment to the baseline and follow-up assessment package**

The proposed additional assessment is in the public domain, and has previously been used in mental health research. Details of the Self Compassion Scale is:

Self-Compassion Scale (Neff, 2003): is a 26-item measure using a 5-point Likert-type scale assessing the extent to which a person expresses self-compassion towards themselves in difficult times. Three subscales are derived from responses, and include self-kindness (vs. self-judgement), common humanity (vs. isolation), and mindfulness (vs. over-identification). likelihood of an individual to adopt innovative strategies in their work. Internal consistency for the subscales range from 0.75-0.80, and scores are negatively correlated with depression and anxiety and positively correlated with life satisfaction.

NEW SOURCE OF FUNDING

As part of the Variation, are you seeking to link this ethics approval to a new research grant or other source of funding? Yes No X

<table>
<thead>
<tr>
<th>Funding Body</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding Project Title</td>
<td></td>
</tr>
<tr>
<td>First named investigator</td>
<td></td>
</tr>
<tr>
<td>Administering institution</td>
<td></td>
</tr>
<tr>
<td>Univ of Newcastle Research Office Reference (if applicable)</td>
<td>GO</td>
</tr>
</tbody>
</table>

Copy table and repeat for each new contract / agreement / grant.

12 DECLARATION

In signing this application, I declare that:

1. The research protocol conforms to the *National Statement on Ethical Conduct in Human Research*, 2007, which I have read.

2. The required number of any documents that are new or revised as a result of the variation, are attached, eg advertisements, participant information sheets, consent forms, surveys, clinical protocols.

3. The variation will not be implemented prior to receiving approval from the ethics committee.

4. I make this application on the basis that the information it contains is confidential and will be used by the University of Newcastle for the purposes of ethical review and monitoring of the research project described herein, and to satisfy reporting requirements to regulatory bodies. The information will not be used for any other purpose without my prior consent.

Signature of chief investigator/project supervisor:

*NOTE: This must be the person at Q1*

Date:

Researchers being added to the research team:

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Michelle Brooks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E:

Session Checklist
SESSION CHECKLIST: Please tick the main interventions provided during your session

Client MRN ___________________ Date ___________________ Session No. ___________________

Please indicate what you think your client’s primary drug of concern is:
______________________________

Do you think your client is participating in the SHADE research project?  □ Yes  □ No

Session orientation: (please tick)

□ Initial appointment  □ Non-scheduled client contact
□ Assessment  □ Discharge/final session
□ Scheduled appointment

Intervention type(s): (please tick all that apply)

□ Assessment  □ Family therapy
□ Brief solutions focussed strategies  □ Goal setting: Abstinence / moderation
□ Case management: Crisis management  □ Managing craving / urges
□ Case management: Referrals / general  □ Managing high risk situations
□ Cognitive restructuring activities  □ Managing slips / lapses
□ Communication / drug refusal skills  □ Mindfulness strategies
□ Counselling: Mental health issues (specify):
______________________________  ______________________________
□ Counselling: Relationship / family issues
□ Drug & alcohol education / information / harm minimisation info.
□ Parenting Education
□ Narrative therapy strategies
□ Motivational enhancement
□ Family therapy
□ Other (specify):

Multimedia: (please tick all that apply)
- During the session was computer-delivered intervention used / recommended?  □ Yes  □ No

□ Yes
- IF NO, computer-delivered intervention was not utilised because:
□ Computer-delivered intervention was offered but client declined
□ Not appropriate, because (specify):
□ Other (specify):

- IF YES, was computer-delivered intervention utilised – □ In session  □ Homework  □ Both

□ Both
Type of computer-delivered intervention used –
☐ SHADE (please tick all modules that apply)
☐ My story so far
☐ Rethinking alcohol/other drug use
☐ Getting moving again
☐ Reducing alcohol/other drug use
☐ Taking charge of your thoughts
☐ Allowing and letting things be
☐ Solving problems
☐ Staying well
☐ Review of progress
☐ SHADE handouts/worksheets
☐ SHADE recommended/discussed only
☐ Internet-delivered resource
  (specify): ____________________

Was the client provided with a formal debriefing/discussion on the computer-delivered intervention(s) used?
☐ Yes  ☐ No

Approximately how long did you spend discussing SHADE or internet-delivered resources? (circle)
<10mins 11-20mins 21-30mins
31-40mins 41-50mins 51-60mins
>60mi
Appendix F:

Client information statement
Information Statement – Client

For the Research Project:
Integrated multimedia psychosocial treatment for co-existing substance use, depression, and anxiety within a stepped-care framework: A feasibility pilot study of treatment outcomes.

Researchers: Dr Frances Kay-Lambkin, A/Prof Jenny Bowman, Dr Andrew Baillie, Mr Aaron Simpson, Ms Mary Joy, Ms Alison Healey, Ms Samantha Wolfe, Ms Michelle Brooks and Mr Steve Childs

You are invited to take part in the research project identified above. The research is a part requirement of the degree of Doctorate of Clinical Psychology being undertaken by Mr Aaron Simpson, Ms Michelle Brooks and Ms Samantha Wolfe at the University of Newcastle, a Masters of Psychology (Clinical) at the University of Newcastle undertaken by Ms Alison Healey, and a Masters of Psychology (Clinical) at Macquarie University undertaken by Ms Mary Joy. These students are under the supervision of Dr Frances Kay-Lambkin from the Centre for Brain and Mental Health Research, A/Prof Jenny Bowman from the University of Newcastle and Dr Andrew Baillie at Macquarie University. You are being asked to participate in this study because you have recently commenced assessment and treatment services through the North Sydney Central Coast Area Health Service (NSCCAHS) – Area Drug and Alcohol Service, Central Coast Counselling Team. Mr Steve Childs from the North Sydney Central Coast Area Health Service (NSCCAHS) – Area Drug and Alcohol Service is also a researcher on this project.

Why is this research being done? – Traditionally, both drug & alcohol and mental health treatments have been conducted face-to-face. With the advent of new technology, evidenced-based computer-delivered treatments for mental health and drug & alcohol problems are now also available. The purpose of this project is to investigate people’s experience of combining both computer-delivered treatments with traditional face-to-face treatments for both drug & alcohol and mental health problems.

Even if you are not interested in computers or computer-delivered treatments we would still like you to participate in the study.

If you agree to participate in the study – Consenting participants would still have an assessment with their Drug & Alcohol Counsellor as normal. Consenting participants will be asked to complete an initial assessment with a researcher focusing on a range of topics including, mental health history, drug & alcohol use (past and current), and quality of life. In addition to this, participants will be asked to provide information about their thoughts on computer-delivered treatments for drug & alcohol and/or mental health problems. Participants will also be asked about their access to, and current use of, computers.

For all consenting participants, counselling staff will complete a session-by-session checklist. This checklist will summarise the content of each session participants receive as part of their
treatment through the NSCCAHS – Area Drug and Alcohol Service, Central Coast Counselling Team. This checklist will focus on when and how face-to-face and/or computer-delivered treatments are used during each session you receive.

Three-months after their initial assessment consenting participants will be asked to complete a follow-up assessment measuring their current mental health status and drug & alcohol use. In addition, participants will be asked about their perceptions and experience of computer-delivered treatments for drug & alcohol and mental health problems.

At the completion of both the initial assessment and 3-month follow-up assessments participants will be offered reimbursement for their expenses in completing these assessments. All participants will receive up to $20 as recompense for travel and other costs associated with participating in the study for each of these assessments.

What are your choices? - Participation in this research project is entirely your choice. Only those who give their informed consent will be included in the project. Whether or not you decide to participate, your decision will not disadvantage you in any way and will not effect the treatment you receive from the NSCCAHS – Area Drug and Alcohol Service, Central Coast Counselling Team. If you do decide to participate, you may withdraw from the project at any time without giving a reason and you have the option of withdrawing all data relating to you. Participants will also be free to withdraw any of their data, without question, at any stage throughout the study period, and up until 2 weeks following their final face-to-face assessment. After this time, all identifying markers will be permanently destroyed leaving unidentifiable data.

What are the risks and benefits of participating?- There are few risks associated with the study, but should you become distressed while completing any questionnaires or when using computer-delivered treatment an appointment with your Drug & Alcohol Counsellor can be made available for you. A possible benefit of combining computer-delivered and face-to-face treatments for drug & alcohol and/or mental health problems is that you may gain a better understanding and management of your presenting problems.

Irrespective of your decision to participate in this study or not, all clients receive the same treatment from the NSCCAHS – Area Drug and Alcohol Service, Central Coast Counselling Team.

Information provided by you for the study will have your name replaced by a code number and will be securely stored in the office of the chief investigator. Only the researchers listed on this sheet will have access to your information. As Ms Wolfe, Ms Healey and Mr Childs are an employees of the NSCCAHS – Area Drug and Alcohol Service, their access to research data will be restricted to aggregate and de-identified data only.

Information collected in this study may be presented at mental health and drug & alcohol treatment related conferences, and published in professional journals. The students involved in this project, as identified above, will write up the summarised results in a research report (thesis). Individual participants will not be identified in any reports arising from the project. Feedback about the study will be made available to you at the end of the study if you request it. Study results will not be reported on an individual basis. All data acquired as part of this project will be de-identified and securely stored for a minimum of 15-years. During this time it is possible that this data may be used for further evaluation by the research team.

What do you need to do to participate? - Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or you have questions, ask your Drug & Alcohol Counsellor or a researcher. If you would like to participate, please complete the attached Consent Form.

Please be assured that all information you provide as part of this project will remain confidential subject to any disclosure requirements established by law and departmental policy.
Your Drug & Alcohol Counsellor who explains this information to you will answer any questions you have about the research project and will give you a copy of this Information Statement to take with you. If you wish, you are free to consult with your own nominated treating doctor before agreeing to participate in the study. If you would like to ask any questions that arise during the research study please contact:

Dr Frances Kay-Lambkin on 4033 5690 or by email at Frances.Kay-Lambkin@newcastle.edu.au

Complaints about the Study

General (ethics related) information about the research study may be obtained from the Deputy Chair of the Northern Sydney Central Coast Health Human Research Ethics Committee, Telephone: 02 9926 8106, Fax: 02 9926 6179.

Should you have any concerns or you are unhappy with the conduct of this trial and do not feel comfortable contacting the research staff, you may contact the Complaints Manager/Patient Representative (Central Coast Health) who is an independent person within the Health Service on 4320 3920. If you do need to contact the Complaints Manager/Patient Representative, please have this form handy so you may readily quote the Protocol Number and Title of the Project to this person.

The ethical aspects of this project have also been approved by:

(c) The University of Newcastle, Human Research Ethics Committee, Approval No. H-2008-0271, and as additional complaints procedures are available to you. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.

(d) Macquarie University Ethics Review Committee (Human Research). If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Research Ethics Officer (telephone [02] 9850 7854, fax [02] 9850 8799, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.
Appendix G:

Client Consent Form
Consent Form – Client

1. I have read (or have had read to me) and understand all the information describing this study in the attached information sheet. I understand the nature, purpose and possible consequences and that I can leave the study at any time. All my questions have been answered to my satisfaction. I voluntarily consent to participate in this study and acknowledge that I have received a copy of this agreement and information sheet.

2. It has been explained to me that the research project will be carried out according to the principles in the National Statement on Ethical Conduct in Research Involving Humans (1999) and has been approved by both The University of Newcastle - Human Research Ethics Committee and the NSCCH Coast - Human Research Ethics Committee.

3. I consent to undergo the procedures described in the information sheet as necessary for participation in the research project.

4. I give permission for my contact details and medical record number to be provided by the NSCCH – Area Drug and Alcohol Service, Central Coast Counselling Team, to the research team.

5. I give permission for my clinician to complete a session-by-session checklist outlining the type of intervention(s) namely, face-to-face and/or computer-delivered psychotherapy; I receive each session during this project. I understand that this is only for the purpose of identifying the amount and type of intervention I receive during each session (i.e. face-to-face and/or computer-delivered intervention). Further, I understand that no other personal information will be included in the session checklist.

   ☐ Yes ☐ No

6. I would like a copy of the study’s results sent to me when available

   ☐ Yes ☐ No

7. I give permission for de-identified data I provide as part of my participation in this project to be used by other research students working with the research team at the Centre for Brain & Mental Health Research, University of Newcastle.
☐ Yes □ No

I have been assured that the answers to the survey questions will remain confidential subject to any disclosure requirements established by law and departmental policy.

Research Project Title: Integrated multimedia psychosocial treatment for co-existing substance use, depression, and anxiety within a stepped care framework: A feasibility pilot study of treatment outcomes.

Participant signature: ________________________________ Age: __________

Date: __________

I have given a verbal explanation of the research project, its procedures and risks and I believe the participant has understood that explanation

Researcher signature: ____________________________________________

Date: __________

Prepared September 1998 - amended March 2005
By the Clinical Drug Trials Sub-Committee
Appendix H:

Baseline Questionnaires including the Opiate Treatment Index
Client’s Name:
_________________________________________

Client’s Address:
_________________________________________

Client’s Phone:
_________________________________________

Participant Number: _______

Date of Initial Assessment: ______/_____/______

Interviewer: _______

Location:
_________________________________________

Alternative Contact person: ________________________

Alternative Contact Address_____________________________________

THE SHADE PROJECT – 2010

KEEP THIS PAGE SEPARATE FROM THE PERSON’S COMPLETED ASSESSMENT
Alternative Contact Phone (H/M): __________________________

Relationship to client: ______________________________________

...........................................................

General Practitioner________________________________________

Psychiatrist______________________________________________

Case Manager_____________________________________________
The Shade Project 2010
Interview: Initial
(Final Version – 30/04/2010)

Participant Number: 

Centre for Brain and Mental Health Research, The University of Newcastle

<table>
<thead>
<tr>
<th>Referral Source?</th>
<th>0=Self</th>
<th>10=General Practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1=Community Mental Health</td>
<td>11=Public psychiatric hospital</td>
<td></td>
</tr>
<tr>
<td>2=Media (newspaper/radio/tv)</td>
<td>12=Public psychiatric unit in a public hospital</td>
<td></td>
</tr>
<tr>
<td>3=Centrelink</td>
<td></td>
<td></td>
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<tr>
<td>4=Youth Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5=University Health Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6=Methadone Clinic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7=Probation and Parole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8=Private Psychologist</td>
<td></td>
<td></td>
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<tr>
<td>9=Private Psychiatrist</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99=NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION A: DEMOGRAPHICS

A1. Date of birth

A2. Age (years)

A3. Sex
   1=Male
   2=Female

A4. Country of birth – What country were you born in?
   1=Australia
   2=UK and Ireland
   3=Europe (including former USSR)
   4=Central and South America
   5=NZ, Pacific islands, PNG
   6=South East Asia
   7=Indian subcontinent and other Asia
   8=Middle East
   9=North Africa
   10=Central and Southern Africa
   11=other

A5. Aboriginal / Torres Strait Islander descent
   Are you of Aboriginal or Torres Strait Islander descent?
   0=No
   1=Yes

A7. Present Marital Status
   What is your marital status? Have you been living with a partner for 6 months or more?
   0=Single, never married
   1=Married
   2=Defacto
   3=Separated
   4=Divorced
   5=Widowed
   6=NK

A8. Number of children
   How many living children do you have? (include step-children)
   00=No children

A9. Children living with subject
   How many dependent children under the age of 18 do you have living with you?
   (Include step-children)
   00=No children

A10. Main carer for the children or not
   Have you been the main carer for the children in the last 12 months?
   0=No
   1=Yes
   8=NK
   9=NA

A11. Who do you live with?
   1=Parent(s)
   2=Spouse +/- children
   3=Defacto partner +/- child
   4=Friend(s)
   5=Alone
   6=Children without partner
   7=Relatives
   8=Other (specify _____________)
   9=No fixed address
   10=Institution

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A12. **Accommodation during last month**

*Where have you been living during the last month?*

*How long have you lived there/been homeless?*

Code up to 3 types of accommodation in past month, if applicable

Code number of weeks in each accommodation in last month (01=<1 week)

<table>
<thead>
<tr>
<th>Accommodation #1</th>
<th>N. Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation #2</td>
<td>N. Wks</td>
</tr>
<tr>
<td>Accommodation #3</td>
<td>N. Wks</td>
</tr>
</tbody>
</table>

01= Homeless / NFA  
02= Crisis shelter or rooming house  
03= Hostel  
04= Institution: hospital

<table>
<thead>
<tr>
<th>Accommodation #1</th>
<th>N. Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation #2</td>
<td>N. Wks</td>
</tr>
<tr>
<td>Accommodation #3</td>
<td>N. Wks</td>
</tr>
</tbody>
</table>

05= Institution: nursing home, lodge  
06= Group home  
07= Supported housing  
08= Hotel/rented room  
09= Rented room (public)

010= Rented room (private)

11= Own home  
12= Family home  
88= Other (Specify_________)

99= NA

A13. **Accommodation during the last 12 months** (excluding the past one month already rated)

*Where have you lived for more than a week during the last 12 months?*

*How long have you lived there/been homeless?*

Code up to 3 types of accommodation longest held (if applicable)

Code number of weeks in each type of accommodation during the previous 12 months (01=<1 week)

<table>
<thead>
<tr>
<th>Accommodation #1</th>
<th>N. Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation #2</td>
<td>N. Wks</td>
</tr>
<tr>
<td>Accommodation #3</td>
<td>N. Wks</td>
</tr>
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<td>Accommodation #3</td>
<td>N. Wks</td>
</tr>
</tbody>
</table>

05= Institution: nursing home, lodge  
06= Group home  
07= Supported housing  
08= Hotel/rented room  
09= Rented room (public)

10= Rented room (private)

11= Own home  
12= Family home  
88= Other (Specify_________)

99= NA

A14. **Age at leaving school**

*How old were you when you left school?*

00= Never went to school  
88= Still at school

A15. **Secondary school completion**

*Did you complete the highest year of secondary school available?*

0= No  
1= Yes  
9= NA

A16. **Highest qualification obtained**

*What is the highest qualification you obtained?*

1= Secondary school qual  
2= Nursing qualification  
3= Teaching qualification  
4= Trade cert/apprenticesh  
5= Technician's/adv cert  
6= Certificate other above  
7= Associate diploma  

8= Undergraduate diploma  
9= Bachelor degree  
11= Masters degree/doctorate  
12= Left school, no qualifications  
88= Other  
99= NA
A17. **During the past month, how frequently have you been taking part in any of the following jobs around the home? Would you say frequently, occasionally or not at all?**

0=Not at all  
1=Occasionally  
2=Frequently  
8=NK

Cooking for others.................................................................
Cleaning or washing up...........................................................
Gardening..............................................................................
Shopping for household...........................................................
Having meals together...........................................................
Watching TV program together..............................................
Playing games........................................................................
Doing Chores/Errands.............................................................
Other Activities (specify: _____________________________)..............

A18. **Participation in Household Activities**

Over the past 12 months, have you been unable to do things that your family (or household) would normally expect of you?  
What have you been unable to do?  
Do others not let you do things? Why?  
Is it that you lack interest in it?  
Or have you been unable to do things because of physical/mental health or forgetfulness?

0= No dysfunction; has participated about as much as an average person of same sex/age group would under similar circumstances
1= Obvious dysfunction; household participation significantly reduced, due to lack of interest or incompetence
2= Severe dysfunction; no participation, self-alienated or excluded by others from daily household routine, or disruptive
8= Uncertain or impossible to assess
9= NA; does not share a household

A19. **Availability of Friends**

How many people do you regard as friends?  
Ask the name of friend/s. Only count people outside the family. Some form of contact (face to face or phone conversation) over the last 12 months is required for considering a person a friend.  
How often have you been seeing them over the past month?  
And over the past year?  
What do you do together?

0=None  
1=One  
2=A few  
3=Many  
8=NK  
9=NA
A20. **Perceived Need for Friends**  
*Do you feel that you have as many good friends as you need or would you like to have more?*

0 = Does not need good friends at all  
1 = Needs and would like more friends  
2 = Has as many friends as needed  
88 = NK  
99 = NA

A21. **Overall Socialising during past 12 months**  
*How have you been getting on with other people at work, neighbours, family members during the last 12 months?*

Did you go out to any social activities?  
Did you make any phone calls to friends or other people you knew?  
How much of the time did you spend alone, in your room, or just walking around on your own?  
Did you feel lonely?

Rate overall socialising/isolation over past 12 months – rate isolation on its own merits, regardless of self imposed (e.g. avoidance).  
0 = No dysfunction; has been socialising during the period as much as could be expected of an average person of same sex/age group and social background  
1 = Obvious dysfunction; may regard some people as friends but actual socialising with them is minimal, has been significantly reduced, sporadic participation in any organised activity  
2 = Severe dysfunction; no friends and no organised social activities, extremely restricted social relationships outside the household  
8 = Uncertain or impossible to assess  
9 = NA

A22. **Social Withdrawal during last 12 months**  
*Would you say that over the past 12 months you enjoyed company a lot or preferred to be on your own?*

Did you find it difficult to mix or communicate with people?  
Did you prefer to be left alone?  
About how much of the time did you spend doing things by yourself?  
Would you join in the company of others if encouraged to do so, or would you normally refuse even if asked?  
Did the presence of other people annoy you?

Rate social withdrawal (i.e. isolation which is not imposed by others or by the circumstances, but results mainly from subject’s active avoidance of social contacts).  
0 = No dysfunction; mixes and generally interacts with people as much or more than the average person of the same sex/age group would under similar circumstances  
1 = Obvious dysfunction; maintains a very restricted range of social contacts, generally avoids being with other people, but would mix with people if encouraged or pressured  
2 = Severe dysfunction; marked tendency to self-isolation, not responsive to encouragement, inaccessible, may frequently lock him/herself up or wander aimlessly  
8 = Uncertain or impossible to assess  
9 = NA
A23. Deterioration in Interpersonal Relationships

*If you compare the past 12 months with previous years, do you think that your relations with friends, workmates or other persons may have gotten worse?*

Did this happen because of your health or nervous problems?
Or because you lost interest or motivation?
Or because others have lost interest in maintaining a relationship with you?

0 = No deterioration perceived in the past year compared to previous years
1 = Deterioration perceived mainly attributed to subject’s own health/nervous problems or loss of interest
2 = Deterioration perceived mainly attributed to other people’s loss of interest
3 = Improvement perceived in past year compared to previous years
8 = NK
9 = NA

A24. Intimate Relationships

*During the past 12 months have you had a close female/male friend – someone that you would share your thoughts and feelings with or think of as a best friend, or someone you might rely on for support when you need it? Have you ever had such a special relationship? How often do you see this special friend?*

0 = Not dysfunctional; has close and/or intimate affective relationship during the past 12 months
1 = Obvious dysfunction; has had close friends or intimate relationship in the past but not during the last 12 months
2 = Severe dysfunction; never had close friend or intimate relationship
8 = Uncertain or impossible to assess
9 = NA

A25. Currently Employed

*Do you have a job at present?*

0 = No job at present
1 = Employment outside the home (full time job)
2 = Employment outside the home (part time job)
3 = Household
4 = Studying
5 = Retired
8 = NK
9 = NA

A26. If Unemployed, looking for work (past month)

*At any time in the last 4 weeks have you been looking for full time or part time work?*

0 = No
1 = Yes; looking for a full time job
2 = Yes; looking for a part time job
8 = NK
9 = NA

A27. Participation in rehabilitation or day programme in last 12 months

*When you were not in hospital, have you been involved in a rehabilitation or day program?*

0 = No
1 = Yes
8 = NK
9 = NA

Skip to A30 if 0

A28. Number of weeks in rehabilitation or day program in last 12 months

*How many weeks did you attend rehab/day program at ________________?*

(Range=0-52)
88 = NK
99 = NA
A29. Frequency of attendance of rehab/day program
How many days per week did you attend the rehab/day program at ________?
(Range=0-7)  
88=NK  99=NA

A30. Current Source of Income
What are your main sources of income in the past month? Code up to 3 sources.

Source of current income #1
Source of current income #2
Source of current income #3

1=Wage/salary from employer
2=Own business
3=Family/spouse payment
4=Government pension/cash benefit
5=Maintenance/child support
6=Superannuation/ annuity
7=Workers compensation/ accident or sickness insurance
8=other income (specify _________________)
88=NK
99=NA
A31. **Pension/other benefits**

*Have you received any of the following pensions or benefits in the past month?*

Read out the items below as a checklist. Code up to 3 types of benefit.

Present=past month

Benefit #1

Benefit #2

Benefit #3

1= Age pension   5= Carer’s pension   10= Special benefit
2= Service pension  6= Sole parent’s pension   11= Other (specify______)
3= Disability     7= Sickness allowance/benefit  88= NK
   support/invalid pension  8= New start/job  99= NA
4= Widow’s pension or wife’s pension  9= Unemployed benefit

A32. **Self Care in past month**

*How much effort have you been putting into care for your appearance in the past month? Or keeping yourself healthy and fit?*

Did you make a lot of effort to look neat and tidy, stylish or was this something that was of little importance to you?

Did you think at all about healthy eating or physical exercise?

Would you say that you were able to look after yourself, keep yourself clean, tidy your own room, do your laundry?

Did you let other people do this for you because you were not interested or had no energy?

0= No dysfunction; level of care normal, takes appropriate interest in own appearance and maintains reasonable standards without, or with minimum supervision
1= Obvious dysfunction; self care below average standard, likely to make an unfavourable impression
8= Uncertain or unable to assess
9= NA

A33. **Interests**

*How have you been keeping up with what is happening in the world in the past month?*

Did you watch TV, or keep up with the news in other ways?

Would you say that you have been trying to keep up with the national/international news? Can you give examples?

Did you follow the football teams?

Have you been involved in any particular interests over the past four weeks?

Did you read any books, buy newspapers or magazines? Which ones?

Have you developed any interests or hobbies?

0= No dysfunction; seeks information, talks with people about local and world events, has a ‘world map’ as appropriate to sociocultural context
1= Obvious dysfunction; less than average interest, no special efforts to obtain information, never reads anything, does not listen to radio or watch news on TV
8= Uncertain or unable to assess
9= NA (eg. moderate to severe intellectual handicap)
Now I’m going to ask you some questions about your use of drugs.

Have you ever used any of the following drugs?
When was the last time you used (Drug)?

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>Ever Used</th>
<th>When was the last time you used?</th>
<th>Is this the drug for which you are currently seeking treatment?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1=Yes</td>
<td>2=No</td>
<td>1=Yes</td>
</tr>
<tr>
<td></td>
<td>1=Never</td>
<td>2=More than 6 months ago</td>
<td>2=No</td>
</tr>
<tr>
<td></td>
<td>3=In the past 6 months</td>
<td>4=In the past month</td>
<td>3=In the past 6 months</td>
</tr>
<tr>
<td></td>
<td>5=In the past week</td>
<td>6=In the past few days</td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
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<tr>
<td>Cannabis</td>
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<tr>
<td>Heroin</td>
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<tr>
<td>Other Opiates</td>
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<tr>
<td>Amphetamines</td>
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<tr>
<td>Cocaine</td>
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<tr>
<td>Tranquilisers</td>
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<td>Barbiturates</td>
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<tr>
<td>Hallucinogens</td>
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<tr>
<td>Inhalants</td>
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<tr>
<td>Tobacco</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caffeine</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION C: OTI - Alcohol

1. When was the last time you drank alcohol?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answers 1, 2 or 3, proceed to Cannabis

2. During the past month, how often did you drink alcohol?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answers 0, proceed to Cannabis

3. On what day did you last drink alcohol (in the past month)?
   ______________________

4. How much alcohol did you drink on that day?
   (Ask about all categories. Figures in square brackets are numbers of standard drinks in one unit)

<table>
<thead>
<tr>
<th>Wine</th>
<th>Spirits</th>
<th>Full Strength Beer</th>
<th>Light Beer</th>
<th>Fortified Wine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass (100mL)</td>
<td>30ml nips</td>
<td>Middy (10oz/285mL)</td>
<td>Middy (10oz/285mL)</td>
<td>Port Glass (60mL)</td>
</tr>
<tr>
<td>[1]</td>
<td>[1]</td>
<td>[1]</td>
<td>[0.5]</td>
<td>[1]</td>
</tr>
<tr>
<td>750ml bottles</td>
<td>750ml bottles</td>
<td>Schooner (15oz/425mL)</td>
<td>Schooner (15oz/425mL)</td>
<td>750ml bottles</td>
</tr>
<tr>
<td>[7.5]</td>
<td>[25]</td>
<td>[1.5]</td>
<td>[0.76]</td>
<td>[10]</td>
</tr>
<tr>
<td>Flagon (2 Litres)</td>
<td>UDL (cans)</td>
<td>Can</td>
<td>Can</td>
<td>2 lit. flagons</td>
</tr>
<tr>
<td>[20]</td>
<td>[1.3]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td>[32]</td>
</tr>
<tr>
<td>.lt. casks</td>
<td>750ml bottles (longneck)</td>
<td>Stubby</td>
<td>Stubby</td>
<td></td>
</tr>
<tr>
<td>[10 per litre]</td>
<td>[2.5]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td></td>
</tr>
<tr>
<td>No. of standard drinks</td>
<td>750ml bottles (longneck)</td>
<td>[2]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL NUMBER OF STANDARD DRINKS = ________________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. On which day before that did you drink alcohol? ___________________________
6. And how much alcohol did you drink on that day?

(Ask about all categories. Figures in square brackets are numbers of standard drinks in one unit)

<table>
<thead>
<tr>
<th>Wine</th>
<th>Spirits</th>
<th>Full Strength Beer</th>
<th>Light Beer</th>
<th>Fortified Wine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass (100mL)</td>
<td>30ml nips</td>
<td>Schooner (15oz/425mL)</td>
<td>Schooner (15oz/425mL)</td>
<td>Port Glass (60ml)</td>
</tr>
<tr>
<td>[1]</td>
<td>[1]</td>
<td>[1.5]</td>
<td>[0.75]</td>
<td>[1]</td>
</tr>
<tr>
<td>750ml bottles</td>
<td>750ml bottles</td>
<td>Can</td>
<td>Can</td>
<td>750ml bottles</td>
</tr>
<tr>
<td>[7.5]</td>
<td>[25]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td>[10]</td>
</tr>
<tr>
<td>Flagon (2 Litres)</td>
<td>UDL (cans)</td>
<td>Stubby</td>
<td>Stubby</td>
<td>2 lt. flagons</td>
</tr>
<tr>
<td>[20]</td>
<td>[1.3]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td>[32]</td>
</tr>
<tr>
<td>ft. casks</td>
<td>750ml bottles</td>
<td>750ml bottles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[10 per litre]</td>
<td>(longneck)</td>
<td>(longneck)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of standard drinks</td>
<td>TOTAL NUMBER OF STANDARD DRINKS =</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. And when was the day before that? _____________________________

8. Would this be a typical pattern of drinking?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. If NO, What would be a typical pattern of drinking?

10. \( t_1 = 3 - 5 \) ............................................................

11. \( t_2 = 5 - 7 \) ............................................................

12. \( q_1 = 4 \) ............................................................

13. \( q_2 = 6 \) ............................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION D: OTI - Cannabis

1. When was the last time you used cannabis (marijuana, dope, grass, hash, pot)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1, 2 or 3, proceed to Heroin

2. During the past month, how often did you use cannabis?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answered 0, proceed to Heroin

3. On what day did you last use cannabis (in the past month)?
   ……………………………………………

4. How many joints/bongs/etc. did you have on that day?
   ……………………………………………

5. On which day before that did you use cannabis?
   ……………………………………………

6. And how many joints/bongs/etc. did you have on that day?
   ……………………………………………

7. And when was the day before that?
   ……………………………………………

8. Would this be a typical pattern of cannabis use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of using?
10. \( t_1 = 3 - 5 \) ............................................................................................................

11. \( t_2 = 5 - 7 \) ............................................................................................................

12. \( q_1 = 4 \) ...................................................................................................................

13. \( q_2 = 6 \) ....................................................................................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION E: Drug Use - Heroin

1. When was the last time you used heroin?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Other Opiates

3. During the past month, how often did you use heroin?
   
   Between 6-7 days each week –
   Score 28
   Between 4-5 days each week –
   Score 20
   Between 2-3 days each week -
   Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   If subject answered 0, proceed to Other Opiates

3. On what day did you last use heroin (in the past month)?
   .................................................................

4. How many hits/smokes/snorts/pills/doses/etc. did you have on that day?
   ........................................

5. On which day before that did you use heroin?
   ........................................................................

6. And how many hits/smokes/snorts/etc. did you have on that day?
   .........................................................

7. And when was the day before that?
   ........................................................................

8. Would this be a typical pattern of heroin use?
9. What would be a typical pattern of heroin use?

10. \( t_1 = 3 - 5 \) .................................................................

11. \( t_2 = 5 - 7 \) .................................................................

12. \( q_1 = 4 \) .................................................................

13. \( q_2 = 6 \) .................................................................

14. \( Q = \frac{q_1 + q_1}{t_1 + t_2} \) .................................................................
SECTION F: Drug Use – Other Opiates

1. When was the last time you used other opiates?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1 2 or 3, proceed to Amphetamines

2. During the past month, how often did you use other opiates?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answered 0, proceed to Amphetamines

3. On what day did you last use opiates (in the past month)?

4. How many hits/smokes/etc. did you have on that day (record use occasions)?

5. On which day before that did you use opiates?

6. And how many hits/smokes/etc. did you have on that day (record use occasions)?

7. And when was the day before that?

8. Would this be a typical pattern of opiate use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of opiate use?
10. \( t_1 = 3 - 5 \) .................................................................

11. \( t_2 = 5 - 7 \) .................................................................

12. \( q_1 = 4 \) .................................................................

13. \( q_2 = 6 \) .................................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
1. When was the last time you used amphetamines (speed)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Cocaine

2. During the past month, how often did you use amphetamines?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   If subject answered 0, proceed to Cocaine

3. On what day did you last use amphetamines (in the past month)?

4. How many tablets/snorts/hits/etc. did you have on that day?

5. On which day before that did you use amphetamines?

6. And how many tablets/snorts/hits/etc. did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of amphetamine use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of amphetamine use?

10. \( t_1 = 3 - 5 \)
Q11. \( t_2 = 5 - 7 \)  

12. \( q_1 = 4 \)  

13. \( q_2 = 6 \)  

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION H: Drug Use - Cocaine

1. When was the last time you used cocaine (coke, snow, crack)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1 2 or 3, proceed to Tranquilisers

2. During the past month, how often did you use cocaine?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   If subject answered 0, proceed to Tranquilisers

3. On what day did you last use cocaine (in the past month)?

4. How many hits/smokes/snorts/etc. did you have on that day?

5. On which day before that did you use cocaine?

6. And how many hits/smokes/snorts/etc. did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of cocaine use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of cocaine use?
10. \( t_1 = 3 - 5 \) .................................................................

11. \( t_2 = 5 - 7 \) .................................................................

12. \( q_1 = 4 \) .................................................................

13. \( q_2 = 6 \) .................................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
### SECTION I: Drug Use - Tranquilisers

1. **When was the last time you used Tranquilisers (benzos, serepax, rohypnol, mogadon, valium)?**
   - 1. Never
   - 2. More than 6 months ago
   - 3. In the past 6 months
   - 4. In the past month
   - 5. In the past week
   - 6. In the past few days

If subject answered 1, 2 or 3, proceed to *Barbiturates*

2. **During the past month, how often did you use tranquilisers?**
   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4

If subject answered 0, proceed to *Barbiturates*

3. **On what day did you last use tranquilisers (in the past month)?**

4. **How many pills did you have on that day?**

5. **On which day before that did you use tranquilisers?**

6. **And how many pills did you have on that day?**

7. **And when was the day before that?**

8. **Would this be a typical pattern of tranquiliser use?**
   - 1=Yes
   - 2=No, more than usual
   - 3=No, less than usual

9. **What would be a typical pattern of tranquiliser use?**
10. \( t_1 = S_3 - S_5 \) 

11. \( t_2 = S_5 - S_7 \) 

12. \( q_1 = S_4 \) 

13. \( q_2 = S_6 \) 

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION J: Drug Use - Barbiturates

1. When was the last time you used barbiturates (nembutal, seconal)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1 2 or 3, proceed to Hallucinogens

2. During the past month, how often did you use barbiturates?
   Between 6-7 days each week One day each fortnight – Score 2
   – Score 28
   Between 4-5 days each week Not in the last month – Score 0
   – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4

   If subject answered 0, proceed to Hallucinogens

3. On what day did you last use barbiturates (in the last month)?

4. How many pills did you have on that day?

5. On which day before that did you use barbiturates?

6. And how many pills did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of barbiturates use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of barbiturates use?
10. \[ t_1 = 3 - 5 \] ...........................................................................................................................................

11. \[ t_2 = 5 - 7 \] ...........................................................................................................................................

12. \[ q_1 = 4 \] ...........................................................................................................................................

13. \[ q_2 = 6 \] ...........................................................................................................................................

14. \[ Q = \frac{q_1 + q_2}{t_1 + t_2} \] ...........................................................................................................................................
SECTION K: Drug Use - Hallucinogens

1. When was the last time you used hallucinogens (LSD/ Acid, ecstasy, magic mushrooms)?
   1. Never  
   2. More than 6 months ago  
   3. In the past 6 months  
   4. In the past month  
   5. In the past week  
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Inhalants

2. During the past month, how often did you use hallucinogens?
   
   Between 6-7 days each week – Score 28  
   – Score 28  
   Between 4-5 days each week – Score 20  
   Between 2-3 days each week – Score 12  
   One day each week – Score 4

   If subject answered 0, proceed to Inhalants

3. On what day did you last use hallucinogens (in the last month)?

4. How many tabs/pills/etc. did you have on that day?

5. On which day before that did you use hallucinogens?

6. And how many tabs/pills/etc. did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of hallucinogen use?  
   1=Yes  
   2=No, more than usual  
   3=No, less than usual

9. What would be a typical pattern of hallucinogen use?

10. \[ t_1 = 3 - 5 \]
11. \( t_2 = 5 - 7 \) ……………………………………………………………………………………………

12. \( q_1 = 4 \) ……………………………………………………………………………………………

13. \( q_2 = \) ……………………………………………………………………………………………

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
### SECTION L: Drug Use - Inhalants

1. **When was the last time you used inhalants (amyl/rush, glue, laughing gas, aerosols, petrol)?**
   
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Never</td>
</tr>
<tr>
<td>2.</td>
<td>More than 6 months ago</td>
</tr>
<tr>
<td>3.</td>
<td>In the past 6 months</td>
</tr>
<tr>
<td>4.</td>
<td>In the past month</td>
</tr>
<tr>
<td>5.</td>
<td>In the past week</td>
</tr>
<tr>
<td>6.</td>
<td>In the past few days</td>
</tr>
</tbody>
</table>

   *If subject answered 1 2 or 3, proceed to Tobacco*

2. **During the past month, how often did you used inhalants?**
   
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between 6-7 days each week</td>
<td>28</td>
</tr>
<tr>
<td>Between 4-5 days each week</td>
<td>20</td>
</tr>
<tr>
<td>Between 2-3 days each week</td>
<td>12</td>
</tr>
<tr>
<td>One day each week</td>
<td>4</td>
</tr>
<tr>
<td>One day each fortnight</td>
<td>2</td>
</tr>
<tr>
<td>One day each month</td>
<td>1</td>
</tr>
<tr>
<td>Not in the last month</td>
<td>0</td>
</tr>
</tbody>
</table>

   *If subject answered 0, proceed to Tobacco*

3. **On what day did you last use inhalants (in the last month)?**
   
   ..........................................................

4. **How many sniffs did you have on that day?**
   
   ..........................................................

5. **On which day before that did you use inhalants?**
   
   ..........................................................

6. **And how many sniffs did you have on that day?**
   
   ..........................................................

7. **And when was the day before that?**
   
   ..........................................................

8. **Would this be a typical pattern of inhalant use?**
   
   1 = Yes  
   2 = No, more than usual  
   3 = No, less than usual

9. **What would be a typical pattern of inhalant use?**

10. **t1 = 3 – 5** ...........................................................................................................
11. \[ t_2 = 5 - 7 \]

12. \[ q_1 = 4 \]

13. \[ q_2 = 6 \]

14. \[ Q = \frac{q_1 + q_2}{t_1 + t_2} \]
SECTION M: Drug Use - Tobacco

1. When was the last time you smoked cigarettes? *(Including with cannabis mix)*
   
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   **If subject answered 1 2 or 3, proceed to Next Section**

2. During the past month, how often did you smoke cigarettes?
   
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   **If subject answered 0, proceed to Next Section**
Please note the strength of the cigarettes in milligrams for each occasion of use

3. On what day did you last use tobacco (cigarettes)?

4. How many cigarettes did you have on that day?

5. On which day before that did you smoke cigarettes?

6. And how many cigarettes did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of smoking?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of smoking?

10. t1 = W3 – W5

11. t2 = W5 – W7

12. q1 = W4

13. q2 = W6

14. Q = \( \frac{q1 + q2}{t1 + t2} \)
POLY-DRUG USE

Tick the relevant boxes for substances used in the past month. Add up the total number of boxes ticked to get the poly-drug use score.

<table>
<thead>
<tr>
<th>Alcohol (M14)</th>
<th>Tranquilisers (S14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis (N14)</td>
<td>Barbiturates (T14)</td>
</tr>
<tr>
<td>Heroin (O14)</td>
<td>Hallucinogens (U14)</td>
</tr>
<tr>
<td>Other Opiates (P14)</td>
<td>Inhalants (V14)</td>
</tr>
<tr>
<td>Amphetamines (Q14)</td>
<td>Tobacco (W14)</td>
</tr>
<tr>
<td>Cocaine (R14)</td>
<td></td>
</tr>
</tbody>
</table>

**Poly-Drug Use Score:**

\[ P = L14 + M14 + N14 + O14 + P14 + Q14 + R14 + S14 + T14 + U14 + V14 + W14 \]

=
<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Superior functioning in a wide range of activities, life’s problems never seem to get out of hand, is sought out by others because of his or her many positive qualities.</td>
</tr>
<tr>
<td>91</td>
<td>No Symptoms.</td>
</tr>
<tr>
<td>90</td>
<td>Absent or minimal symptoms (e.g. mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g. an occasional argument with family members).</td>
</tr>
<tr>
<td>81</td>
<td>If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g. difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g. temporarily falling behind in school work).</td>
</tr>
<tr>
<td>80</td>
<td>Some mild symptoms (e.g. depressed mood and mild insomnia) OR some difficulty in social, occupational or school functioning (e.g. occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.</td>
</tr>
<tr>
<td>71</td>
<td>Moderate symptoms (e.g. flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g. few friends, conflicts with peers and co-workers).</td>
</tr>
<tr>
<td>70</td>
<td>Serious symptoms (e.g. suicidal ideation, severe obsessional rituals, frequent shoplifting) OR serious impairment in social, occupational or school functioning (e.g. no friends, unable to keep a job).</td>
</tr>
<tr>
<td>61</td>
<td>Some impairments in reality testing or communication (e.g. speech is at time illogical, obscure or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgement, thinking or mood (e.g. depressed man avoids friends, neglects family, and is unable to keep a job).</td>
</tr>
<tr>
<td>51</td>
<td>Behavior is considerably influenced by delusions OR hallucinations OR serious impairment in communication or judgement (e.g. sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g. stays in bed all day; no job, home, or friends).</td>
</tr>
<tr>
<td>41</td>
<td>Some danger of hurting self or others (e.g. suicide attempts without clear expectations of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g. smears faeces) OR gross impairment in commination (e.g. largely incoherent or mute).</td>
</tr>
<tr>
<td>31</td>
<td>Persistent danger of severely hurting self or others (e.g. recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.</td>
</tr>
<tr>
<td>0</td>
<td>Inadequate information</td>
</tr>
</tbody>
</table>
Appendix I:

15 week Follow-up Questionnaire
Client’s Name: ____________________________________________

Client’s Address: __________________________________________

Client’s Phone: ____________________________________________

Participant Number: ________________________________________

Date of Initial Assessment: ____________________________

Interviewer: ____________________________

Location: ____________________________________________

Alternative Contact person: ____________________________

Alternative Contact Address: ____________________________

Alternative Contact Phone (H/M): ____________________________
Relationship to client:
__________________________________
................................................................
General Practitioner__________________________

Psychiatrist__________________________
Case Manager__________________________
The Shade Project
2010

Interview: 15-week Follow-up
(Final Version – 30/04/2010)

Participant Number: [Redacted]

Centre for Brain and Mental Health Research,
The University of Newcastle
SECTION A: DEMOGRAPHICS

A1. Date of birth

A2. Age (years)

A3. Sex  1=Male  2=Female

A11. Who do you live with?
   1=Parent(s)
   2=Spouse +/- children
   3=Defacto partner +/- children
   4=Friend(s)
   5=Alone
   6=Children without partner
   7=Relatives
   8=Other (specify__________________)
   9=No fixed address
  10=Institution
A12. Accommodation during last month
Where have you been living during the last month?
How long have you lived there/been homeless?
Code up to 3 types of accommodation in past month, if applicable
Code number of weeks in each accommodation in last month (01=<1 week)

<table>
<thead>
<tr>
<th>Code</th>
<th>Accommodation</th>
<th>N. Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Homeless / NFA</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Crisis shelter or rooming house</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Hostel</td>
<td></td>
</tr>
<tr>
<td>04</td>
<td>Institution: hospital</td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>Institution: nursing home, lodge</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>Group home</td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>Supported housing</td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>Hotel/rented room</td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Rented room (public)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Rented room (private)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Own home</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Family home</td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>Other (Specify_________)</td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

A17. During the past month, how frequently have you been taking part in any of the following jobs around the home? Would you say frequently, occasionally or not at all?
0=Not at all
1=Occasionally
2=Frequently
8=NK

- Cooking for others
- Cleaning or washing up
- Gardening
- Shopping for household
- Having meals together
- Watching TV program together
- Playing games
- Doing Chores/Errands
- Other Activities (specify: _________________________)

A25. Currently Employed
Do you have a job at present?
0=No job at present
1=Employment outside the home (full time job)
2=Employment outside the home (part time job)
3=Household
4=Studying
5=Retired
8=NK
9=NA
A26. **If Unemployed, looking for work (past month)**

*At any time in the last 4 weeks have you been looking for full time or part time work?*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>1</td>
<td>Yes; looking for a full time job</td>
</tr>
<tr>
<td>2</td>
<td>Yes; looking for a part time job</td>
</tr>
<tr>
<td>8</td>
<td>NK</td>
</tr>
<tr>
<td>9</td>
<td>NA</td>
</tr>
</tbody>
</table>

A30. **Current Source of Income**

*What are your main sources of income in the past month?* Code up to 3 sources.

1. Source of current income #1
2. Source of current income #2
3. Source of current income #3

1 = Wage/salary from employer

2 = Own business

3 = Family/spouse payment

4 = Government pension/cash benefit

5 = Maintenance/child support

6 = Superannuation/annuity

7 = Workers compensation/accident or sickness insurance

8 = other income (specify _________________)

88 = NK

99 = NA

A31. **Pension/other benefits**

*Have you received any of the following pensions or benefits in the past month?* Read out the items below as a checklist. Code up to 3 types of benefit. Present = past month

1. Benefit #1
2. Benefit #2
3. Benefit #3

1 = Age pension

2 = Service pension

3 = Disability support/invalid pension

4 = Widow’s pension or wife’s pension

5 = Carer’s pension

6 = Sole parent’s pension

7 = Sickness allowance/benefit

8 = New start/job search/mature age

9 = Unemployed benefit

10 = Special benefit

11 = Other (specify___________)

88 = NK

99 = NA
A32. Self Care in past month

_How much effort have you been putting into care for your appearance in the past month? Or keeping yourself healthy and fit?_

_Did you make a lot of effort to look neat and tidy, stylish or was this something that was of little importance to you?_

_Did you think at all about healthy eating or physical exercise? Would you say that you were able to look after yourself, keep yourself clean, tidy your own room, do your laundry? Did you let other people do this for you because you were not interested or had no energy?_


0 = No dysfunction; level of care normal, takes appropriate interest in own appearance and maintains reasonable standards without, or with minimum supervision

1 = Obvious dysfunction; self care below average standard, likely to make an unfavourable impression

8 = Uncertain or unable to assess

9 = NA

A33. Interests

_How have you been keeping up with what is happening in the world in the past month?_

_Did you watch TV, or keep up with the news in other ways? Would you say that you have been trying to keep up with the national/international news? Can you give examples? Did you follow the football teams? Have you been involved in any particular interests over the past four weeks? Did you read any books, buy newspapers or magazines? Which ones? Have you developed any interests or hobbies?_

0 = No dysfunction; seeks information, talks with people about local and world events, has a ‘world map’ as appropriate to sociocultural context

1 = Obvious dysfunction; less than average interest, no special efforts to obtain information, never reads anything, does not listen to radio or watch news on TV

8 = Uncertain or unable to assess

9 = NA (eg. moderate to severe intellectual handicap)
Now I’m going to ask you some questions about your use of drugs.

Have you ever used any of the following drugs?
When was the last time you used (Drug)?

<table>
<thead>
<tr>
<th>Drug Class</th>
<th>When was the last time you used?</th>
<th>Is this the drug for which you are currently seeking treatment?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1=Never 2=More than 6 months ago 3=In the past 6 months</td>
<td>1=Yes 2=No</td>
</tr>
<tr>
<td>Alcohol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heroin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Opiates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphetamines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cocaine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tranquilisers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbiturates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hallucinogens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobacco</td>
<td></td>
<td></td>
</tr>
<tr>
<td>caffeine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION C: OTI - Alcohol

1. When was the last time you drank alcohol?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answers 1, 2 or 3, proceed to Cannabis

2. During the past month, how often did you drink alcohol?
   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4
   - One day each fortnight – Score 2
   - One day each month – Score 1
   - Not in the last month – Score 0

If subject answers 0, proceed to Cannabis

3. On what day did you last drink alcohol (in the past month)?
   ____________________________

4. How much alcohol did you drink on that day?
   (Ask about all categories. Figures in square brackets are numbers of standard drinks in one unit)

<table>
<thead>
<tr>
<th>Wine</th>
<th>Spirits</th>
<th>Full Strength Beer</th>
<th>Light Beer</th>
<th>Fortified Wine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass (100mL)</td>
<td>1 [1]</td>
<td>Middy (10oz/285mL)</td>
<td>Middy (10oz/285mL)</td>
<td>Port Glass (60mL)</td>
</tr>
<tr>
<td>30ml nips</td>
<td>1 [1]</td>
<td>Schooner (15oz/425mL)</td>
<td>Schooner (15oz/425mL)</td>
<td></td>
</tr>
<tr>
<td>750ml bottles</td>
<td>7.5 [5]</td>
<td>Can (1.3)</td>
<td>Can (0.7)</td>
<td>750ml bottles [10]</td>
</tr>
<tr>
<td>750ml bottles</td>
<td>25 [25]</td>
<td>Stubby (1.3)</td>
<td>Stubby (0.7)</td>
<td>2 lt. flagons [32]</td>
</tr>
<tr>
<td>Flagon (2 Litres)</td>
<td>20 [20]</td>
<td>UDL (cans) [1.3]</td>
<td>Stubby (1.3)</td>
<td>750ml bottles (longneck) [2.5]</td>
</tr>
<tr>
<td>[10 per litre]</td>
<td></td>
<td></td>
<td></td>
<td>750ml bottles (longneck) [2]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of standard drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td>750ml bottles (longneck) [2.5]</td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF STANDARD DRINKS = ________________________________

5. On which day before that did you drink alcohol? ________________________________
6. And how much alcohol did you drink on that day?
(Ask about all categories. Figures in square brackets are numbers of standard drinks in one unit)

<table>
<thead>
<tr>
<th>Wine</th>
<th>Spirits</th>
<th>Full Strength Beer</th>
<th>Light Beer</th>
<th>Fortified Wine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Middy (10oz/285mL)</td>
<td>Middy (10oz/285mL)</td>
<td></td>
</tr>
<tr>
<td>Glass (100mL)</td>
<td>30ml nips</td>
<td>Schooner (15oz/425mL)</td>
<td>Schooner (15oz/425mL)</td>
<td>Port Glass (60ml)</td>
</tr>
<tr>
<td>[1]</td>
<td>[1]</td>
<td>[1.5]</td>
<td>[0.75]</td>
<td>[1]</td>
</tr>
<tr>
<td>750ml bottles</td>
<td>750ml bottles</td>
<td>Can</td>
<td>Can</td>
<td>750ml bottles</td>
</tr>
<tr>
<td>[7.5]</td>
<td>[25]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td>[10]</td>
</tr>
<tr>
<td>Flagon (2 Litres)</td>
<td>UDL (cans)</td>
<td>Stubby</td>
<td>Stubby</td>
<td>2 lt. flagons</td>
</tr>
<tr>
<td>[20]</td>
<td>[1.3]</td>
<td>[1.3]</td>
<td>[0.7]</td>
<td>[32]</td>
</tr>
<tr>
<td>[10 per litre]</td>
<td>750ml bottles (longneck)</td>
<td>750ml bottles (longneck)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of standard drinks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF STANDARD DRINKS = ____________________________________________

7. And when was the day before that?
_________________________________________

8. Would this be a typical pattern of drinking?
1=Yes
2=No, more than usual
3=No, less than usual

9. If NO, What would be a typical pattern of drinking?

10. \( t_1 = 3 - 5 \) .................................................................

11. \( t_2 = 5 - 7 \) .................................................................

12. \( q_1 = 4 \) ................................................................

13. \( q_2 = 6 \) ................................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION D: OTI - Cannabis

1. When was the last time you used cannabis (marijuana, dope, grass, hash, pot)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1, 2 or 3, proceed to Heroin

2. During the past month, how often did you use cannabis?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answered 0, proceed to Heroin

3. On what day did you last use cannabis (in the past month)?

4. How many joints/bongs/etc. did you have on that day?

5. On which day before that did you use cannabis?

6. And how many joints/bongs/etc. did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of cannabis use?
   1=Yes
   2=No, more than usual
   3=No, less than usual
9. What would be a typical pattern of using?

10. \( t_1 = 3 - 5 \)

11. \( t_2 = 5 - 7 \)

12. \( q_1 = 4 \)

13. \( q_2 = 6 \)

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION E: Drug Use - Heroin

1. When was the last time you used heroin?
   1. Never
   2. More than 6 months ago
   3. More than 1 year ago
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Other Opiates

2. During the past month, how often did you use heroin?
   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4
   - One day each fortnight – Score 2
   - One day each month – Score 1
   - Not in the last month – Score 0

   If subject answered 0, proceed to Other Opiates

3. On what day did you last use heroin (in the past month)?
   ………………………………………………

4. How many hits/smokes/snorts/pills/doses/etc. did you have on that day?
   ………………………………..

5. On which day before that did you use heroin?
   ………………………………………………………………………..

6. And how many hits/smokes/snorts/etc. did you have on that day?
   ………………………………..

7. And when was the day before that?
   ………………………………………………………………………..

8. Would this be a typical pattern of heroin use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of heroin use?
10. \( t_1 = 3 - 5 \) …………………………………………………………………………………………

11. \( t_2 = 5 - 7 \) …………………………………………………………………………………………

12. \( q_1 = 4 \) …………………………………………………………………………………………

13. \( q_2 = 6 \) …………………………………………………………………………………………

14. \( Q = \frac{q_1 + q_1}{t_1 + t_2} \)
SECTION F: Drug Use – Other Opiates

1. When was the last time you used other opiates?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1 2 or 3, proceed to Amphetamines

2. During the past month, how often did you use other opiates?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   If subject answered 0, proceed to Amphetamines

3. On what day did you last use opiates (in the past month)?

4. How many hits/smokes/etc. did you have on that day (record use occasions)?

5. On which day before that did you use opiates?

6. And how many hits/smokes/etc. did you have on that day (record use occasions)?

7. And when was the day before that?

8. Would this be a typical pattern of opiate use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of opiate use?
10. \[ t_1 = 3 - 5 \] 

11. \[ t_2 = 5 - 7 \] 

12. \[ q_1 = 4 \] 

13. \[ q_2 = 6 \] 

14. \[ Q = \frac{q_1 + q_2}{t_1 + t_2} \]
SECTION G: Drug Use - Amphetamines

1. When was the last time you used amphetamines (speed)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1, 2 or 3, proceed to Cocaine

2. During the past month, how often did you use amphetamines?
   Between 6-7 days each week – Score 28
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answered 0, proceed to Cocaine

3. On what day did you last use amphetamines (in the past month)?

4. How many tablets/snorts/hits/etc. did you have on that day?

5. On which day before that did you use amphetamines?

6. And how many tablets/snorts/hits/etc. did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of amphetamine use?
   1=Yes
   2=No, more than usual
   3=No, less than usual
9. What would be a typical pattern of amphetamine use?

10. \( t_1 = 3 - 5 \) ...........................................................

Q11. \( t_2 = 5 - 7 \) ...........................................................

12. \( q_1 = 4 \) ...........................................................

13. \( q_2 = 6 \) ...........................................................

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION H: Drug Use - Cocaine

1. When was the last time you used cocaine (coke, snow, crack)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1 2 or 3, proceed to Tranquillisers

2. During the past month, how often did you use cocaine?
   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4
   - One day each fortnight – Score 2
   - One day each month – Score 1
   - Not in the last month – Score 0

If subject answered 0, proceed to Tranquillisers

3. On what day did you last use cocaine (in the past month)?
   ..........................................................

4. How many hits/smokes/snorts/etc. did you have on that day?
   ..........................................................

5. On which day before that did you use cocaine?
   ................................................................

6. And how many hits/smokes/snorts/etc. did you have on that day?
   ..........................................................

7. And when was the day before that?
   ................................................................

8. Would this be a typical pattern of cocaine use?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of cocaine use?

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10. \( t_1 = 3 - 5 \) ………………………………………………………………………………………………

11. \( t_2 = 5 - 7 \) ………………………………………………………………………………………………

12. \( q_1 = 4 \) ………………………………………………………………………………………………

13. \( q_2 = 6 \) ………………………………………………………………………………………………

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION I: Drug Use - Tranquilisers

1. When was the last time you used Tranquilisers (benzos, serepax, rohypnol, mogadon, valium)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Barbiturates

2. During the past month, how often did you use tranquilisers?
   Between 6-7 days each week – Score 28
   – Score 20
   Between 4-5 days each week – Score 20
   Between 2-3 days each week – Score 12
   One day each week – Score
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

   If subject answered 0, proceed to Barbiturates

3. On what day did you last use tranquilisers (in the past month)?
   …………………………………………………

4. How many pills did you have on that day?
   …………………………………………………………………………………

5. On which day before that did you use tranquilisers?
   …………………………………………………………………………………

6. And how many pills did you have on that day?
   …………………………………………………………………………………

7. And when was the day before that?
   …………………………………………………………………………………

8. Would this be a typical pattern of tranquiliser use?
   1=Yes
   2=No, more than usual
   3=No, less than usual
9. What would be a typical pattern of tranquilliser use?

10. \( t_1 = S_3 - S_5 \) .................................................................

11. \( t_2 = S_5 - S_7 \) .................................................................

12. \( q_1 = S_4 \) ........................................................................

13. \( q_2 = S_6 \) ........................................................................

14. \[ Q = \frac{q_1 + q_2}{t_1 + t_2} \]
SECTION J: Drug Use - Barbiturates

1. When was the last time you used barbiturates (nembutal, seconal)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1 2 or 3, proceed to Hallucinogens

2. During the past month, how often did you use barbiturates?

   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4
   - Not in the last month – Score 0

   If subject answered 0, proceed to Hallucinogens

3. On what day did you last use barbiturates (in the last month)?

4. How many pills did you have on that day?

5. On which day before that did you use barbiturates?

6. And how many pills did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of barbiturates use?
   1=Yes
   2=No, more than usual
   3=No, less than usual
9. What would be a typical pattern of barbiturates use?

10. \( t_1 = 3 - 5 \) .......................................................... 

11. \( t_2 = 5 - 7 \) .......................................................... 

12. \( q_1 = 4 \) .......................................................... 

13. \( q_2 = 6 \) .......................................................... 

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION K: Drug Use - Hallucinogens

1. When was the last time you used hallucinogens (LSD/ Acid, ecstasy, magic mushrooms)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1, 2 or 3, proceed to Inhalants

2. During the past month, how often did you use hallucinogens?
   - Between 6-7 days each week: Score 28
   - Between 4-5 days each week: Score 20
   - Between 2-3 days each week: Score 12
   - One day each week: Score 4
   - One day each fortnight: Score 2
   - One day each month: Score 1
   - Not in the last month: Score 0

   If subject answered 0, proceed to Inhalants

3. On what day did you last use hallucinogens (in the last month)?
   .............................................................

4. How many tabs/pills/etc. did you have on that day?
   ..................................................................

5. On which day before that did you use hallucinogens?
   ..................................................................

6. And how many tabs/pills/etc. did you have on that day?
   ..................................................................

7. And when was the day before that?
   ..................................................................

8. Would this be a typical pattern of hallucinogen use?
1 = Yes
2 = No, more than usual
3 = No, less than usual

9. What would be a typical pattern of hallucinogen use?

10. \[ t_1 = 3 - 5 \]

11. \[ t_2 = 5 - 7 \]

12. \[ q_1 = 4 \]

13. \[ q_2 = \]

14. \[ Q = \frac{q_1 + q_2}{t_1 + t_2} \]
SECTION L: Drug Use - Inhalants

1. When was the last time you used inhalants (amyl/rush, glue, laughing gas, aerosols, petrol)?
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

If subject answered 1 2 or 3, proceed to Tobacco

2. During the past month, how often did you used inhalants?
   Between 6-7 days each week – Score 28
   – Score 20
   Between 4-5 days each week – Score 20
   – Score 12
   Between 2-3 days each week – Score 12
   One day each week – Score 4
   One day each fortnight – Score 2
   One day each month – Score 1
   Not in the last month – Score 0

If subject answered 0, proceed to Tobacco

3. On what day did you last use inhalants (in the last month)?
   …………………………………………………

4. How many sniffs did you have on that day?
   ………………………………………………………………….

5. On which day before that did you use inhalants?
   ……………………………………………………………

6. And how many sniffs did you have on that day?
   ………………………………………………………………….

7. And when was the day before that?
   ………………………………………………………………………

8. Would this be a typical pattern of inhalant use?
9. What would be a typical pattern of inhalant use?

10. \( t_1 = 3 - 5 \)

11. \( t_2 = 5 - 7 \)

12. \( q_1 = 4 \)

13. \( q_2 = 6 \)

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
SECTION M: Drug Use - Tobacco

1. When was the last time you smoked cigarettes? (Including with cannabis mix)
   1. Never
   2. More than 6 months ago
   3. In the past 6 months
   4. In the past month
   5. In the past week
   6. In the past few days

   If subject answered 1 2 or 3, proceed to Next Section

3. During the past month, how often did you smoke cigarettes?
   - Between 6-7 days each week – Score 28
   - Between 4-5 days each week – Score 20
   - Between 2-3 days each week – Score 12
   - One day each week – Score 4
   - One day each fortnight – Score 2
   - One day each month – Score 1
   - Not in the last month – Score 0

   If subject answered 0, proceed to Next Section
If subject answered 0, proceed to Next Section

Please note the strength of the cigarettes in milligrams for each occasion of use

3. On what day did you last use tobacco (cigarettes)?

4. How many cigarettes did you have on that day?

5. On which day before that did you smoke cigarettes?

6. And how many cigarettes did you have on that day?

7. And when was the day before that?

8. Would this be a typical pattern of smoking?
   1=Yes
   2=No, more than usual
   3=No, less than usual

9. What would be a typical pattern of smoking?

10. \( t_1 = W_3 - W_5 \)

11. \( t_2 = W_5 - W_7 \)

12. \( q_1 = W_4 \)

13. \( q_2 = W_6 \)

14. \( Q = \frac{q_1 + q_2}{t_1 + t_2} \)
**POLY-DRUG USE**

Tick the relevant boxes for substances used in the past month. Add up the total number of boxes ticked to get the poly-drug use score.

<table>
<thead>
<tr>
<th>Alcohol (M14)</th>
<th>Tranquilisers (S14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabis (N14)</td>
<td>Barbiturates (T14)</td>
</tr>
<tr>
<td>Heroin (O14)</td>
<td>Hallucinogens (U14)</td>
</tr>
<tr>
<td>Other Opiates (P14)</td>
<td>Inhalants (V14)</td>
</tr>
<tr>
<td>Amphetamines (Q14)</td>
<td>Tobacco (W14)</td>
</tr>
<tr>
<td>Cocaine (R14)</td>
<td></td>
</tr>
</tbody>
</table>

**Poly-Drug Use Score:**

\[
P = L14 + M14 + N14 + O14 + P14 + Q14 + R14 + S14 + T14 + U14 + V14 + W14
\]
Consider psychological, social and occupational functioning on a hypothetical continuum of mental health—illness. Do not include impairment in functioning due to physical (or environmental) limitations.

100 Superior functioning in a wide range of activities, life’s problems never seem to get out of hand, is sought out by others because of his or her many positive qualities.

91 No Symptoms.

91 Absent or minimal symptoms (e.g. mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g. an occasional argument with family members).

81 If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g. difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g. temporarily falling behind in school work).

71 Some mild symptoms (e.g. depressed mood and mild insomnia) OR some difficulty in social, occupational or school functioning (e.g. occasional truancy, or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.

61 Moderate symptoms ( e.g. flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g. few friends, conflicts with peers and co-workers).

51 Serious symptoms (e.g. suicidal ideation, severe obsessional rituals, frequent shoplifting) OR serious impairment in social, occupational or school functioning (e.g. no friends, unable to keep a job).

41 Some impairments in reality testing or communication (e.g. speech is at time illogical, obscure or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgement, thinking or mood (e.g. depressed man avoids friends, neglects family, and is unable to keep a job).

31 Behavior is considerably influenced by delusions OR hallucinations OR serious impairment in communication or judgement (e.g. sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability to function in almost all areas (e.g. stays in bed all day; no job, home, or friends).

21 Some danger of hurting self or others (e.g. suicide attempts without clear expectations of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene ( e.g. smears faeces) OR gross impairment in commination (e.g. largely incoherent or mute).

11 Persistent danger of severely hurting self or others (e.g. recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

0 Inadequate information
Appendix J:

Depression, Anxiety and Stress Scale
Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0  Did not apply to me at all
1  Applied to me to some degree, or some of the time
2  Applied to me to a considerable degree, or a good part of time
3  Applied to me very much, or most of the time

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found it hard to wind down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>I was aware of dryness of my mouth</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>I couldn't seem to experience any positive feeling at all</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>I experienced breathing difficulty (eg, excessively rapid breathing,</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>breathlessness in the absence of physical exertion)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I found it difficult to work up the initiative to do things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>I tended to over-react to situations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>I experienced trembling (eg, in the hands)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>I felt that I was using a lot of nervous energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>I was worried about situations in which I might panic and make a fool</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>of myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I felt that I had nothing to look forward to</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>I found myself getting agitated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>I found it difficult to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>I felt down-hearted and blue</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>I was intolerant of anything that kept me from getting on with</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>what I was doing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I felt I was close to panic</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>I was unable to become enthusiastic about anything</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>I felt I wasn't worth much as a person</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>I felt that I was rather touchy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>I was aware of the action of my heart in the absence of physical</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>exertion (eg, sense of heart rate increase, heart missing a beat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I felt scared without any good reason</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>I felt that life was meaningless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix K:

Self-Compassion Scale
HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost never | Almost always
1 | 2 | 3 | 4 | 5

_____ 1. I’m disapproving and judgmental about my own flaws and inadequacies.
_____ 2. When I’m feeling down I tend to obsess and fixate on everything that’s wrong.
_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
_____ 5. I try to be loving towards myself when I’m feeling emotional pain.
_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.
_____ 7. When I’m down and out, I remind myself that there are lots of other people in the world feeling like I am.
_____ 8. When times are really difficult, I tend to be tough on myself.
_____ 9. When something upsets me I try to keep my emotions in balance.
_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
_____ 11. I’m intolerant and impatient towards those aspects of my personality I don't like.
_____ 12. When I’m going through a very hard time, I give myself the caring and tenderness I need.
_____ 13. When I’m feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.

15. I try to see my failings as part of the human condition.

16. When I see aspects of myself that I don’t like, I get down on myself.

17. When I fail at something important to me I try to keep things in perspective.

18. When I’m really struggling, I tend to feel like other people must be having an easier time of it.

19. I’m kind to myself when I’m experiencing suffering.

20. When something upsets me I get carried away with my feelings.

21. I can be a bit cold-hearted towards myself when I’m experiencing suffering.

22. When I’m feeling down I try to approach my feelings with curiosity and openness.

23. I’m tolerant of my own flaws and inadequacies.

24. When something painful happens I tend to blow the incident out of proportion.

25. When I fail at something that’s important to me, I tend to feel alone in my failure.

26. I try to be understanding and patient towards those aspects of my personality I don’t like.

**Coding Key:**
Self-Kindness Items: 5, 12, 19, 23, 26
Self-Judgment Items: 1, 8, 11, 16, 21
Common Humanity Items: 3, 7, 10, 15
Isolation Items: 4, 13, 18, 25
Mindfulness Items: 9, 14, 17, 22
Over-identified Items: 2, 6, 20, 24

Subscale scores are computed by calculating the mean of subscale item responses. To compute a total self-compassion score, reverse score the negative subscale items - self-judgment, isolation, and over-identification - then compute a total mean.
Appendix L:

Depression, Anxiety, Stress and Gender
Table 3. The relationship between depression, anxiety, stress and gender.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
<th>ANOVA</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>17.095</td>
<td>12.075</td>
<td>$F(1,76)=.083$</td>
<td>.774</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>19.943</td>
<td>13.715</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>Male</td>
<td>9.905</td>
<td>10.264</td>
<td>$F(1,76)=.381$</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>11.371</td>
<td>10.536</td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>Male</td>
<td>20.762</td>
<td>9.926</td>
<td>$F(1,76)=.141$</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>21.731</td>
<td>12.725</td>
<td></td>
</tr>
</tbody>
</table>

The results indicated that females were slightly more stressed, more anxious and reported higher levels of depression than males at baseline. However, the difference between males and females was not found to be significant.
Appendix M:

Self-Compassion Subscales and Gender
Table 4. The relationship between the scales of self-compassion and gender.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
<th>ANOVA</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>2.133</td>
<td>.845</td>
<td>F(1,76)=.092</td>
<td>.763</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.074</td>
<td>.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.107</td>
<td>.848</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Kindness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.233</td>
<td>1.004</td>
<td>F(1,76)=2.297</td>
<td>.134</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.581</td>
<td>1.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.392</td>
<td>1.012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Judgement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.566</td>
<td>1.010</td>
<td>F(1,76)=.131</td>
<td>.718</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.486</td>
<td>.903</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.530</td>
<td>.957</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Humanity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.14</td>
<td>1.279</td>
<td>F(1,76)=.327</td>
<td>.569</td>
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<td></td>
<td>Female</td>
<td>3.371</td>
<td>1.099</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.286</td>
<td>1.195</td>
<td></td>
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</tr>
<tr>
<td>Mindfulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.685</td>
<td>1.012</td>
<td>F(1,76)=.831</td>
<td>.365</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.493</td>
<td>.792</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.597</td>
<td>.918</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over Identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>3.256</td>
<td>1.116</td>
<td>F(1,76)=2.967</td>
<td>.089</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.684</td>
<td>1.050</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.451</td>
<td>1.101</td>
<td></td>
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</tr>
<tr>
<td>Grand Average</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.613</td>
<td>.589</td>
<td>F(1,76)=.412</td>
<td>.523</td>
</tr>
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<td></td>
<td>Female</td>
<td>2.919</td>
<td>3.022</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.752</td>
<td>2.072</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results indicated that females were higher in over-identification, isolation, self-judgment and overall self-compassion than males. Males were higher in self-kindness, common humanity and mindfulness. Taken together, it appears that females score lower on the positive subscales of self-compassion and high on the negative subscales thought their overall self-compassion was higher. However, there was not a significant difference between the results for self-compassion and sub-scales for males and females.
Appendix N:

Depression, Anxiety, Stress, Self-Compassion and Alcohol Use
Table 5. Correlations showing change scores between depression, anxiety, stress, self-compassion and alcohol use.

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Kindness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>.423**</td>
<td>.536**</td>
<td>.322*</td>
</tr>
<tr>
<td>Significance</td>
<td>.002</td>
<td>.000</td>
<td>.022</td>
</tr>
<tr>
<td>Self-Judgement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation</td>
<td>.405**</td>
<td>.335*</td>
<td>.386**</td>
</tr>
<tr>
<td>Significance</td>
<td>.003</td>
<td>.016</td>
<td>.005</td>
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The relationship between depression, anxiety, stress, alcohol use and self-compassion was examined and the results indicated that depression, anxiety and stress were all significantly positively correlated. Additionally, Self-kindness, Self-judgement and Isolation were all significantly positively related to Depression, Anxiety and Stress. Mindfulness was found to be significantly positively correlated to Depression and Anxiety. Anxiety was found to be significantly correlated to common humanity. The results also indicated that there was a negative relationship between overall self-compassion, depression, anxiety and stress.
Appendix O:

Change in Self-Compassion from Baseline to 15 Week Follow-up
Table 6. Correlations showing the association between the change for self-compassion from baseline to 15 week follow-up.

<table>
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<th></th>
<th>Self-kindness</th>
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<th>Common Humanity</th>
<th>Mindfulness</th>
<th>Isolation</th>
<th>Grand Average</th>
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<td>.208</td>
<td>.623**</td>
<td>.560**</td>
<td>.389**</td>
<td>.325*</td>
</tr>
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<td>.144</td>
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<td>.000</td>
<td>.005</td>
<td>.020</td>
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<td>.533**</td>
<td>.159</td>
<td>.075</td>
<td>.519**</td>
<td>-.635**</td>
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<td></td>
<td>.000</td>
<td>.266</td>
<td>.600</td>
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<tr>
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<td>.122</td>
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<td>.727**</td>
<td>-.718**</td>
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<td>.159</td>
<td>.122</td>
<td>1</td>
<td>.548**</td>
<td>.304*</td>
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<td>.007</td>
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<td>.075</td>
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<td>.548**</td>
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<td>.304*</td>
<td>.433**</td>
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<tr>
<td>Isolation Correlation</td>
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<td>.519**</td>
<td>.727**</td>
<td>.304*</td>
<td>.304*</td>
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<td>.000</td>
<td>.000</td>
<td>.030</td>
<td>.030</td>
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<tr>
<td>Grand Average Correlation</td>
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<td>-.718**</td>
<td>.375**</td>
<td>.433**</td>
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<td>Alcohol Use Correlation</td>
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<td>.263</td>
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<td>.062</td>
<td>.162</td>
<td>.062</td>
<td>.000</td>
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</table>

This information is reported and discussed in this thesis but the table was not used in the submitted journal article.
Appendix P:

Depression, anxiety, stress, Self-Compassion and Poly Drug Use
Table 7: The effect of poly drug use (1=3 or more drugs used, 2=2 or fewer drugs used) on depression, anxiety, stress and self-compassion.

<table>
<thead>
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<th>Drug Use</th>
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<th>ANOVA</th>
<th>Sig.</th>
</tr>
</thead>
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<td>Depressi</td>
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<td>17.333</td>
<td>12.029</td>
<td>F(1,72)=.002</td>
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<tr>
<td></td>
<td>2</td>
<td>17.473</td>
<td>13.166</td>
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<tr>
<td></td>
<td>Total</td>
<td>17.405</td>
<td>12.540</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
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<td>11.000</td>
<td>11.774</td>
<td>F(1,72)=.066</td>
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<tr>
<td></td>
<td>2</td>
<td>10.368</td>
<td>9.240</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10.676</td>
<td>10.480</td>
<td></td>
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<td>F(1,72)=.381</td>
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<tr>
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<tr>
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<tr>
<td>Self-Judgement</td>
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<td>.973</td>
<td>F(1,72)=.390</td>
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<tr>
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<td>2</td>
<td>3.460</td>
<td>1.063</td>
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<tr>
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<td>Total</td>
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<tr>
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<td>1.000</td>
<td>F(1,72)=1.200</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.658</td>
<td>.949</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.548</td>
<td>.976</td>
<td></td>
</tr>
<tr>
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<td>3.326</td>
<td>1.265</td>
<td>F(1,72)=.060</td>
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<tr>
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<td>1.185</td>
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<td>Total</td>
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<tr>
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<td>0.949</td>
<td>F(1,72)=.774</td>
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<tr>
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<td>2</td>
<td>2.711</td>
<td>.905</td>
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<td>Total</td>
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<td>.926</td>
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<td>2.971</td>
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<td></td>
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</table>
As can be seen in the above output, the data was separated into those participants who used two or less substances and those who used three or more substances. Due to limitation with the word count in this report the use of other drugs or multiple drug use was analysed but not discussed in detail. However, the results from these analyses indicate that there was not a significant difference between the stress, anxiety, grand average of self-compassion, self-kindness, self-judgement, over identification, common humanity, mindfulness and isolation.
Appendix Q:

DASS, Self-compassion and alcohol use (mindfulness vs. no mindfulness)
<table>
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<tr>
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<td>12.341</td>
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<td></td>
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<tr>
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<td>F(1,73)=5.057</td>
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<tr>
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<td>Number of substances used in the past month</td>
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<tr>
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<td>Total</td>
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<td>Mindfulness</td>
<td>20.719</td>
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<td>Total</td>
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<tr>
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<td>Total</td>
<td>F(1,76)</td>
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<td>.229</td>
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As can be seen in the above output, the baseline scores for depression, anxiety, stress, age and the components of self-compassion for those participants who received mindfulness intervention were compared to those who did not received mindfulness intervention. However, the results from these analyses indicate that there was not a significant difference between the age, age left school, number of substances used the past month, depression, stress, anxiety, grand average of self-compassion, self-kindness, over identification, common humanity, mindfulness and isolation. There was a significant difference for self-judgement which has been discussed previously.
Appendix R:

Information about the sample and clinicians
Alcohol abuse or dependence was not measured by the study team and thus cannot be reported here. All study participants, in order to be eligible for treatment at the Drug and Alcohol Clinical Service, had to meet criteria for alcohol dependence. In the thesis, participants have now been only described as meeting the criteria for alcohol dependence disorder rather than alcohol abuse. This was an error in reporting the participant characteristics.

Participants referred to the research project came via one of three treatment services. These included the Counselling team (65% of participants), the Cannabis Clinic (27%) and the MERIT team (8%).

At baseline, participants reported using a number of substances. Thirty-five percent of the sample reported using three substances, representing the modal number of substances used in the month prior to baseline. Nineteen percent were using only one substance, and 29% were using two. Eleven percent of the sample were using four substance concurrently at baseline, and 3% were using five or more.

Participants were involved in the study for a period of 15 weeks, but they may have been involved with the Drug and Alcohol Clinical Service for a longer or shorter period of time. During their 15-week involvement with the research team, participants received between 1 and 10 treatment sessions. Fifty-six percent of the sample received one session only, with 16% receiving two sessions over the 15-week study period. Seven percent of participants received four, five or ten sessions.
Appendix S:

Depression, Anxiety, Stress, Self-compassion and Follow-up
Table 9. Follow-up information – Age, DASS, Self-compassion and Drug use

<table>
<thead>
<tr>
<th>Follow up</th>
<th>Mean</th>
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<th>ANOVA</th>
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<td>F(1,76)=.253</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>13.214</td>
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<tr>
<td>Total</td>
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<td>12.341</td>
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<td></td>
</tr>
<tr>
<td>Age left school</td>
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<td>F(1,73)=.42</td>
<td>.838</td>
</tr>
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<td>13.783</td>
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<td>Total</td>
<td>17.481</td>
<td>12.767</td>
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<tr>
<td>Anxiety</td>
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<td></td>
<td>F(1,76)=3.865</td>
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<td>7.385</td>
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<td>12.196</td>
<td>11.259</td>
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<td>Total</td>
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<td>10.346</td>
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<td>Stress</td>
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<td>-------</td>
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<td><strong>Over-</strong></td>
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<td>3.477</td>
<td>.596</td>
<td>2.072</td>
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As can be seen in the above output, the scores for depression, anxiety, stress, age and the components of self-compassion for those participants who provided 15-week follow-up information were compared to those who did not provide follow-up data. However, the results from these analyses indicate that there was not a significant difference between the age, age left school, number of substances used the past month, depression, stress, anxiety, grand average of self-compassion, self-judgement, over identification, common humanity and isolation. There was a significant difference for self-kindness, mindfulness which has been discussed previously in this thesis.
Appendix T:

Psychometric Properties of the Self-Compassion Scale
There are six factors that comprise the self-compassion scale - Self-kindness, Self-judgment, Common Humanity, Isolation, Mindfulness and Over-Identification. In the Self-Kindness verses Self-Judgement subscale there are five items that load onto each factor. Internal consistency reliability was .78 for the Self-Kindness subscale and .77 for the Self-Judgment subscale. In the Common Humanity versus Isolation there are four items for each factor. Internal consistency reliability was .80 for the Common Humanity subscale and .79 for the Isolation subscale. In the Mindfulness versus Over-Identification there are four items that load onto each factor. Internal consistency reliability was .75 for the Mindfulness subscale and .81 for the Over-identification subscale. Internal consistency for the final six factor model which made up the 26-item Self-Compassion Scale was .92.

The Self-Compassion Scale was found to have a significant negative correlation with the Speilberger Trait Anxiety and the Beck Depression Inventory. The Self-compassion Scale was found to have a significant positive correlation with the Life Satisfaction Scale. In terms of sex differences, females were found to have a significantly lower overall self-compassion score than males.