2013

Culture in treatment for Aboriginal Australian men in New South Wales residential drug and alcohol rehabilitation services

Stacey L. Berry

University of Wollongong

Recommended Citation
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School of Psychology

Culture in treatment for Aboriginal Australian men in New South Wales residential drug and alcohol rehabilitation services

Stacey L. Berry

This thesis is presented as part of the requirements for the award of the Degree of Doctor of Psychology (Clinical) of the University of Wollongong

March 2013
ABSTRACT

Aboriginal people are one of the populations most in need of mental health and drug and alcohol services within Australia, although it has been questioned whether treatment programs are adequately sensitive to and inclusive of relevant aspects of Aboriginal culture. The primary objectives of the research were to investigate 1) which cultural activities were offered in residential drug and alcohol rehabilitation programs for Aboriginal Australian men, 2) the benefits associated with these cultural activities from the perspectives of service providers and service users, and 3) whether cultural engagement predicted outcomes.

Study 1 assessed the feasibility of collecting outcome data from a residential drug and alcohol rehabilitation program, and the usability of a recently developed Aboriginal-specific measure of empowerment, the Growth and Empowerment Measure (GEM: Haswell et al., 2010). Study 1 also explored consumer perceptions of the helpfulness of cultural activities within the treatment program. Participants were 57 Aboriginal and 46 non-Aboriginal males attending one residential drug and alcohol rehabilitation service in New South Wales (NSW), Australia. Results from Study 1 identified the need for more specific measures of cultural engagement (Study 2) and informed the design of Study 3.

Study 2 examined the views of service providers regarding the cultural activities offered within treatment programs for Aboriginal Australians. Participants were the managers of five residential drug and alcohol rehabilitation services in NSW. Study 2 also describes the development and content validation of a measure of cultural engagement for use with Aboriginal Australians, the Aboriginal Cultural Engagement Survey (ACES: Berry, Crowe, & Deane, 2012). Development involved the participation of the Aboriginal community in four phases, and results demonstrate excellent content validity both at the item level (all items above .80) and full scale level (.98).

Study 3 assessed the outcomes of empowerment and mental health for Aboriginal males attending residential drug and alcohol rehabilitation services. The association between outcomes and cultural engagement, both in everyday life and while in drug and alcohol treatment, were also investigated. Study 3 examined the preferences of service users regarding the cultural activities offered in treatment
programs, including their perceived relevance and helpfulness. Participants were 101 Australian Aboriginal male clients attending five residential drug and alcohol rehabilitation services in NSW. Results of hierarchical multiple regression analysis indicate that cultural engagement in everyday life significantly predicted empowerment but not other measures of mental health. Cultural engagement undertaken within treatment programs was not associated with empowerment or mental health. Potential explanations for the differential effects of cultural engagement are considered. The opinions of service users are presented, including the desire for treatment programs to provide more education regarding history/heritage and more time on Country. Recommendations are made regarding ways to enhance the effectiveness of cultural activities within drug and alcohol rehabilitation programs.
ACKNOWLEDGEMENTS

I acknowledge the significant contribution made to this research by the Aboriginal community in New South Wales. The Aboriginal community on the South Coast, especially the Elders who offered their participation, must be thanked for their willingness to discuss their histories and personal experiences for the purpose of research. Staff employed with the Aboriginal Medical Service (AMS), the Aboriginal Health and Medical Research Council (AH&MRC), Circle Sentencing and the University of Wollongong all made significant contributions in the roles of consultants and mentors, and in facilitating access to community members. It is acknowledged that Aboriginal Australians are among the most researched populations worldwide, and so the availability and generosity shown by the Aboriginal community in supporting this research is something for which I am sincerely grateful.

The five managers of the services involved in the research were pivotal in gaining access to participants, as well as a wealth of knowledge and expertise in the area of drug and alcohol treatment for Aboriginal Australians. I am especially grateful for the sustained personal contribution made by each of these individuals throughout several stages of the research. The NSW Health Drug and Alcohol Research Program contributed funds which enabled an Aboriginal male research assistant to conduct the client interviews. It was expected that there be potential difficulties related to culture and gender if male Aboriginal participants were interviewed by a female non-Aboriginal researcher, and therefore the decision to hire research assistants was intended to maximise the accuracy of the research findings. I thank my research assistants Justin Cain-Bloxsome and Stephen Mitchell who travelled around NSW to conduct interviews. They worked hard to promote the research and most importantly to accurately capture the thoughts and opinions of the research participants. Finally, I am deeply grateful to my research supervisors, Dr. Trevor Crowe and Prof. Frank Deane. They have made themselves available whenever necessary to guide me through this process, while empowering me to take the lead. Thank you for your support and patience, and for the learning opportunities you have provided for me.
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OUTPUTS FROM THE RESEARCH


1 INTRODUCTION

1.1 Overview

The health of Aboriginal Australians is described, with a focus on drug and alcohol use and mental health. A brief discussion of coexisting disorders and interventions is included. Traditional and contemporary definitions of recovery are compared, and the focus of the present research on outcomes of mental health and empowerment is noted. Self-determination theory and the cultural deficit model are presented as avenues for explaining Aboriginal disadvantage in Australia. The relationship between self-determination theory and empowerment is also explored. Existing interventions for drug and alcohol use in Aboriginal populations are described, along with difficulties in client engagement and prior recommendations for improvements.

The importance of culture and spirituality for Aboriginal Australians is presented. An illustration of Aboriginal cultural engagement in contemporary Australia follows, and a theoretical link between cultural engagement and positive wellbeing is offered in the context of self-determination theory. Research into therapeutic interventions within Australia and abroad which incorporate Aboriginal culture are presented, along with a critique of the existing research investigating outcomes associated with cultural engagement for Aboriginal Australians. Existing tools for measurement of cultural engagement are described. It is argued that there is a need to more directly measure cultural engagement for Aboriginal Australians, and to investigate the associated health outcomes.

1.2 The health of Aboriginal Australians

There is often tension surrounding the use of different terms to represent the native people of Australia, and therefore it is necessary to explain the language used throughout this research thesis. The terms Aboriginal and Torres Strait Islander refer to many peoples and language groups who were living in Australia prior to European settlement. The term Aboriginal is used throughout this research thesis to represent both Aboriginal and Torres Strait Islander people, and is used rather than the term Indigenous due to a preference expressed by the majority of individuals and services involved in the research. The author acknowledges that many Aboriginal Australians prefer to be referred to by their language group, such as Koori, Bundjalung, Yuin, or
Kamilaroi. However, due to the inclusion of many individuals and services from a large variety of language groups in the present research, it has been necessary to use the collective term Aboriginal for ease of presentation and communication. Although all Aboriginal language groups and individuals have their own unique history, the information shared and investigated in this research is intended to be as representative as possible of Aboriginal Australian people.

Since colonisation Aboriginal Australians have experienced extreme levels of loss, grief, disempowerment, cultural alienation, and loss of identity (Hunter, 1993). This has had a devastating impact on their physical and mental health, and as a result the health status of Aboriginal Australians is far below that of the average Australian. This is evident through extremely poor physical health profiles, as well as higher prevalence rates of suicide, domestic violence, drug and alcohol use, and unemployment (Cleworth, Smith, & Sealey, 2006).

1.2.1 Drug and alcohol use in Aboriginal populations

Concern over the use of alcohol and other drugs by Australian Aboriginal people is expressed by Aboriginal and non- Aboriginal people alike (Langton, 1991). High-risk alcohol consumption was reported in 15% of Aboriginal people over 15 years of age in 2002 (Australian Bureau of Statistics, 2002). Binge drinking and episodic heavy drinking are common among Aboriginal drinkers (Lake, 1989; Perkins et al., 1994). The Department of Health and Ageing (2007) reports that between the years 2000 and 2004 Aboriginal men and Aboriginal women died from alcohol-related causes, and at a rate seven times higher and ten times higher than their non-Aboriginal counterparts respectively. Among Aboriginal males suicide has been found to be the most common cause of alcohol-related deaths, and among Aboriginal females, the fourth most common cause (Chikritzhs, Pascal, & Gray, 2007). Over the past two decades studies have shown that Aboriginal Australians are much more likely than non- Aboriginal Australians to suffer from conditions related to drug and alcohol use, such as alcoholic liver cirrhosis, haemorrhagic stroke, assault injury, road traffic injury, and suicide (Wilkes, Gray, Saggers, Casey, & Stearne, 2010). Research indicates that there are proportionately more Aboriginal than non- Aboriginal people who refrain from drinking (Perkins et al., 1994). It has been suggested that a reason for the higher rate of abstinence among Aboriginal people is that more Aboriginal people are ex-drinkers, many of whom have given up
because of serious health concerns (Commonwealth Department of Human Services and Health, 1996).

Alcohol is not the only substance which is being misused in Aboriginal communities. There have been devastating effects of petrol-sniffing among adolescent males in the remote areas of Central Australia, and this has been expressed as a significant source of shame and distress for many Aboriginal communities (Sheldon, 2001). Brady (2002) discusses the changing face of drug and alcohol use within the Aboriginal population, stating that between 1992 and 2002 the use of drugs other than alcohol was on the increase. These drugs include opiates, cannabis, amphetamines, injecting drugs, and polydrug use (Brady, 2002). Between 1994 and 2004, among the Aboriginal population there were increases in the number of users of alcohol (15%), cannabis (5%), amphetamines (204%), painkillers and analgesics (107%), and injected drugs (50%). During the same period the numbers of users of tobacco, alcohol, cannabis, and injecting drugs within the non-Aboriginal population decreased (Australian Institute of Health and Welfare, 2005, 2006; Commonwealth Department of Human Services and Health, 1996). Therefore, there is an increasing trend for drug and alcohol services to provide services for Aboriginal clients, and to focus therapeutic interventions on drug and alcohol use rather than alcohol use alone.

Previous research has considered the role of drug of choice on outcomes for clients of residential rehabilitation services (Hambley, Arbour, & Sivagnanasundaram, 2010). Results indicate variability in outcomes for participants who used different types of drugs, with users of cocaine plus other substances (i.e. polydrug users) having the lowest rates of post-treatment reduction in drug use. Considering the potential variability in outcomes depending on individuals’ drug of choice, the primary drug of choice of participants is of interest in the present research.

1.2.2 Mental health in Aboriginal populations

The mental health of many Aboriginal Australians is poor, and research has consistently shown that this is largely influenced by the effects of colonisation (Australian Institute of Health and Welfare, 2002, 2003; Human Rights and Equal Opportunity Commission, 1997; Parker, 2010; Swan & Raphael, 1995). The Human Rights and Equal Opportunity Commission (1997) found that following removal
from their families, Aboriginal Australians suffered significant loss (of identity, culture, family, and community), and experienced lasting and profound problems such as anxiety, depression, suicide, violence, delinquency, and alcohol and drug use. The effects of colonisation on American Indians, whose history is often likened to Australian Aboriginal history, have been explained by Waldram (2004). The unresolved trauma experienced by American Indians following European settlement is referred to as ‘soul wound’, and it is explained that the damage is cumulative across generations. It is suggested that this wound leads to poor social and emotional wellbeing, including symptoms of anxiety, depression, feelings of marginality, and alienation. Similarly, Rickwood (2004) states that “the social and emotional wellbeing of Aboriginal and Torres Strait Islanders remains a source of national shame” (p. 2). The available evidence, although limited, suggests that mental health disorders are more prevalent in Aboriginal communities than non-Aboriginal communities, and that Aboriginal people are over-represented in inpatient mental health care (Roxbee & Wallace, 2003). In comparison to non-Aboriginal Australians, Aboriginal Australians suffer from mental illnesses due to psychoactive drug and alcohol abuse at a rate 4.5 times higher, schizophrenia and delusional disorders at a rate 2.7 times higher, mood and neurotic disorders at a rate 1.2 times higher, personality disorders at a rate 1.8 times higher, and organic mental disorders at a rate 2.4 times higher (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2008).

Nagel (2006) states that Aboriginal people are vulnerable to poor mental health treatment outcomes due to poor physical health, social disadvantage, co-morbid substance abuse, and a burden of grief through suicide, homicide and incarceration. Between 2001 and 2005 in Queensland, South Australia, Western Australia, and the Northern Territory, the suicide rate among Aboriginal men was almost three times higher than among non-Aboriginal men, and among Aboriginal women aged less than 44 years it was more than two times higher than among non-Aboriginal women (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2008). The phenomenon of malignant grief is said to be the result of the persistent stress experienced by Aboriginal communities and individuals (Milroy, personal communication, as cited in Parker, 2010). Malignant grief is explained as “a process of irresolvable, collective, and cumulative grief that affects [Aboriginal]
individuals and communities. The grief causes individuals and communities to lose function and become progressively worse; ultimately it leads to death” (Parker, 2010, p. 6). The factors which contribute to increasing rates of psychiatric morbidity in Aboriginal communities are commonly believed to include destruction of social infrastructure, rapid urbanisation and poverty, cultural alienation, loss of identity, family dislocation, and increased drug and alcohol consumption (Hunter, 1993; O’Shane, 1995).

The trauma suffered by the stolen generations as a result of the assimilation policies of the Australian government (Australian Institute of Health and Welfare, 2002, 2003; Human Rights and Equal Opportunity Commission, 1997; Parker, 2010; Swan & Raphael, 1995) has direct relevance to the mental health of Aboriginal Australians. The stolen generations refers to the period of Australian history, during the first half of the 20th century, when Aboriginal children were forcibly removed from their families so that they could be assimilated into white Australian society. It is estimated that one in ten Aboriginal children were forcibly removed from their families, but some reports indicate that this figure may be much higher (Dudgeon, Wright, Paradies, Garvey, & Walker, 2010). Attachment theory posits that the quality of early parent-child bonding, as well as the infant’s actual experience of the relationship with their parents, has important implications for psychological and emotional adjustment later in life (Strahan, 1995). Mental health issues and difficulties in interpersonal relationships in adulthood have been shown to be associated with disruptions to early attachments (Armsden, McCauley, Greenburg, & Burke, 1990; Parker, 1983; Parker & Barnett, 1988). The assimilation practices imposed by the Australian government are likely to have negatively impacted early attachments for many Aboriginal Australians and contributed to mental ill health.

It is necessary to note that non-Aboriginal Australian culture is not simply “white” culture but is far more rich and complex. The term “white” is used periodically in this research only in the context of governmental assimilation policies. Historically mainstream Australian culture was predominantly white, and the governmental policies described in this research aimed for assimilation of Aboriginal Australians specifically into the culture of white Australians.
1.2.3 Coexisting mental health and substance abuse disorders

A large proportion of individuals, both Aboriginal and non-Aboriginal, who have substance abuse disorders have coexisting mental health disorders (Blankertz & Cnaan, 1994), also known as co-morbidity (Drake, Mueser, Brunette, & McHugo, 2004) or dual diagnosis (NSW Office of Drug and Alcohol Policy, 2006). It has been estimated that in Australia the proportion of people engaged by mental health services who experience concurrent drug and alcohol use issues ranges from 30-90% (Davis 2003). Along with other data from the 1980s and 1990s (Kessler et al., 1996; Regier et al., 1990), this indicates that coexisting disorders are so common that it might be considered the rule rather than the exception (Minkoff, 2001). High rates of coexisting disorders have been reported among Aboriginal Australians (Nagel, 2006; Roxbee & Wallace, 2003), and there are complex patterns in causality and treatment believed to be unique to Australian Aboriginal populations (Roxbee & Wallace, 2003). Thus service providers need to be aware of stigma and engagement challenges associated with the presence of coexisting disorders.

The treatment of people with coexisting disorders is more complex than treating people with a single diagnosis. Clients with coexisting disorders tend to have significantly poorer social functioning, more severe psychiatric symptoms, higher levels of need (Weaver, Stimson, Tyrer, Barnes, & Renton, 2004), higher severity of drug and alcohol use (Brooner, King, Kidorf, Schmidt, & Bigelow, 1997; Driessen, et al.1998), less compliance with treatment, poorer treatment outcomes (Chen et al., 2003; Hunter et al., 2005), higher rates of suicide and self-harm (Chen et al., 2003; Drake et al., 2004), and higher treatment costs, including criminal justice involvement and hospitalisation (Brunette, Mueser, & Drake, 2004; Chen et al., 2003; Szirom, King, & Desmond, 2004; Teesson, 2001). Research has also shown that individuals with coexisting disorders who are in drug and alcohol programs have lower rates of program completion, shorter stays in treatment, and higher rates of relapse and rehospitalisation following treatment than individuals with substance abuse disorders alone (Compton, Cottler, Jacobs, Ben-Abdallah, & Spitznagel, 2003; Mortlock, Deane, & Crowe, 2011; Weisner, Matzger, & Kaskutas, 2003). For this reason the presence of coexisting disorders is of interest in the present research, with outcomes compared for participants with and without coexisting disorders.
1.2.3.1 Interventions for clients with coexisting disorders

Over the past two decades it has been recognised that individuals with coexisting disorders constitute a diverse and difficult clinical population (Minkoff, 2001) and for this reason research into current interventions advocate the need to integrate services for drug and alcohol use and mental health at the clinical level (Drake, O’Neal, & Wallach, 2008; Weaver et al., 2004). A meta-analysis of 78 outcome studies conducted between 1965 and 1996 addressed the question of drug and alcohol treatment effectiveness (Prendergast, Podus, Chang, & Urada, 2002). It was found that substance abuse treatment is effective in reducing drug and alcohol abuse (mean effect size 0.30), as well as crime (mean effect size 0.13). The authors suggested that rather than continuing to ask simply whether drug and alcohol treatment is effective, it may be more beneficial to ask how treatment can be improved, and how treatment may be tailored to meet the needs of specific groups of clients (Prendergast et al., 2002).

1.2.4 Residential treatment for substance abuse disorders

Residential treatment programs have become a widely used intervention for clients with substance abuse disorders, as well as clients with coexisting disorders. Such programs provide intensive therapeutic services as well as offering safe housing, assistance with daily living (Brunett, Drake, Woods, & Hartnett, 2001), and the opportunity to develop the skills necessary for recovery (Brunette et al., 2004). An alternative to residential treatment programs is outpatient services. These services generally provide programs for several hours on several days of the week, either during the day or the evening (Drake et al., 2008). It has been found that there is little difference in outcome between inpatient or outpatient treatment programs for clients who are eligible for either service (Finney & Moos, 2002). However, not all clients will be eligible for either service, as outpatient programs are not well suited for clients with more severe drug and alcohol histories (Finney & Moos, 2002; Prendergast et al., 2002).

There are many advantages of residential treatment programs, one of these being their capacity to remove clients from their substance-abusing environments (Brunette et al., 2004). Residential treatment is an especially practical option given the strong relationship between coexisting disorders and homelessness (Caton et al., 1995; Leal, Galanter, Dermatis, & Westreich, 1998). Further, clients who are not
homeless are likely to live in marginal situations in which they have limited control over their environment, or in neighbourhoods that are pervasively affected by drug and alcohol use (Quimby, 1995). Additional difficulties for clients, especially those with coexisting disorders, can include unavailability of a positive peer support network, lack of internal controls and refusal skills (particularly in the early stages of recovery), as well as problems with maintaining a connection to treatment (Brunette et al., 2004). Residential programs have the potential to assist with these difficulties by offering an alternative to high relapse-risk environments and placing clients within a relatively supportive network where their connection to treatment is consistently maintained.

It has been demonstrated that the length of time clients remain in treatment is positively associated with improvements in post-treatment outcomes (Darke, Campbell, & Popple, 2012; Sung & Richter, 2007), such as reduced drug use and recidivism (Farabee, Hser, Anglin, & Huang, 2004), and improved psycho-social wellbeing (Hubbard, Craddock, Flynn, Anderson, & Etheridge, 1997). It has also been found that a single treatment enrolment of a lengthy period is associated with better outcomes than several shorter enrolments (Darke et al., 2012), with three months often suggested as a minimum for residential treatment programs (Deane, Wootton, Hsu, & Kelly, 2012). Furthermore, age has been found to be associated with length of stay, with older clients more likely to remain in treatment longer (Hampton & Margaret, 2006) and/or complete treatment (Wickizer et al., 1994). Therefore length of stay in treatment and age are of interest in the present research, with Study 3 outcomes investigated in relation to the length of stay and age of participants.

In a review conducted of 45 studies involving interventions for people with coexisting disorders, residential treatment programs evidenced consistently positive outcomes relating to drug and alcohol use (Drake et al., 2008). It is notable, however, that none of the 45 studies reviewed focused on Aboriginal populations. Due to the vast differences in historical background, cultural factors, and service engagement between Aboriginal and non-Aboriginal populations, we cannot assume without testing that findings from mainstream research are also valid for Aboriginal people. Given the high rates of poverty, unemployment, and low socio-economic status within the Aboriginal population, residential programs are likely to be especially
advantageous for Aboriginal clients. However, these services need to be appropriately managed and staffed to ensure maximum engagement, cultural safety and appropriate responsiveness to the complexity of needs of disempowered people (Berry & Crowe, 2009). The present research aims to contribute knowledge regarding treatment outcomes for Aboriginal clients in residential drug and alcohol treatment within Australia.

1.2.5 Recovery - the aim of treatment for substance abuse disorders

The definition of recovery has recently evolved, largely due to a movement in the mental health literature, to focus on aspects of subjective wellbeing rather than simply and exclusively a reduction in symptoms. Anthony (1993) defines recovery as:

A deeply personal, unique process of changing one’s attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful and contributing life even with limitations caused by illness. Recovery involves the development of new meaning and purpose in one’s life as one grows beyond the catastrophic effects of mental illness. (p. 13)

Recovery has also been described as a process whereby an individual can establish a positive sense of identity founded on self-determination, and may recover from the psychological trauma of the mental illness (Andresen, Oades, & Caputi, 2003).

Within drug and alcohol, the term ‘recovery’ was historically almost exclusively associated with 12-step programs such as Alcoholics Anonymous (AA), and was used interchangeably with terms such as abstinence, remission, and resolution. Most researchers continue to define recovery in terms of complete abstinence from all drugs (Laudet, 2007). This traditional view discounts the use of reduction/management and harm minimization approaches. More contemporary views of recovery purport that an individual can live a meaningful and hopeful life while still experiencing their symptoms (Anthony & Liberman, 1992; Slade, Amering, & Oades, 2008). Drug and alcohol use could be considered a symptom of more pervasive problems. When taking a contemporary perspective of recovery, it should follow that it is possible that an individual may lead a meaningful, contributing life while still experiencing (and controlling) their symptoms (i.e. their
drug and alcohol use). A conceptualisation of recovery that does not require complete abstinence as a prerequisite would allow an individual the hope and motivation necessary to begin to rebuild their life and their identity. This conceptualization of recovery is reflected in how the Substance Abuse and Mental Health Services Administration (SAMHSA, 2011) defines recovery, as “a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential” (para. 2).

The present research does not consider abstinence as an outcome, but rather focuses on mental health and empowerment. Before considering these desired outcomes, however, it is necessary to consider explanations for the current state of disadvantage of Aboriginal Australians.

1.3 Explaining Aboriginal disadvantage

1.3.1 The effect of deficit thinking

The cultural deficit model is concerned with explaining why a minority group may not have adopted the behaviours and values of the majority group (Kirk & Goon, 1975). Cultural deficit thinking can often be used to hold minority groups responsible for their own disadvantage, whether it is in terms of education, poverty, or health. For example, African-American people have been judged as holding themselves in a cycle of poverty because they have a poverty of culture, including poor values, attitudes and motivation (Johnson & Bowman, 2003).

Deficit thinking has been identified to occur regarding Aboriginal Australians, and to be subscribed to by Aboriginal and non-Aboriginal people alike (Gorringe, Ross, & Fforde, 2011). Gorringe and colleagues suggest that deficit thinking can lead to the designation of some individuals as less Aboriginal, less real, or less valid than others, and that this can happen for several reasons, such as a person being less black than others, not speaking his native language, or not living where the ‘real black people’ live. The authors add that this type of thinking is not only due to the way non-Aboriginal people speak, but is often exacerbated by the way Aboriginal people speak toward and about each other. They posit that such negative dialogue within Aboriginal populations can lead to stereotype threat. This is a phenomenon whereby an individual in a group which has a negative stereotype believed about them can be vulnerable to underperformance due to their belief that others subscribe to the negative stereotype, even if the individual themselves does
not. Thus, the more that Aboriginal and non-Aboriginal people express beliefs of deficit regarding Aboriginal populations, the more likely Aboriginal individuals are to believe that others subscribe to the negative stereotypes, and the more powerful the self-fulfilling prophecy of that stereotype threat can be. The authors add that there currently exists an “identity of disadvantage” (p. 7) within Aboriginal communities, whereby young Aboriginal Australians aspire to become the negative stereotypes because they believe they are supporting their Aboriginal cultural identity (Gorringe et al., 2011). Oppressive statements are often internalised and used by Aboriginal individuals to oppress other Aboriginal individuals (Dudgeon & Oxenham, 1989), and this is passed on so that inter-generational trauma becomes the legacy of Aboriginal history (Garvey, 2007).

The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Workshop, conducted in 2009, had an aim of creating a safe place to discuss issues regarding perceptions of identity within the Aboriginal community, and planning a way forward which does not subscribe to negative stereotypes and the language of deficit (Gorringe et al., 2011). It was concluded that Aboriginal-led initiatives are needed to effect change, both at the community and national level, and that leading Aboriginal opinion makers need to be involved if this process is to be effective. It was also suggested that the negative stereotypes need to be replaced with positive, strength-based approaches which may begin to re-build a positive cultural identity for Aboriginal Australians. Self-determination theory may also be helpful in providing a framework to understand the significant disadvantage of Aboriginal Australians.

1.3.2 Self-Determination Theory related to Aboriginal Australians

Self-determination theory is an approach to human motivation and personality that investigates people’s inherent growth tendencies and innate psychological needs (Ryan & Deci, 2000). Ryan and Deci posit that there are three basic needs that foster the positive processes of self-motivation and personality integration, and which are essential for constructive social development, personal wellbeing, and optimal functioning. These are the needs for competence, relatedness, and autonomy. Although these needs may be seen to have a focus on the individual, two further sub-theories within self-determination theory described below explain
how these needs apply to those within the context of a collectivist culture such as Aboriginal Australia.

A sub-theory within self-determination theory, cognitive evaluation theory (Deci & Ryan, 1985) aims to explain variability in intrinsic motivation. Cognitive evaluation theory suggests that people must not only experience themselves as competent but also see their own behaviour as self-determined (i.e. have a sense of autonomy or an internal perceived locus of causality) for intrinsic motivation to be present. Deci and Ryan suggest that this requires either immediate support for autonomy and competence, or prior developmental supports which have led to abiding inner resources supporting autonomy and competence. In general, the cognitive evaluation theory framework indicates that social environments can support or thwart people’s innate psychological needs, and in doing so can facilitate or forestall intrinsic motivation. The historical context of Aboriginal Australia involves the removal of human rights from Aboriginal people, disempowerment for Aboriginal individuals resulting from a loss of choice and control in their lives, and a commonly practiced degradation and shaming of Aboriginal culture. It is reasonable to conclude that the innate psychological needs for autonomy and competence of Aboriginal people have not been adequately supported.

Organismic integration theory was also introduced by Deci and Ryan (1985) to explain the contextual factors which either promote or hinder the internalization of motivation. Internalization is important for motivation as it has been found that more internalised motivation is associated with greater positive outcomes in health (Williams, Rodin, Ryan, Grolnick, & Deci, 1998), drug and alcohol treatment programs (Ryan, Plant, & O’Malley, 1995), intimate relationships (Blais, Sabourin, Boucher, & Vallerand, 1990), and physical activity (Chatzisarantis, Biddle, & Meek, 1997). Organismic integration theory posits that relatedness, “the need to feel belongingness and connectedness with others” (Ryan & Deci, 2000, p. 73), is of primary importance for internalization, and proposes that internalization is more likely to be present when there is support for feelings of relatedness. Given the historical context of Aboriginal people being removed from their families, communities, and cultures, the relatedness of Aboriginal people within their culture of origin has not been well supported by Australian policies. Furthermore, the attempted forced assimilation of Aboriginal people into white Australian culture has
resulted in Aboriginal people being denied autonomy while at the same time being expected to relate to a foreign and often unwelcoming culture. Thus, the need for relatedness has not been well supported for Aboriginal Australians, neither within Aboriginal culture nor non-Aboriginal culture. There is a need for support at the community level which focuses on enhancing connectedness and relatedness for individuals, both to the community and to culture.

To explain the causes of diminished functioning in human beings, it is suggested to look first to the immediate social context of the affected individual, and then to their developmental environments, to determine the extent to which the individual’s needs for competence, autonomy and relatedness were thwarted (Ryan & Deci, 2000). The authors maintain that by failing to provide supports for these innate psychological needs, we as a society contribute to alienation and poor wellbeing, and conversely that these basic psychological needs must be satisfied across the lifespan for an individual to hold a sense of wellbeing and integrity. To summarise, Ryan and Deci’s (2000) Self-determination theory posits that excessive control, less than optimal challenges, and deficits in connectedness disrupt the individual’s inherent growth tendencies, and can result not only in a lack of motivation and responsibility but also in psychopathology and personal distress. Thus, Australian society and governmental policies may be seen as not having supported Aboriginal communities and individuals to develop autonomy, relatedness, and competence, and therefore may have contributed to Aboriginal disadvantage.

The primary needs of autonomy, relatedness and competence described in self-determination theory (Ryan & Deci, 2000) may be interpreted as relating only to the psychology of the individual. However, the related cognitive evaluation theory and organismic integration theory (Deci & Ryan, 1985) refer to the importance of the social environment and contextual factors in supporting or thwarting these innate needs. Furthermore, organismic integration theory argues the importance of belongingness and connectedness to others for the internalisation of cultural practices. Therefore self-determination theory and its sub theories are appropriate theories to consider in the context of a collectivist culture such as that of Aboriginal Australians.
1.3.2.1 Self-Determination Theory and the substitute need

It is suggested that, in general, cultures provide tools, practices, and values that can allow people to satisfy their basic needs, and when this occurs, health and wellbeing may be expected to be present (Deci & Ryan, 2000). Conversely, when the values are not well-integrated and the cultural context is pressured and chaotic, we may expect to find individual “ill-being” as well as whole cultures which are more fragmented and less stable. Deci and Ryan continue to explain that when an individual’s innate psychological needs are not satisfied when they are young, they may develop need substitutes which can further interfere with attaining the nutriments they really need. This theory may assist somewhat in explaining the significant drug and alcohol problems in Aboriginal populations - long-standing and inter-generational frustration of basic needs has occurred, and what has developed is a substitute ‘need’ which prevents further the individual’s need for autonomy, competence, and relatedness. It is necessary to consider how self-determination and related constructs have been used to attempt to improve the social and health inequalities which exist between Aboriginal and non-Aboriginal Australians.

1.3.2.2 Self-Determination and empowerment

Self-determination, in the context of government policy, has been broadly defined as “the principle of Aboriginal people being involved in decision-making about, and management of, their own affairs” (Rowse, as cited in Pratt & Bennett, 2004). Self-determination was a major foundation underlying the government’s approach to Aboriginal policy making following the establishment of the Department of Aboriginal Affairs in 1973. After 1996, the Howard government began to speak more of self-empowerment and moved away from the principle of self-determination (Pratt & Bennett, 2004). More recently, the Portfolio Budget Statement (2004) specified one of its major planned outcomes as being to “promote economic, social and cultural empowerment of Aboriginal and Torres Strait Islander peoples in order that they may freely exercise their rights equitably with other Australians” (p. 30). In this context the word ‘empowerment’ refers to a continuation and a development of procedures which will give Aboriginal people optimal opportunities to have input into the policies and decisions made which have relevance to themselves (Pratt & Bennett, 2004).
Empowerment has also been described as “a group-based, participatory, developmental process through which marginalised or oppressed individuals and groups gain greater control over their lives and environment, acquire valued resources and basic rights, and achieve important life goals and reduced societal marginalization” (Maton, 2008, p. 5). Maton discusses the importance of empowering community settings, and explains that to be empowering a community must meet two criteria. Firstly, the ‘empowering process’, which means it occurs over time, involves active and sustained engagement, and results in growth in awareness and capacity, and secondly the ‘empowerment outcomes’, which involve enhanced control, influence, and capacity in political, economic, and psychological domains. Hence empowerment differs from self-determination in that it develops over time from the sustained activity of community members and results in clearly defined outcomes, whereas self-determination refers to the simple involvement of community members in decision-making and management. In other words, empowerment tends to require more agency from the individuals and community-members themselves, to result in a greater proportion of input by those community members, than does self-determination. Empowerment also tends to involve greater community focus as well as accessing power from multiple sources, while self-determination generally refers to simple involvement by individuals in decision-making. Active engagement of members within the community is an important part of community empowerment, and such a focus on community, responsibility, and obligation is at the foundation of traditional Aboriginal culture.

Self-determination theory (Ryan & Deci, 2000) may be better applied to the collective culture of Aboriginal Australians by placing more focus on the related sub-theories of cognitive evaluation theory and organismic integration theory (Deci & Ryan, 1985). These argue the importance of the social environment and contextual factors in supporting or thwarting an individual’s needs, as well as the importance of belongingness and connectedness to cultural practices. Self-determination if viewed in this more comprehensive sense may be considered conceptually closer to empowerment and therefore more congruent with interventions that aim to enhance community empowerment.

It has been suggested that approaches which aim to enhance empowerment have the potential to address concerns about broad inequalities in health, human
development, and capability (Haswell et al., 2010). Research has linked positive health outcomes among disadvantaged groups to therapeutic interventions that aim to enhance community and individual empowerment (Haswell et al., 2010). Therefore empowerment approaches are likely to be beneficial in health services for Aboriginal Australians, due to the significant health inequalities seen between this population and non-Aboriginal Australians. Empowerment as an outcome of treatment is investigated in the context of drug and alcohol services in both Study 1 and Study 3.

It is necessary to consider existing treatment services for Aboriginal Australians. It is also important to explore the therapeutic orientation of current interventions, as well as the difficulties identified in the existing treatment system.

1.4 Treatment services for Aboriginal Australians

It has been argued that Aboriginal Australians are not accessing mental health services at a level which is consistent with their level of need (Berry & Crowe, 2009; Garvey, 2000; Westerman, 2004). Research has shown that a primary reason for this is the failure of mental health services to embrace an understanding of Aboriginal conceptualisations of mental health, and the resulting cultural inappropriateness of many mental health services (Dudgeon, 2000; Garvey, 2000). The National Aboriginal Community Controlled Health Organisation (NACCHO, 1993) states that mental health and drug and alcohol use must be considered in a social and emotional context which encompasses oppression, racism, environment, economical factors, stress, trauma, grief, cultural genocide, psychological processes and ill health.

1.4.1 Existing interventions for Aboriginal drug and alcohol use

An investigation was conducted into the types of services offered for drug and alcohol use throughout Australia (Brady, Dawe, & Richmond, 1998). Of the 29 organisations that provided services primarily for Aboriginal people, 15 of these offered a program based solely on abstinence using the Minnesota model (also known as the disease model of alcoholism, or the 12-step model used in AA groups). In this model alcoholism is viewed as a progressive disease with abstinence as the only option for recovery, and programs based on this model tend to be more confrontational and inflexible. The other 14 Aboriginal service providers identified in this study offered a range of treatment options, including harm minimization information, controlled drinking programs, and referrals to residential rehabilitation.
centres. These programs, in contrast with those based on the Minnesota model, provide an example of flexible, individualised treatment. The Family Wellbeing Empowerment Program is a group empowerment program that has been implemented in many Australian Aboriginal settings over the past ten years (Tsey et al., 2005; Tsey, Whiteside, Deemal, & Gibson, 2003). This program was developed by Adelaide-based Aboriginal people, and with its grounding in Aboriginal experiences of family survival, it aims to harmonise the physical, emotional, mental, and spiritual aspects of everyday living (Haswell et al., 2010). Family therapy is described as an especially important area of development, as an increasing number of residential rehabilitation centres are opening their doors to entire families (Ellis, 1998, 1999; Ngaimpe Aboriginal Corporation, 1998).

The services offered at Milliya Rumurra, a rehabilitation centre six kilometres from Broome in Western Australia, are described by Ikin (1999). She states that treatment was formerly based on the disease model of alcoholism, but that it now encompasses social learning theory and education towards controlled drinking. Clients at Milliya Rumurra are encouraged to develop self awareness and to choose the model of treatment which is most appropriate for them. This centre concurrently runs programs involving both the disease model and the social learning model, and these programs are said to operate without conflict. It is noted that prevention and relapse strategies need to be a greater focus in the program, and that future plans will need to incorporate suicide prevention and sexual abuse treatment (Ikin, 1999).

Weigelli Centre is another rehabilitation centre which advocates a flexible approach, in that they do not adhere to a specific program but attempt to cater for the individual needs of their clients (Ellis, 1999). Weigelli is an Aboriginal community controlled rehabilitation centre in Cowra, New South Wales (NSW), and their counsellors run groups for issues such as domestic violence, depression, Aboriginal culture, education, acceptance, anger management, assertiveness, values, and grief. The Weigelli program runs for three months and has a primary aim of harm minimization (Ellis, 1999).

Benelong’s Haven is described as the first Aboriginal-run Australian residential alcohol and drug treatment centre, established in 1974 (Chenhall, 2006). Benelong’s Haven houses between 60 and 80 residents, mostly men, and is based primarily on the AA model. It has been suggested that various concepts found in AA
can be seen as aligning with core socio-cultural values in Australian Aboriginal culture. For example, “powerlessness” is described as being associated with the experience of many Aboriginal Australians of having lost cultural ties, pride, and dignity as a result of colonisation. Furthermore, “sharing stories” is said to be associated with the belief held by Aboriginal culture that social groups provide the primary setting for individual experience, and the “one day at a time” concept of AA is described as relating to the nomadic lifestyle of traditional Aboriginal societies. Benelong’s Haven also integrates a number of therapeutic approaches, including group psychotherapy. Termed “psych groups,” these facilitated psychotherapy groups are intended to provide a culturally appropriate forum in which clients may explore their negative and destructive thoughts, while also receiving a non-intrusive element of psycho-education (Chenhall, 2006).

The treatment at a residential drug and alcohol service for Aboriginal Australians in Southeast Australia is described by Chenhall (2008). He refers to the treatment as an integration of AA, educational sessions, group psychotherapy, and individual counselling. He also explains that the program is based on a system of contingency management and skill development. Within contingency management, clients are able to gain and lose privileges, and as a result they learn to cope with loss, failure and success. Skill development involves clients taking on responsibilities which aide in the development of social and living skills. This system assists clients to learn to cope with conflict, failure, responsibility and success in a productive way by using the skills learned within the residential setting.

1.4.2 Reasons for engagement difficulties for Aboriginal clients

It is often challenging to engage clients in mental health services and drug and alcohol services, especially clients with coexisting disorders. In addition, it is often more difficult to engage Aboriginal clients than non-Aboriginal clients due to limited access to services, a lack of cultural respectfulness (cultural safety or cultural security) within services (Berry & Crowe, 2009), and a failure of mental health services to embrace an understanding of Aboriginal conceptualisations of mental health (Dudgeon, 2000; Garvey, 2000; Mehl-Madrona, 2009). A lack of cultural respectfulness may include such things as: introductions between clinicians and clients which do not incorporate understandings of the land and familial
relationships; the assessment of Aboriginal clients outside of their own cultural context; a failure to acknowledge Aboriginal concepts of mental health as holistic; the failure to use cultural consultants as a first step in engaging Aboriginal clients; and a communication style which tends to put pressure on people by demanding a direct answer (Westerman, 2004).

The psychotherapy process has been found to be problematic when working in Aboriginal communities due to the high level of self-disclosure required, and the intrusive nature of the therapeutic experience (Krawitz & Watson, 1997; Vargas & Koss-Chioino, 1992). Research has found that Aboriginal clients communicated a preference for a therapist to develop a broader relationship with them, rather than the traditional separation of the professional and personal domains (Vicary & Westerman, 2004). It has also been recognised that a person’s gender can influence the exchange of sensitive information, with Aboriginal clients commonly feeling offended at being asked questions of a sensitive nature by a clinician of the opposite sex (Department of Health and Ageing, 2007). Additionally, the individualistic focus of psychotherapy has been said to conflict with systems of social support and cohesion which are important for Aboriginal Australians (Dudgeon & Pickett, 2000).

1.4.3 Improving Aboriginal mental health and drug and alcohol services

The great disparity between Aboriginal and non-Aboriginal conceptions of mental health must be considered by clinicians when working with Aboriginal clients. The word punyu, from the language of the Ngaringman of the Northern Territory, explains that health encompasses both person and Country (Atkinson, Graham, Pettit, & Lewis, 2002). Punyu is associated with being strong, happy, knowledgeable, beautiful, clean, socially responsible and safe (i.e. being within the law and also being cared for by others) (Mobbs, 1991). The health of Aboriginal people may not be considered in terms of a mind/body dichotomy, as it is generally viewed in a western model of health and illness (Slattery, 1994). A possibility for future research is the collaboration of Aboriginal mental health workers and Aboriginal community members to develop a model of Aboriginal mental health that may be understood by both clinicians and clients. Such a model may help to operationalise Aboriginal understanding of mental health and guide clinicians in their approach. For example, this type of work progressed in North America through
research involving recorded discussions with traditional healers to develop a set of twelve “guideposts” to direct training of mental health workers wishing to work with Aboriginal people (Mehl-Madrona, 2009). These guideposts include adopting beliefs that healing “solutions must be internally derived,” requires a “relational model of self,” and that “empowerment is different from treatment”.

It has been recommended that the delivery of culturally respectful drug and alcohol programs should be based on the following (Wilkes et al., 2010): a holistic concept of health and wellbeing grounded in an Aboriginal understanding of the historical factors that have influenced drug and alcohol use and harm; culture as a central core component; support and reinforcement of Aboriginal family systems of care and responsibility; Aboriginal ownership and control; and recognition of the diversity between Aboriginal communities.

It is considered important to assess Aboriginal clients within the context of their own culture (and even further in terms of family/community), which may include investigating how an individual’s behaviour is viewed by members of their cultural group, and questioning whether a client’s symptoms result in an impairment in their usual environment (Westerman, 2004). This process of culturally sensitive assessment is important, as it has been found that Aboriginal people assessed in a foreign environment often presented as significantly more distressed than usual (Hunter, 1988).

It has been argued that the use of cultural consultants should become standard practice for clinicians working with Aboriginal populations. Broadly defined, a cultural consultant is an Aboriginal person who is willing to vouch for the non-Aboriginal clinician, and to act as the first point of contact between the clinician and the client (Westerman, 2004). Cultural consultants should be of the same gender and from the same language group or tribal group as the client. Aboriginal clients have communicated a preference to engage in services provided by Aboriginal practitioners, but considering the small number of such professionals, it is suggested that services for Aboriginal clients could be improved through the use of cultural consultants as co-therapists (Vicary & Westerman, 2004).

Communication style has been found to be very important when engaging Aboriginal clients. Direct questioning is considered by many Aboriginal people to be an ill-mannered and inappropriate way to begin a relationship, and the older and
more respected the person is, the more inappropriate direct questioning may be (Department of Health and Ageing, 2007). For this reason a method of three-way talking may often be used, in which a client uses a third person (such as a family member) as a mediator to exchange information with the service provider. This form of communication can be very valuable as it allows for effective exchange of information with minimal embarrassment for the client.

It has been consistently suggested that the best approach to therapy involves a narrative style of communication, including open-ended questions which are positively-phrased (Harris, 1977; Malin, 1997; Vicary & Westerman, 2004). Vicary and Westerman (2004) refer to this as “yarning about my problem” (p. 8). This provides an example of how traditional psychotherapy can be adapted and modified to be more culturally appropriate for Aboriginal clients. Group psychotherapy has been described as culturally appropriate because it relates to the Aboriginal tradition of sharing stories (Chenhall, 2006). Self determination theory (Ryan & Deci, 2000) argues the importance of the social environment in supporting an individual’s innate needs, and the importance of relatedness and connectedness in the context of cultural practices. This further supports the use of group psychotherapy for Aboriginal Australians. Residential treatment programs for Aboriginal clients should be flexible in order to cater for clients from a wide variety of backgrounds (Brady, 2002). The structure of the program should incorporate rigorous initial assessment, planning around discharge, and a wide range of treatment and counselling styles, rather than using AA meetings as their sole treatment. Furthermore, there are numerous drug and alcohol use and behaviour change models that could be used and adapted for Aboriginal-specific residential programs, such as social learning, motivational interviewing, cognitive behavioural interventions and family therapy (Brady, 2002).

Qualitative research involving 70 Aboriginal participants investigated their beliefs about mental health and the existing mental health system in Australia (Vicary & Westerman, 2004). Participants identified that the core components necessary in non-Aboriginal service providers are a non-racist attitude and a sound knowledge of Aboriginality. The authors concluded from the qualitative data that the participants believed:

Non-Aboriginal people who were cognizant of the issues confronting Aboriginal people, who were willing to listen and learn, and who were
willing to apply a blend of western and Aboriginal psychology using Aboriginal advisors were more likely to be successful in their work with Aboriginal clients. (Vicary & Westerman, 2004, p. 9)

There is little empirical research that identifies the effectiveness of such approaches, nor what is the optimal ‘blend’ of western and Aboriginal psychological, interpersonal, and communal recovery supports.

Both clinical and cultural competencies have been described as important for practitioners to develop (Westerman, 2004). Clinical competencies involve certain therapeutic techniques which are shown to be useful treatments for particular disorders (National Aboriginal and Torres Strait Islander Health Council, 2003). Cultural competencies involve the ability to identify and treat mental health issues in a way that accepts culture as having a central role (Cross, 1995; Dana, 2000). It involves an integration of the practitioner’s cultural awareness and knowledge into the clinical context, so that better health outcomes might be achieved for their clients (Department of Health and Ageing, 2007). The elements of cultural competence have been suggested to be organised under the concepts of cultural awareness, cultural knowledge, and flexibility (Cross, Bazron, Dennis, & Isaacs, 1989). The Royal Australian College of Physicians (2004) has outlined five guiding principles for cultural competence: value diversity, maintain capacity for cultural self-assessment, remain aware of the dynamics which are inherent in the interaction of cultures, institutionalise cultural knowledge, and adapt service delivery to reflect an understanding of the diversity of cultures.

It has been suggested that increasing the cultural competence of clinicians results in increases in the utilization of services, and positive outcomes for Aboriginal clients (Vicary, 2002). However, there is no empirical evidence to support this in Aboriginal Australian populations. Furthermore, cultural competence in general has been criticised for its limited empirical support in other countries (Lakes, Lopez, & Garro, 2006; Sue, Zane, Hall, & Berger, 2009), and there has been recent controversy surrounding the conceptualisation of cultural competence (Wendt & Gone, 2012). Firstly, there have been criticisms made regarding the culturally essentialist assumptions inherent in the dominant “kind of person” models which emphasise the awareness, knowledge and skills of the clinician. Secondly, the alternative “process-oriented” models have been criticised for emphasising such
generic aspects of therapy that they risk losing sight of culture altogether. There has been a recent shift away from focusing on culturally competent clinicians towards considering culturally commensurate therapies. Mainstream psychotherapy has been described as deriving from a western model of the self as individualistic, rationalistic and egocentric, and modern psychotherapy as a cultural tool that preserves its own socio-historical context. It has therefore been suggested that consideration of different forms of psychotherapy as cultural artefacts themselves, and critical appraisal of these, is necessary. Some have argued that only by going beyond the general guidelines for cultural competence, and considering the cultural commensurability of a treatment in actual practice, can we really consider how culturally sensitive and effective a treatment is (Wendt & Gone, 2012). The questions have been raised: “how much culture is enough?” and “what implications does a blending of cultural practices harbour for the . . . individuals seeking ‘traditional’ cultural reclamation and revitalization?” (Wendt & Gone, 2012, p. 217).

In order to understand better the advantages of cultural competence and culturally commensurate therapies it is necessary to consider what culture means for Aboriginal Australians and what role it has in their treatment. The present research seeks to begin addressing such questions by considering the outcomes associated with cultural engagement for Aboriginal clients, as well as examining the opinions of the clients themselves. Before doing this it is important to understand the history and current challenges of Aboriginal people and their culture.

1.5 Importance of Culture, Community and Spirituality

It has been consistently suggested that for Aboriginal people, ill-health is a manifestation of many factors, including spiritual and emotional alienation from culture, land, community and family (Jackson & Ward, 1999). Attempting to accurately represent the complexity of Aboriginal spirituality has been described as a difficult challenge (Poroch et al., 2009). In their long history prior to colonisation there was only gradual and minimal change in the cultural and spiritual practices of Aboriginal Australians. In contrast to this long and stable history, colonisation swiftly affected a form of “cultural genocide of [Aboriginal] Australians, through the loss of language, family dispersion and the cessation of cultural practices” (Dudgeon et al., 2010, p.30).
1.5.1 A background of Aboriginal culture and spirituality

It is estimated based on archaeological evidence that Aboriginal people have been present in Australia for between 45,000 and 120,000 years (Dudgeon et al., 2010; Parker, 2010). Prior to European settlement, it has been estimated that there were between 300,000 and 750,000 Aboriginal people inhabiting Australia’s mainland, and approximately 500 clan groups each with their own dialect, history, territory, and culture. Aboriginal people recorded history through music, song, story, dance, language, art, and ceremony, and there were complex systems of kinship, religion, and economic life (Collard, 2000). As a semi-nomadic people, Aboriginal Australians were relatively non-materialistic, with greater emphasis placed on social and spiritual activities (Dudgeon et al., 2010). Order and organisation were a feature of life in Aboriginal societies, with set processes for resolving conflict and punishment for wrongdoing. Such punishments were determined by the community and served the dual purpose of re-establishing balance between the offender and the wronged, and allowing the offender an internal sense of having made amends (Garvey, 2007).

Similar organisation, as well as a deep respect for the land, sea, and sky, characterised the cultures of Torres Strait Islander peoples, who inhabited the small group of islands in the Torres Strait, near the north-easternmost tip of the Australian mainland (Garvey, 2007). Torres Strait Islanders were gardeners, fishermen, hunters, warriors, and expert sailors and navigators (Dudgeon et al., 2010).

Kinship groups were led by individuals or groups who had gained leadership status based on age, social standing, and accomplishments, and these leaders were called Elders. Elders regulated many aspects of communal life, such as rituals and traditional law (or lore), and kinship was not confined to blood relatives but extended to all members of a clan (Westen, Burton, & Kowalski, 2006). Kinship was primarily important in defining social roles, and there were codes of behaviour between each person outlining their obligations and responsibilities towards each other (Dudgeon et al., 2010). Men and women had defined cultural roles. For example, men taught their nephews hunting skills and led them through initiation, while children were well-protected by the women within the group, not only by their mothers but by their Aunties and older siblings (Dudgeon et al., 2010; Parker, 2010). Sense of self was
viewed in a collective sense, intimately connected to aspects of spirituality, community, culture and Country (Parker, 2010).

Aboriginal Australians believe that the physical environment, the land, was shaped by spiritual ancestors as they travelled across the landscape, with both living and non-living things being a consequence of the actions of the Dreaming ancestors. Therefore traditional concepts of Aboriginal land ownership are different to non-Aboriginal legal systems. Each individual and community belonged to certain territories, thus having obligations and spiritual connections to particular Country. Hence Aboriginal Australians have traditionally seen themselves as belonging to the land, rather than owning the land (Dudgeon et al., 2010).

The individual’s state of social and emotional health was determined by the state of the community and the land, so that during the best of times, when place, connections, and relationships were strong, so the individual enjoyed wellbeing. Mental health has always been sought and valued by Aboriginal Australians, and within the traditional culture there were ways that wellbeing could be compromised as well as reinforced (Garvey, 2007). Aboriginal culture valued human relationships and connections to particular places/land, and so it has been argued that ruptures in connections between people and places were the greatest conceivable threat to Aboriginal health and emotional wellbeing (Garvey, 2007; Hunter, 1996; O’Shane, 1995; Swan & Raphael, 1995). It has been suggested that re-establishing, respecting, and promoting the traditional culture, in particular connection between people and places, is an important way of restoring social and emotional wellbeing for today’s Aboriginal Australians (Hunter & Garvey, 1998; Hunter, Tsey, Baird, & Baird, 2002).

1.5.2 Culture and spirituality for today’s Aboriginal Australians

During 1994 and 1995 the Ways Forward report was developed through extensive consultation with Aboriginal communities, Aboriginal-controlled health services and senior government officials. The report confirmed that for Aboriginal Australians the removal of their children from their families, their dispossession, and their continued social and economic disadvantage all contributed to widespread problems in mental health and social and emotional wellbeing (Zubrick, Kelly, &
Walker, 2010). The first guiding principal in the Ways Forward report (Swan & Raphael, 1995), states:

[The] Aboriginal concept of health is holistic, encompassing mental health and physical, cultural, and spiritual health. Land is central to wellbeing. This holistic concept does not merely refer to the ‘whole body’ but in fact is steeped in the harmonised inter-relations which constitute cultural wellbeing. The inter-relating factors can be categorised largely as spiritual, environmental, ideological, political, social, economic, mental and physical. Crucially, it must be understood that when the harmony of these inter-relations is disrupted, Aboriginal ill-health will persist. (p. 13)

In contemporary Australia, in comparison to the extensive literature written regarding the physical health of Aboriginal Australians, there is a paucity of research and evidence about the relationship between spirituality and social and emotional wellbeing for Aboriginal Australians (Poroch et al., 2009). It has been noted that there are significant differences between Aboriginal beliefs about health and Western views of health. While Western notions tend to dichotomise, such as between material and spiritual, past and present, mind and body, Aboriginal Australians view the world as interconnected and interdependent (Swan & Raphael, 1995). For example, Aboriginal Australians identify the land, including rocks, trees and birds, as representing a part of their own being, rather than as something external to them (Edwards, 1994). Aboriginal people today use traditional art to communicate about their Country, religious and spiritual views, their clan, and their relationships.

Within the numerous attempts to define modern Aboriginal mental health concepts, the common theme has consistently been the holistic nature of health and wellbeing (Roxbee & Wallace, 2003; Swan & Raphael, 1995; Vicary & Westerman, 2004; Ypinazar, Margolis, Haswell-Elkins, & Tsey, 2007). Anderson (1996) states that for Aboriginal people:

Our identity as human beings remains tied to our land, to our cultural practices, our systems of authority and social control, our intellectual traditions, our concepts of spirituality, and to our systems of resource ownership and exchange. Destroy this relationship and you damage – sometimes irrevocably – individual human beings and their health. (p. 15)
It has been suggested that for urban Aboriginal people their spirituality is evoked when Elders attend public events, smoking ceremonies, and cultural camps, and through the practices of Welcome to Country ceremonies, Dreamtime stories, ceremonies, artefact-making or painting (Poroch et al., 2009). Reclaiming Aboriginal spirituality has been described as a similar to reclaiming identity, and a way of enhancing resilience in the face of inter-generational trauma and racism (Poroch et al., 2009). Recognising spirituality is critical to the understanding of Aboriginal wellbeing, and spirituality and culture must be considered in developing and implementing health promotion and projects for Aboriginal Australians (McLennan & Khavarpour, 2004). Significant damage was caused during colonisation when governmental policies were implemented to displace Aboriginal communities from their land and remove Aboriginal children from their families (Dudgeon et al., 2010). These policies affected a disruption to the traditional way of life which has spanned more than two centuries so far, and the result has been a widespread severing of cultural and spiritual lines. Many Aboriginal people’s sense of identity, spiritual and physical wellbeing, and general psychological adjustment has been negatively impacted (The Human Rights and Equal Opportunity Commission, 1997). Reconnecting of these cultural and spiritual lines is expected to have healing effects, and to allow reclamation of cultural, spiritual, and personal identity (Poroch et al., 2009).

To date there is limited research within Australia which investigates the association between reconnecting/engaging in culture and positive health outcomes. The present empirical research will investigate this within the context of residential drug and alcohol treatment services. Theoretically, the link between cultural engagement and positive health outcomes has be explained through self-determination theory (Chirkov, Ryan, Kim, and Kaplan, 2003; Chirkov, Ryan & Willness, 2005).

1.5.3 Self-Determination Theory and cultural practices

As previously explained, Ryan and Deci’s (2000) self-determination theory posits that the basic needs for competence, relatedness and autonomy are essential for social development, personal wellbeing, and optimal functioning. The importance of sense of autonomy for motivation was further explored in the sub-theory cognitive evaluation theory (Deci & Ryan, 1985), and the three innate psychological needs
have been considered in relation to cultural practices, identity, and wellbeing (Chirkov et al., 2005). It has been suggested that the extent to which a cultural practice is internalised (i.e. valued by an individual and integrated voluntarily as a part of one’s life) can also be understood in terms of the level of autonomy that is experienced by an individual when involved in cultural practice, and that variations in autonomy are associated with wellbeing (Chirkov et al., 2005). Chirkov and colleagues explain that through the process of internalization of cultural practices, individuals may come to feel more integrated and less alienated, experiencing greater ‘cultural fit’ and relatedness within their culture, and subsequently enhanced wellbeing. They predicted that for Brazilian and Canadian students, when individuals experience autonomy in enacting their cultural practices, their wellbeing would increase. They also predicted that the more the students perceived others to be supporting their basic psychological needs, the greater their overall wellbeing would be. They found autonomy in cultural practices to be positively associated with wellbeing, even after controlling for age, gender, income, and parents’ education. They also found that the more students perceived others to support their need for autonomy, competence, and relatedness, the higher their wellbeing, and that supporting one’s basic needs was associated with greater cultural fit. Thus, these findings indicate that supporting the basic psychological needs of individuals plays an important role in fostering cultural identification, and that the more autonomy an individual experiences in engaging in cultural practices, the greater their wellbeing.

Similar results were obtained in a study of the relationship between wellbeing and autonomy of enactment of cultural practices (Chirkov et al., 2003). Both hedonic (happiness) and eudaimonic (fulfilment) indicators were used to measure wellbeing, and results showed that regardless of what cultural practices an individual may engage in, there is an association between more autonomous enactment of those practices and greater wellbeing. In the context of Aboriginal Australians, such findings suggest that the more autonomous and internalised the enactment of traditional cultural practices, the more likely that engagement in those practices will impact positively on wellbeing.

The present research investigates the cultural engagement of Aboriginal Australians in the two contexts of everyday life and residential drug and alcohol treatment. According to Chirkov and colleagues (2003, 2005), the extent to which an
individual experiences their cultural engagement as autonomous has the potential to impact on their motivation as well as their wellbeing experienced from cultural engagement. Therefore it is necessary to consider the effect of participants’ level of autonomy and intrinsic motivation on outcomes in the present research. In Study 3 autonomy and intrinsic motivation in cultural engagement is assessed under cultural identification. These are conceptually related, as the higher one’s level of cultural identification, the greater their autonomy and intrinsic motivation towards cultural engagement is expected to be. The need to consider participants’ cultural identification informed the hypotheses of Study 3.

1.6 Culture as treatment

The culture as treatment hypothesis (Brady, 1995) suggests that a return to traditional Aboriginal cultural practices is sufficient for effecting recovery from drug and alcohol use for many Aboriginal individuals. This hypothesis is supported by the research of Chirkov and colleagues (2003, 2005) described above, which argues the importance of autonomous practice of cultural activities in order to experience cultural fit, relatedness with ones culture, and general wellbeing. However, “empirical investigations of the [culture as treatment] hypothesis are yet to appear in the scientific literature” (Gone & Calf Looking, 2011, p. 293). The present research begins to investigate this hypothesis in the context of Aboriginal Australians. The degree to which an individual is embedded in his/her cultural traditions is thought to play a vital protective function in mental health and drug and alcohol use (Torres Stone, Whitbeck, Chen, Johnson, & Olson, 2006).

Cultural engagement refers to the degree to which an individual is embedded within, and/or participates in, his/her cultural traditions. For Aboriginal Australians, cultural engagement refers to a wide variety of activities including traditional cooking practices, use and protection of land and Country, traditional artwork, music and dance, and participation in community practices (e.g., ceremony, meetings). Cultural engagement also involves an attitude of respect for others and community belonging, which although difficult to define and capture, has been noted by many
Aboriginal research participants to be a significant component of Aboriginal culture (Berry, Crowe, & Deane, 2012).

1.6.1 Culture in therapeutic interventions for Aboriginal people

There are ongoing attempts abroad, especially in the United States, Canada, and New Zealand, to provide therapeutic interventions for Aboriginal people that are culturally safe and effective. It is considered important to integrate cultural interventions and evidence-based methods in treatment of drug and alcohol problems in Native American communities (Wright et al., 2011). Wright and colleagues refer to the holistic nature of health and wellbeing for Native Americans, and state that restoring balance and wholeness reinforces a sense of cultural identity. The authors state that it is crucial to the wellbeing of Native communities that they be able to address imbalances and difficulties in a culturally congruent way. They describe a program at the Native American Health Centre which integrates traditional cultural practices with more established treatment methods. The cultural elements of the treatment at the Native American Health Centre include: talking circles, sweat lodge ceremony, traditional healers, seasonal ceremonies, prayer, smudging (the burning of particular herbs), drumming, use of herbs, women’s/men’s societies, and pow-wows (cultural community events). It is also stated that counsellors work with clients to draw on the clients’ own backgrounds, traditions, practices, and stories to develop skills and assist the healing process. Wright and colleagues investigated outcomes at the Native American Health Centre for out-patient \((n = 161)\) and residential \((n = 329)\) treatment over a 6-month period. They found participants in both groups showed significant decreases in drug and alcohol use, although changes were more pronounced for the residential treatment group. Unfortunately no control group was included in this research, and therefore it cannot be claimed that traditional cultural practices were important to outcomes.

An inpatient drug and alcohol treatment program on the Blackfeet Indian Reserve in Montana has been described (Wendt & Gone, 2012). The program involves 30-days spent in tepees pitched away from the settled areas of the reservation, and activities include food procurement and preparation, camp maintenance, equestrian skills, language preservation, cultural instruction, traditional crafts, and participation in ceremony. Unfortunately this program is yet to be
empirically assessed, and it remains to be seen whether the treatment is successful both in terms of drug and alcohol outcomes and cultural criteria (Wendt & Gone, 2012).

The Manitoba First Nations community in Canada has made efforts to integrate western and Aboriginal healing methods in their local healing lodge (Wendt & Gone, 2012). Western therapeutic techniques employed include the twelve steps of AA, grief exercises, anger discharge, genogram mapping, inner child work, and neurolinguistic programming. Aboriginal therapeutic modalities employed include smudging, talking circles, tobacco offerings, pipe ceremonies, sweat lodge rites, and fasting camps. Analysis of the discourse used by staff and clients in the context of the Aboriginal therapeutic modalities revealed westernised notions of therapy and healing, such as “carrying [of] burdens”, “release [of emotional] pressure”, and commitment to “looking at” and “working on” oneself (Gone, 2011, p. 195-196). The authors explain this finding as significant in the consideration of psychotherapy as a cultural artefact in its own right, because even when traditional cultural practices are employed in a therapeutic setting, the western roots of psychotherapy remain evident (Wendt & Gone, 2012). Unfortunately no quantitative research findings were presented regarding the outcomes of the treatment program as a whole, or for the western therapeutic techniques compared with the Aboriginal techniques.

An alcohol prevention program for American Indian youth blended mainstream intervention with culturally appropriate treatment approaches (Moran & Bussey, 2007). The research literature and the American Indian community informed the design of the prevention program. The research literature informed the need for the components of decision-making, problem solving, resistance skills, enhancement of self-esteem, strategies to cope with stress/anxiety, and social skills. From consultation with the community, the intervention derived its name *Seventh Generation Program*, and the seven core values which were to be the central organising framework of the program – harmony, respect, generosity, courage, wisdom, humility, honesty. The authors emphasise that the intervention was developed in a manner which incorporated these values, rather than with an aim of teaching the young participants specific cultural activities and artefacts. The research involved an intervention group (*n* = 107) and a no-intervention comparison group (*n* = 61), with a mean age at pre-test of 10 years. Children in grades four to seven were
targeted in order to maximise the probability of reaching them before their first alcohol use (Moran & Bussey, 2007), given that the average age at first drink for this population is 12 years (May & Moran, 1995). Mental illness was not assessed. The 13-week program was conducted for the intervention group for one hour in the afternoon on school days, and after six months these participants received six booster sessions. Measures were taken prior to the program, at the completion of the program, and at one-year follow-up. The intervention group evidenced significant improvements over time on locus of control, depression, social support, and alcohol beliefs. The intervention group showed a significant improvement in alcohol beliefs from post-test to follow-up, while the comparison group declined (Moran & Bussey, 2007). While these are positive results, it is possible that the intervention group performed better at follow-up simply because those children who participated in follow-up were the most stable and well-functioning, with only half of each group being located for follow-up testing.

Research was conducted to investigate the perspectives of treatment providers regarding the integration of spiritual and western methods of treatment for Native American clients (Moghaddam & Momper, 2011). Staff reported that a significant factor in the treatment experience for the client is the degree to which they have adopted the traditions, languages, and customs of the dominant culture. They explained that engagement in traditional activities during treatment is often a cultural awakening for the client, and can act as a reintroduction back to Native society. Many staff saw this new found connection between clients and their heritage as a protective factor for clients. Staff also referred to the healing power of spirituality and traditional activities, naming spiritual development as a primary goal of the treatment they provide. A limitation of the research is the acknowledgement by the authors that some staff expressed concerns regarding the lack of authenticity of the cultural activities provided. Although the authors attempt to justify this by stating that the program is simply a “reflection of the two worlds within which Native clients must function” (Moghaddam & Momper, 2011, p. 1436).

A sweat lodge (a traditional Native American ceremony) was implemented at the Wyoming State Hospital to improve the care of Native American clients admitted to the facility. Clients who participated in the sweat lodge described the healing power of the ceremony and the importance it held for their treatment, as well as the
sense of connection and integration it enhanced with their community (Tolman & Reedy, 1998). Retraditionalization is a term coined by Green (1983), and refers to a process used within services for American Indians involving a return to traditional cultural forms. It is stated that retraditionalization can promote cultural and individual self esteem, while also offering an opportunity for healing and renewal (Edwards, 2003).

In Canada there is recognition by state governments that the quality of programming decisions can be significantly improved by actively engaging Aboriginal people in program planning and delivery, and that the family and community must be viewed as the primary source of restoration. Efforts to restore language, religious and community practices are understood to be fundamental acts of healing by Canadian Aboriginal people, and consideration of this is seen to be crucial in mental health promotion for this population (Kirmayer, Simpson, & Cargo, 2003). Chandler and Lalonde (1998) found a direct correlation between increased cultural control within First Nations communities in British Columbia and reduced suicide rates among community members. Communities were scored on seven factors indicating the extent of cultural control (termed ‘cultural continuity’ in the research). The seven factors were self-government, involvement in land claims, band control of education, health services, cultural facilities, police, and fire services. The rate of suicide was strongly correlated with the level of these factors, with communities that had all seven factors having no suicides, and communities with none of these factors having extremely high suicide rates (137.5 suicides within the 5-year study window). These research findings are limited in that it is likely other unmeasured community factors were linked to the suicide rates, such as collective self-efficacy or self-esteem, better infrastructure, community organisation, active roles for youth, and higher rates of employment. The labelling of the factors as cultural continuity is also questionable, as the factors seem more to reflect the level of community control than cultural traditions (Kirmayer et al., 2003). However, the research indicates the positive effects of enhanced community control by Aboriginal people themselves, and should encourage future studies to consider the structure and dynamics of communities in determining mental health.

It has been noted that there are difficulties inherent in incorporating the needs of New Zealand’s Maori people into the existing Eurocentric mental health services
of New Zealand (Krawtiz & Watson, 1997). Identity for Maori people is said to emerge within the context of a relationship, and as such less emphasis must be given to autonomy and self-sufficiency, and more to relationship, connection and community. When engaging in psychotherapy, Maori people, similarly to Australian Aboriginal people, are likely to expect therapists to be open about themselves, as Maori people place a higher value on a person’s personal attributes than their professional credentials (Krawtiz & Watson, 1997).

All of these examples demonstrate the ways in which countries around the world are attempting to become more aware of the cultural needs of Aboriginal populations. Consequently they are implementing services that provide greater cultural opportunities for Aboriginal clients. Unfortunately most studies are qualitative and make no attempt to explicitly link cultural activities to therapeutic outcomes.

1.6.2 Outcomes from culture in treatment for Aboriginal Australians

There is a commonly held belief that engagement in cultural activities is beneficial for Aboriginal Australians (Burgess, Berry, Gunthorpe, & Bailie, 2008; McDermott, O’Dea, Rowley, Knight, & Burgess, 1998; Morice, 1976; O’Dea 1984, Rowley et al., 2008), particularly for those individuals who highly value their cultural traditions.

A review was conducted of empirical studies which investigated Aboriginal Australians’ level of cultural attachment and their socio-economic outcomes (Roth, 2011). The review noted that in the 2008 National Aboriginal and Torres Strait Islander Survey (NATSSIS), the following statistics were reported in the section “Culture and Language”: 19% of Aboriginal people over 15 years old spoke an Aboriginal language; 62% of Aboriginal people over 15 years old identified with a clan, tribal or language group; 72% of Aboriginal people over 15 years old recognised an area as their homelands or traditional Country; 63% of Aboriginal people over 15 years old were involved in cultural events, ceremonies, or organisations in the past year; 31% of children between 3 and 14 years of age spent at least one day per week with an Aboriginal leader or Elder; 65% of Aboriginal children between 5 and 14 years of age were taught about Aboriginal culture at school (Roth, 2011). The review stated that only a small number of empirical studies
have investigated the importance of cultural attachment to socio-economic outcomes for Aboriginal people. Also noted were the significant limitations in the studies that have been conducted, and the necessity for further research to shed light on this important area of enquiry into Aboriginal health.

The results from the National Aboriginal and Torres Strait Islander Survey were used as a basis to measure cultural attachment of Aboriginal Australians (Dockery, 2009a, 2009b, 2011). Measurement of cultural attachment was derived specifically from responses to the questions regarding participating in cultural activities, identifying with a clan, and speaking an Aboriginal language. Dockery categorised participants into four different levels of cultural attachment based on these responses – strong, moderate, weak, and minimal – and compared these levels with socio-economic outcomes. In three separate publications Dockery concluded the following. In non-remote areas, there was a positive relationship between cultural attachment and educational attainment, however in remote areas this relationship was negative (Dockery, 2009a). Strong cultural attachment was associated with better outcomes in the domains of self-assessed health, alcohol abuse, being arrested, and employment status. However this relationship varied by remoteness, and in some of these domains those with minimal cultural attachment fared better than those with weak or moderate attachment (Dockery, 2009b). In remote areas there was a positive relationship between cultural attachment and mental wellbeing, however in non-remote areas stronger cultural attachment was associated with greater psychological distress (Dockery, 2011). In summary, results were variable depending on whether participants lived in remote or non-remote locations. A significant limitation of the three studies is the measurement of cultural attachment being based on three simple questions without the use of more established measures or consideration of the content validity of the questions used. This supports the need for development of a measure of cultural engagement for Aboriginal Australians, conducted in Study 2 of the present research.

Cultural identity and peer influences were investigated as predictors of drug and alcohol use in Australian adolescents (Gazis, Connor, & Ho, 2010). Cultural identity was measured using the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992), with the wording of items being altered to reflect language more appropriate to the Australian setting (e.g., “I am active in organizations or social
groups that include mostly members of my own ethnic group” was altered to “I take part in social groups that include mostly people of my own culture”). Participants included 274 young people (mean age 13.62 years) in Northern Queensland, and included the cultural groups labelled as non-Aboriginal Australians (n = 119), Aboriginal Australians (n = 129), and other minorities (n = 26). The effect of cultural identity and friends’ drug and alcohol use on personal drug and alcohol use was investigated for all three cultural groups. Results indicate that cultural identity was protective for Aboriginal and non-Aboriginal youth alike, but when taking into account peer influence, Aboriginal youths were more susceptible to alcohol initiation, even if they had strong cultural identity. The authors suggest that this may be the case because Aboriginal youths who have been raised with a strong sense of community may be more likely to conform, and therefore more susceptible to peer pressure (Gazis et al., 2010). One limitation of this research is the inclusion of South East Asians and Pacific Islanders in the cultural group labelled as Aboriginal Australians. Participant numbers were initially reported separately for these two groups, but for analysis purposes the two groups were combined. This may have confounded the results due to potentially large differences in culture and cultural identity within the group labelled Aboriginal Australians. The inclusion in the above research of a measure of cultural identity further informed the consideration of cultural identification in the present research, and the Study 3 hypotheses.

Caring for Country refers to caring for one’s homeland, and comprises one aspect of cultural engagement for Aboriginal Australians. Caring for Country has been defined as having the knowledge and responsibility to manage traditional lands, and the participation of Aboriginal Australians in “interrelated activities with the objective of promoting ecological and human health” (Burgess et al., 2008, p. 1). There is preliminary evidence that cultural engagement can lead to positive health benefits for Aboriginal Australians. A qualitative study was conducted involving interviews with 13 traditional custodians and Aboriginal environmental workers from the Yorta Yorta Nation and the Boonerwrung Tribe in Victoria (Kingsley, Townsend, Phillips, & Aldous, 2009). The semi-structured interviews included questions regarding the health and wellbeing benefits associated with caring for Country, as well as perceptions of Aboriginal people when on their own Country. Thematic analysis was used and found that a spiritual and cultural relationship to land
increased identity, self-esteem, and pride for participants. Specific themes described by participants include: Country as a place to escape and become grounded; time on Country increasing knowledge of Aboriginal culture and natural resource management; receiving “answers from nature” (Kingsley et al., 2009, p. 295); reconnecting with ancestors; feeling pulled to land which gave a sense of belonging; and viewing caring for Country as an inherent obligation which connected them to their culture. A female participant reported that caring for Country “empowers you to make sense of your life. . . . It’s a special connection. . . . This is where your ancestors were. . . . That’s a sense of belonging” (Kingsley et al., 2009, p. 295). Participants also reflected on feeling “required”, “needed”, “a great sense of pride”, “self-worth”, “responsibility”, and “achievement” when involved in caring for Country (Kingsley et al., 2009, p. 296). The qualitative nature of this research, the small sample size, and the single-interview research design all present significant limitations to the findings of this research. More thorough and systematic investigation is required of the benefits of caring for Country and general cultural engagement.

Research has also found that Aboriginal people living in homelands, where traditional practices of Caring for Country are common, have better health outcomes than those in centralised populations (Burgess et al., 2008, McDermott et al., 1998, Morice 1976, O’Dea 1984, Rowley et al., 2008). Health outcomes were investigated in the Utopia community, a decentralised community in Australia’s Northern Territory, over a 10-year period (Rowley et al., 2008). The authors measured mortality from all causes as well as mortality and hospitalisations associated with cardiovascular disease, and found rates to be 40-50% lower within the Utopia community than within the general Northern Territory Aboriginal population. It was argued that the positive health outcomes in this community were likely to be related to the connectedness to culture, family, and land (Rowley et al., 2008). Similarly, Aboriginal people living on homelands in Central Australia had significantly better health outcomes with regard to mortality, hospitalisation, hypertension, diabetes, and injury than those living in centralised areas (McDermott et al., 1998). Marked health improvements were found in Australian Aboriginal people with diabetes after a temporary reversion to traditional lifestyle (O’Dea, 1984). However, it should be noted that it is unclear whether the reason for the health gains evidenced in these
studies is cultural engagement itself, or perhaps the effects of being with family, living an active lifestyle, or any number of other variables which may affect health in a positive way.

The body of research presented above indicates that there are three prior studies which have investigated the association between cultural engagement and health outcomes for Aboriginal Australians. However, these studies have not directly measured engagement in cultural activities and have evidenced various methodological limitations. Quantitative methods have not yet been employed to measure cultural engagement’s association with drug and alcohol treatment outcomes. Furthermore, research design has not employed multiple services and multiple studies. There is a need for the present research to more directly measure cultural engagement and its association with mental health outcomes within the context of drug and alcohol treatment.

1.6.3 Measurement of Aboriginal cultural engagement

A measure of cultural engagement was developed to evaluate the relationship between alcohol cessation and engagement in traditional activities amongst American Indians (Torres Stone et al., 2006). The research found that participation in traditional activities and traditional spirituality had significant positive effects on alcohol cessation. Such a comprehensive measure of cultural engagement does not yet exist for Aboriginal Australians. The Caring for Country Questionnaire (Burgess et al., 2008), measures some activities which are related to Aboriginal cultural engagement (e.g., spending time on Country, protecting Country, ceremony), however it does not adequately capture the wider variety of activities which represent cultural engagement for Aboriginal Australians. A more comprehensive measure of cultural engagement is needed to clarify whether there is an association between cultural engagement and health benefits for Aboriginal Australians.

Anecdotal reports from young Aboriginal Australians indicate they have difficulty in articulating a sense of cultural connection. This has been attributed to a lack of open cultural practice and a lack of systemic cultural transmission by older Aboriginal people (Berry et al., 2012). Enhancing connection with a traditional culture which is diminishing and often inaccessible presents a difficult task. However, culture is not a static thing but one which changes over time, and as such there are likely benefits of clarifying what engagement in culture looks like for
Abo
ger

original Australians today. Poroch and colleagues (2009) state that while remote communities may continue to practice traditional culture to some extent, many traditions have been almost lost to urban communities. They explain that some respondents in an urban case study expressed that their experiences of spirituality
and culture included: feeling a sense of another presence; how you feel about yourself and other Aboriginal people; the requirement to go to Country to find one’s deep spirit; totem beliefs; being comfortable with oneself; treating others with dignity and kindness and receiving the same; and connection with yourself, your family, and your land. This is one view of culture put forward by 6 individuals in the Canberra region of Australia. It is probable that what is considered ‘culture’ changes over time, and between regions and language groups. There is a need for a measure of cultural engagement for Aboriginal Australians which is relevant to the lifestyle, traditional knowledge, and challenges of today’s Aboriginal people. A reliable and valid measure of cultural engagement will allow future research to establish whether there is a clear association between cultural engagement and health benefits. Establishing a link between cultural engagement and positive health outcomes will then provide an empirical basis for the inclusion of culture in treatment planning and program development.

Some may question whether cultural engagement can actually be captured by a questionnaire, due to its dynamic and conditional nature. Culture is an ever-changing construct, the understanding of which varies according to group membership, individual belief structures, and time-related perspectives. During the process of this research there were certainly critics who suggested that culture cannot be captured by words on a page. It is appreciated that culture is complex, and any measure of cultural engagement developed could not aim to measure culture in totality or in an absolute manner. Instead of measuring culture itself, the survey developed would aim only to measure the level of engagement in certain activities stated by the Aboriginal community to be culturally important to them. A primary advantage of such a measure would lie in its ability to provide services and individuals themselves with information regarding the type and extent of cultural activities undertaken. Furthermore, the very changing nature of culture is one of the primary reasons it is important to consider the question of how to capture and measure cultural engagement. With the significant intrusion made on Australian
Aboriginal culture over the past centuries, Aboriginal culture has become difficult to define and experience for Aboriginal and non-Aboriginal people alike. The development of a survey regarding Aboriginal cultural engagement would provide an opportunity to capture a snapshot of particular dimensions of culture, at a particular point in time, with a particular group of Aboriginal Australians. This would not limit what is considered culture over time, and it would be necessary to revise the measure periodically in order to account for changing perspectives and understandings of culture. There is currently very little knowledge and understanding about what constitutes Aboriginal culture in modern Australia, and the development of a measure of cultural engagement may provide a structured and reliable method of gathering information regarding the extent to which individuals engage in particular cultural activities.

1.7 Rationale for the present research

There is a need for effective health services for Aboriginal Australians. It is necessary for the therapeutic interventions offered to be culturally safe, and to enhance individuals’ wellbeing. Engagement in cultural practices is one way for individuals to enhance their experience of cultural fit and relatedness, and ultimately enhance their wellbeing (Chirkov et al., 2003, 2005). Several health benefits have been linked to cultural engagement, such as reduced risk of drug and alcohol use in adolescents (Gazis et al., 2010), increased self-esteem and identity (Kingsley et al., 2009), lower rates of cardiovascular disease (Rowley et al., 2008), reduced rates of mortality, hospitalisation, hypertension, diabetes, and injury (McDermott et al., 1998), and improved socio-economic outcomes (Dockery, 2009a, 2009b, 2011). However, it has been argued that the culture as treatment hypothesis (Brady, 1995), namely that a return to traditional Aboriginal cultural practices is sufficient for effecting recovery from drug and alcohol use for many Aboriginal individuals, remains an open empirical question (Gone & Calf Looking, 2011). The present research seeks to address this question by considering the outcomes associated with cultural engagement for Aboriginal Australians in drug and alcohol treatment.

One particular area of wellbeing that has not yet been investigated with regard to cultural engagement for Aboriginal Australians is empowerment. Empowerment is a process relevant to individuals and communities whereby a sense of mastery, control, and self-efficacy may be achieved (Haswell et al., 2010).
Empowerment approaches have been adopted to enhance health outcomes for disadvantaged populations both in Australia and abroad (Haswell et al., 2010), and there has been a focus on empowerment within Australian Aboriginal governmental policies. Therefore it is important to consider outcomes in terms of empowerment for services that aim to improve wellbeing for Aboriginal Australians.

A measure of empowerment, the Growth and Empowerment Measure (GEM; Haswell et al., 2010), has been developed for use with Aboriginal Australian populations, but it has not yet been implemented in the context of drug and alcohol treatment. There is a need to investigate whether the GEM is an appropriate measure to be used in this context, and more specifically to investigate its association with other outcomes and its sensitivity to change within a drug and alcohol population. Once this is established, the GEM may then be used to consider the relationship between empowerment and other variables important to Aboriginal Australians, such as cultural engagement. The primary question addressed in this research is whether there is an association between cultural engagement and treatment outcomes such as empowerment.

The research comprises three studies. The first two are driven by the need to clarify the appropriateness of important aspects of measurement. In Study 1 the sensitivity and feasibility of measures of outcome for Aboriginal Australians (specifically the GEM) are assessed. In Study 2 a measure of cultural engagement is developed that might help capture the mechanisms by which improvements in outcome occur (the Aboriginal Cultural Engagement Survey, ACES; Berry et al., 2012). Study 3 then continues to utilise these measures in a survey of Aboriginal men undergoing treatment in services that explicitly include cultural components. Broadly this study aims to clarify whether cultural engagement (e.g., ACES) is associated with therapeutic outcomes (e.g., GEM).

1.8 AIMS OF THE RESEARCH

Study 1

1. To establish the feasibility of collecting outcome data from a residential service.
2. To assess the appropriateness of the GEM for use in a drug and alcohol treatment setting (i.e. its association with other outcome measures and its sensitivity to change).
3. To provide a preliminary exploration of the perceived value of the cultural components of treatment from the perspectives of both Aboriginal and non-Aboriginal clients.

Study 2

1. To describe the cultural activities offered at several residential drug and alcohol treatment programs throughout NSW, and to establish the service providers’ view of the therapeutic benefits of these cultural activities.

2. To develop a measure of cultural engagement of Aboriginal Australians in their everyday life (the Aboriginal Cultural Engagement Survey, ACES; Berry, Crowe, & Deane, 2012).

Study 3

1. To seek the perspective of clients regarding the cultural activities offered in treatment, and their views on the most helpful and important cultural aspects to be included in treatment programs.

2. To use the ACES and other measures of cultural engagement during treatment to investigate the relationship between engagement in cultural activities and outcomes (such as empowerment) for Aboriginal Australians.
STUDY 1
2 METHODS – STUDY 1

2.1 AIMS
1. To establish the feasibility of collecting outcome data from a residential service.
2. To assess the appropriateness of the GEM for use in a drug and alcohol treatment setting (i.e. its association with other outcome measures and its sensitivity to change).
3. To provide a preliminary exploration of the perceived value of the cultural components of treatment from the perspectives of both Aboriginal and non-Aboriginal clients.

2.2 PARTICIPANTS

Participants were recruited via convenience sampling from Aboriginal and non-Aboriginal clients engaged in residential drug and alcohol treatment at Oolong House, located in Nowra on the South Coast of NSW. Participation was on a voluntary basis with informed consent provided. Participants included 57 Aboriginal and 46 non-Aboriginal males over 18 years of age who had alcohol and other drug problems. Attrition resulted in sample sizes of 50 (25 Aboriginal, 25 non-Aboriginal) and 34 (20 Aboriginal, 14 non-Aboriginal) at the time points 8-weeks and 16-weeks respectively. Attrition was due to participants choosing to leave the program (e.g., due to family responsibilities or unwillingness to adhere to the program structure) and eviction (e.g., for violations of the program rules, including drug use or violence). No clients engaged in the service during the data collection period refused to participate in the study. Follow up data for participants who did not complete the program were not available. Therefore the results of the research do not reflect the self perceived health of the treatment non-completers.

Oolong House offers residential drug and alcohol rehabilitation services for male clients of Aboriginal and non-Aboriginal backgrounds. Oolong House is a modified therapeutic community providing evidence-based treatments (e.g., cognitive behaviour therapy) and group-based interventions, including AA and Narcotics Anonymous (NA). The treatment program is 16-weeks long and uses a traditional holistic community-healing model, incorporating the Aboriginal community in the healing process. The program involves participation in cultural activities as well as cultural education in the areas of ancestry, cultural respect, land
and humanity, hunting and gathering, language, storytelling, cultural identity, traditional artwork, construction of traditional musical instruments and weapons, traditional music, cultural dance, and visiting culturally significant sites.

2.3 Procedure

Data were collected by a research project officer working at Oolong House at intake, 8-weeks, 16-weeks (program completion), and 3-month post discharge follow-up. Data at intake, 8-weeks and 16-weeks were collected via face-to-face semi-structured interviews, while follow-up data were collected via telephone interviews and face-to-face interviews on site of the service. At all time-points data were collected on the Kessler 10 Psychological Distress Scale (K10; Kessler et al., 2002), the Drug Taking Confidence Questionnaire (DTCQ-8; Sklar & Turner, 1999), and the Growth and Empowerment Measure (GEM; Haswell et al., 2010). At program completion data were also collected for each participant on the Treatment Component Evaluation.

2.4 Measures

2.4.1 Kessler 10 Psychological Distress Scale (K10)

The K10 (Kessler et al., 2002) is a brief 10-item self-report questionnaire designed to measure core dimensions of non-specific psychological distress. The K10 is used widely, including in the World Health Organization World Mental Health Survey, and commonly used as a clinical outcome measure (Brooks, Beard, & Steel, 2006). No population norms were found to be available for the K10. The K10 has been found to have high internal consistency reliability (Cronbach’s alpha = 0.93), good precision in the 90th-99th percentile range of the population distribution (standard errors of standardised scores in the range 0.20-0.25), as well as an ability to discriminate DSM-IV cases from non-cases (areas under the Receiver Operating Characteristic curve of 0.87 to 0.96) (Kessler et al., 2002). The K10 has been found to have a cut-off point of 16 or more yielding a sensitivity of .86 and a specificity of .78 in identifying people with any mood or anxiety disorder (Andrews & Slade, 2001). Participants respond on a 5-point Likert scale from none of the time to all of the time, and has a possible range of 0 to 50. The yearning about mental health version of the K10 (Nagel & Thompson, 2007), developed for use with Aboriginal Australians, was used in this research (included in Appendix A, labelled “section 3”).
This version contains the same wording as the original, with additional graphics to promote comprehension of the response scale.

2.4.2 Drug Taking Confidence Questionnaire (DTCQ-8)

The DTCQ-8 (Sklar & Turner, 1999) is an 8-item self-report measure adapted from the original 50-item questionnaire (DTCQ-50; Annis, Sklar, & Turner, 1997) which measures a person’s self-efficacy in not drinking or taking drugs in specific high relapse-risk situations. No population norms were found to be available for the DTCQ-8. Analyses have demonstrated that the DTCQ-50 has a stable factor structure and is a reliable measure of coping self-efficacy for use across a wide range of addictions (Annis et al., 1997; Sklar, Annis, & Turner, 1998). The DCTQ-8 has been shown to correlate at .97 with the total DTCQ-50 score and to account for 95% of the variance in total DCTQ-50 scores (Sklar & Turner, 1999). Therefore the DTCQ-8 has been assessed to be a reliable and valid indicator of refusal self-efficacy. Participants respond on a 6-point scale from 0% to 100%, where 0% = Not confident at all and 100% = Very confident. A global self-efficacy score is obtained by calculating the mean of all eight responses, with higher scores indicating greater self-efficacy (Sklar & Turner, 1999). The DTCQ-8 is included in Appendix B.

2.4.3 Growth and Empowerment Measure (GEM)

The GEM (Haswell et al., 2010) is a self-report measure comprised of a 13-item Emotional Empowerment Scale (EES14) and 12 Empowerment Scenarios (12S). This tool was designed as a part of the Empowerment Research Program (a collaboration of the University of Queensland and James Cook University) to provide a measure of dimensions of empowerment that are important to Aboriginal Australians, and was developed using in-depth interview data from 50 participants of the Family Wellbeing Empowerment Program who described their experience of empowering change (see Tsey et al., 2005). The instrument was examined and improved through workshops in Alice Springs, Yarrabah and Cairns, with the help of Aboriginal consultants as well as researchers experienced in the measurement of complex psychological concepts (Haswell et al., 2010). This scale has been purposely designed to be visually attractive, interesting, and simple to complete. The GEM is included in Appendix A (the EES14 is labelled “section 2” and the 12S is labelled “section 4”).

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The GEM has been shown to have robust internal reliability for the EES14 (α = .89) and the 12S (α = .86), and the individual components and summary scores of this tool measure inter-related but distinct aspects of empowerment and wellbeing. The GEM comprises four subscales, two within each of the EES14 and the 12S (Haswell et al., 2010). The EES14 comprises the Inner Peace subscale (items 2, 3, 4, 10, 11, 12, 13, and 14) and the Self-Capacity subscale (items 5, 6, 7, and 9). The 12S comprises the Healing and Enabling Growth subscale (scenarios 1, 2, 3, 5, 8, 10, and 11) and the Connection and Purpose subscale (scenarios 4, 6, 7, 9, and 12). No population norms were found to be available for this measure.

All items on the EES14 are rated on a 5-point scale falling between two extremes. For example, for item 13 the first point on the scale is I live in fear of what’s ahead, while the last point on the scale is I feel safe and secure, I can face whatever is ahead. The total-score range for the EES14 is 14 to 70. All scenarios on the 12S are rated on a 7-point scale falling between two extremes. For example, for item 4 the first point on the scale is There are things I should change in my life to be healthier and happier, but it seems all too hard. I don’t think I can change anything at this time, and the last point on the scale is I have gained skills and confidence and have succeeded in making many important changes in my life. I feel fully confident about my ability to make changes. The total-score range for the 12S is 12 to 84.

The GEM is relatively unique in its attempt to measure the process of empowerment (Haswell et al., 2010), as other measures of empowerment-like constructs have focused on measuring outcomes or indicators of change rather than processes (e.g., the sense of coherence scale; Antonovsky, 1993). Contemporary views of recovery focus on aspects of wellbeing rather than exclusively on reduction in symptoms, and it has been argued that recovery from drug and alcohol use must extend beyond the drug and alcohol behaviour to encompass a process of self-improvement and renewed life (Laudet, 2007). In line with these views, the GEM seeks to measure individuals’ own perspectives of their psychosocial wellbeing and empowerment at a personal, family, and organisational level. Unlike previous measures of empowerment, the GEM is intended to be used in a variety of settings rather than being tailored to a specific context (Haswell et al., 2010). The GEM has not previously been used within a drug and alcohol treatment setting, and no data on its sensitivity to change has previously been reported.
2.4.4 Treatment Component Evaluation

This measure was developed for this study and aimed to evaluate different aspects of the program from the participants’ perspective. Participants complete the treatment component evaluation at the completion of the 16-week program. A total of 16 aspects of treatment are rated in the treatment component evaluation, including the cultural components of the program, i.e. “how helpful did you find the cultural program (e.g., artwork, weaving, dance) in assisting you to reach your recovery goals?” No population norms are available for this measure and it is yet to be assessed for reliability and validity. Responses are rated on a 5-point Likert scale regarding the extent to which participants believe that different aspects of the treatment program were helpful (1 = unhelpful to 5 = extremely helpful). The treatment component evaluation has a possible range of 16 to 80. The treatment component evaluation is included in Appendix C.

2.5 Statistical analyses

Due to a high attrition rate, independent samples t-tests were conducted to determine whether non-completion (i.e. leaving the program before the 8-week and 16-week time-points) was associated with baseline scores on the K10, the DTCQ-8, or the GEM. To investigate the association between symptom distress measures and empowerment and refusal self-efficacy measures at baseline, correlational analysis was conducted. Where assumptions for parametric analysis were violated a Kendall’s tau-b correlation was used. Kendall’s tau-b has been found to have several advantages over Spearman’s r when applied to data from psychiatric treatment settings (Arndt, Turvey, & Andreason, 1999). Repeated measures analysis of variance (ANOVA) as well as a series of paired t-tests were conducted to analyse changes over the three time-points for the K10, DTCQ-8, and GEM. Where assumptions for parametric analyses were violated, nonparametric Friedman Two-Way ANOVA and Wilcoxon Signed Ranks tests were used respectively. Effect sizes were calculated to indicate the sensitivity to change of the GEM (Haswell et al., 2010). Effect sizes were calculated as recommended by Clark-Carter (2004) by converting z into r using the formula \( r = \text{the absolute value of } \frac{z}{\sqrt{N - \text{Ties}}} \). Effect size has been used as an indicator of sensitivity to change in previous studies regarding substance abuse treatment (e.g. Butler et al., 2006), and a high effect size is
indicative of high sensitivity to change and utility of the tool. Cohen (1988) suggests that $r$ values greater than .5 may be considered large, greater than .3 may be considered medium, and greater than .1 may be considered small. Finally, exploratory analysis was conducted to examine client responses on the treatment component evaluation. Independent samples t-tests were conducted to investigate whether there was a significant difference between Indigenous and non-Indigenous clients’ ratings of the helpfulness of various components of treatment, particularly cultural components of treatment.
3 RESULTS – STUDY 1

3.1 Attrition

A high attrition rate was found, with 103 participants in treatment at baseline, 50 at 8-weeks, and 34 at 16-weeks. Independent samples t-tests were conducted to investigate whether there was a significant difference on the baseline scores for participants who left the program before the 8-week and 16-week time points when compared with participants who remained in the program. For the 8-week time point the assumptions of scale of measurement, independence, and homogeneity of variance were met. Results indicate that there was no significant difference for any of the baseline measures for participants who left the program before the 8-week time point when compared with participants who remained in the program (all p values > .27). For the 16-week time point the assumptions of scale of measurement, independence, and homogeneity of variance were met. Results once again indicate no significant difference on any of the baseline measures for participants who left the program before the 16 week time point when compared with participants who remained in the program (all p values > .27), although the result approached significance for the Empowerment Scenarios (S12) of the GEM (p = .06). Participants who completed the program had higher baseline scores for the S12 than participants who left the program before 16-weeks, indicating that baseline empowerment levels may have been a factor in determining whether or not participants remained in the treatment program.

3.2 Treatment outcomes

Correlational analysis was conducted to investigate the association between symptom distress measures, empowerment and refusal self-efficacy measures at baseline. The assumption of normality was violated; therefore a Kendall’s tau-b correlation was used. Higher scores on the K10 indicate higher levels of psychological distress, whereas higher scores on the DTCQ-8 and the GEM indicate higher levels of refusal self-efficacy and empowerment respectively. Results are summarised in Table 1. As expected, a significant negative correlation was found between the K10 and the DTCQ-8, and between the K10 and all four subscales of the GEM. Significant positive correlations were found between the DTCQ-8 and all four subscales of the GEM. This indicates that more psychological distress is associated
with less empowerment and less confidence to resist the urge to use drugs, and conversely that more empowerment is associated with more confidence to resist drug and alcohol use.

Table 1

*Kendall’s tau-b correlations between scores at baseline (n =103) on outcome measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Distress (K10)</td>
<td>-.27**</td>
<td>-.52**</td>
<td>-.34**</td>
<td>-.41**</td>
<td>-.37**</td>
</tr>
<tr>
<td>2. Refusal self-efficacy (DTCQ-8)</td>
<td>-</td>
<td>.40**</td>
<td>.34**</td>
<td>.35**</td>
<td>.30**</td>
</tr>
<tr>
<td>3. Inner Peace (GEM)</td>
<td>-</td>
<td>-</td>
<td>.54**</td>
<td>.48**</td>
<td>.38**</td>
</tr>
<tr>
<td>4. Self-Capacity (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.43**</td>
<td>.40**</td>
</tr>
<tr>
<td>5. Healing &amp; Enabling Growth (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.49**</td>
</tr>
<tr>
<td>6. Connection &amp; Purpose (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**p < .01.

A repeated measures ANOVA was conducted to analyse changes over time for the K10, the DTCQ-8, and the GEM subscales over three times points: baseline, 8-weeks and 16-weeks. Friedman Two-Way ANOVA was used, and the assumptions of independence and scale of measurement were met. Results indicate a significant difference between scores at baseline, 8-weeks and 16-weeks on the K10 ($\chi^2_F = 27.74$ (corrected for ties), $df = 2, N – ties = 34, p = .000$), the DTCQ-8 ($\chi^2_F = 36.02$ (corrected for ties), $df = 2, N – ties = 34, p = .000$), and all four subscales of the GEM including Inner Peace ($\chi^2_F = 26.34$ (corrected for ties), $df = 2, N – ties = 34, p = .000$), Self-Capacity ($\chi^2_F = 22.42$ (corrected for ties), $df = 2, N – ties = 34, p = .000$), Healing and Enabling Growth ($\chi^2_F = 32.67$ (corrected for ties), $df = 2, N – ties = 34, p = .000$), and Connection and Purpose ($\chi^2_F = 14.80$ (corrected for ties), $df = 2, N – ties = 34, p = .001$).

Follow-up pairwise comparisons using the Wilcoxon Signed Ranks test were conducted and results are summarised in Table 2. There was a significant difference between baseline and 8-weeks on all measures. This indicates that from baseline to 8-weeks participants’ psychological distress significantly decreased, while their confidence in resisting use and their empowerment significantly increased. For 8-
weeks to 16-weeks, the assumptions of independence and scale of measurement were met and results are summarised in Table 3. There was a significant improvement in scores for the K10, DTCQ-8, and the GEM subscales Inner Peace and Healing and Enabling Growth. This indicates that from 8-weeks to 16-weeks participants’ psychological distress significantly decreased, while their confidence in resisting use significantly increased along with two aspects of their empowerment (i.e. Inner Peace and Healing and Enabling Growth). It is notable that between 8-weeks and 16-weeks the mean of psychological distress moved into the non-significant range of case-ness, with scores below 16 indicating no presence of anxiety or mood disorder (Andrews & Slade, 2001). There was an increase for the subscale Self-Capacity that approached significance and a non-significant increase for the subscale Connection and Purpose.

Table 2
Summary of results from Wilcoxon Signed Ranks tests comparing outcome scores at baseline (n = 103) and 8-weeks (n = 50)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline Mean</th>
<th>Baseline SD</th>
<th>8-weeks Mean</th>
<th>8-weeks SD</th>
<th>N - Ties</th>
<th>Mean Rank</th>
<th>T</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>K10b</td>
<td>25.60</td>
<td>9.41</td>
<td>17.08</td>
<td>7.12</td>
<td>48</td>
<td>26.05</td>
<td>134</td>
<td>-4.66</td>
<td>.000</td>
</tr>
<tr>
<td>DTCQ-8c</td>
<td>62.20</td>
<td>30.63</td>
<td>85.74</td>
<td>21.54</td>
<td>41</td>
<td>21.92</td>
<td>72</td>
<td>-4.65</td>
<td>.000</td>
</tr>
<tr>
<td>IPd</td>
<td>3.48</td>
<td>.92</td>
<td>4.29</td>
<td>.75</td>
<td>46</td>
<td>24.29</td>
<td>158</td>
<td>-4.18</td>
<td>.000</td>
</tr>
<tr>
<td>SCe</td>
<td>3.93</td>
<td>.79</td>
<td>4.53</td>
<td>.66</td>
<td>41</td>
<td>22.09</td>
<td>88</td>
<td>-4.46</td>
<td>.000</td>
</tr>
<tr>
<td>HGf</td>
<td>4.14</td>
<td>1.18</td>
<td>5.30</td>
<td>1.01</td>
<td>47</td>
<td>25.97</td>
<td>115</td>
<td>-4.75</td>
<td>.000</td>
</tr>
<tr>
<td>CPg</td>
<td>4.74</td>
<td>1.26</td>
<td>5.47</td>
<td>1.03</td>
<td>43</td>
<td>23.72</td>
<td>139.5</td>
<td>-4.03</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. a = positive ranks where 8-weeks > baseline for DTCQ-8, IP, SC, HG, and CP
b K10 = Kessler 10-item Psychological Distress Scale
c DTCQ-8 = Drug Taking Confidence Questionnaire, 8-item version
d IP = Inner Peace
e SC = Self-Capacity
f HG = Healing and Enabling Growth
g CP = Connection and Purpose
Table 3

Summary of results from Wilcoxon Signed Ranks tests comparing outcome scores at 8-weeks (n = 50) and 16-weeks (n = 34)

<table>
<thead>
<tr>
<th>Measure</th>
<th>8-weeks</th>
<th>16-weeks</th>
<th>N - Ties</th>
<th>Mean Rank</th>
<th>T</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K10b</td>
<td>17.08</td>
<td>7.12</td>
<td>14.71</td>
<td>4.84</td>
<td>30</td>
<td>17.10</td>
<td>123</td>
</tr>
<tr>
<td>DTCQ-8c</td>
<td>85.74</td>
<td>21.54</td>
<td>93.07</td>
<td>9.81</td>
<td>22</td>
<td>12.67</td>
<td>63</td>
</tr>
<tr>
<td>IPd</td>
<td>4.29</td>
<td>.75</td>
<td>4.65</td>
<td>.41</td>
<td>24</td>
<td>13.53</td>
<td>29.50</td>
</tr>
<tr>
<td>SCe</td>
<td>4.53</td>
<td>.66</td>
<td>4.71</td>
<td>.43</td>
<td>18</td>
<td>10.63</td>
<td>43.50</td>
</tr>
<tr>
<td>HGf</td>
<td>5.30</td>
<td>1.01</td>
<td>5.69</td>
<td>.85</td>
<td>32</td>
<td>19.23</td>
<td>105</td>
</tr>
<tr>
<td>CPg</td>
<td>5.47</td>
<td>1.03</td>
<td>5.63</td>
<td>.93</td>
<td>29</td>
<td>15.74</td>
<td>167.5</td>
</tr>
</tbody>
</table>

Note. a = positive ranks where 16-weeks > 8-weeks for DTCQ-8, IP, SC, HG, and CP; b = negative ranks where 8-weeks > 16-weeks for K10; c = K10 = Kessler 10-item Psychological Distress Scale; d = DTCQ-8 = Drug Taking Confidence Questionnaire, 8-item version; e = IP = Inner Peace; f = SC = Self-Capacity; g = HG = Healing and Enabling Growth; h = CP = Connection and Purpose

3.3 Sensitivity to change

Effect sizes between baseline and 8-weeks were large for the K10 (r = .67), the DTCQ-8 (r = .73), and all four subscales of the GEM (Inner Peace = .62; Self-Capacity = .70; Healing and Enabling Growth = .69; Connection and Purpose = .61). Effect sizes between 8-weeks and 16-weeks were large for the subscales Inner Peace (r = .70) and Healing and Enabling Growth (r = .53), medium for the K10 (r = .41), the DTCQ-8 (r = .44) and the subscale Self-Capacity (r = .44), and small for the subscale Connection and Purpose (r = .20). The effect sizes for the GEM subscales indicate that the GEM was highly sensitive to change in the current drug and alcohol treatment population, particularly during the earlier half of the treatment program.

3.4 Participants’ perspectives on the value of cultural components

Exploratory analysis was conducted to examine participants’ responses on the treatment component evaluation. Independent sample t-tests were conducted to investigate whether there was a significant difference between Aboriginal and non-
Aboriginal participants’ ratings of the helpfulness of cultural components of treatment. The assumption of normality was violated, and therefore the Mann-Whitney $U$ test was used. As expected, results indicate that Aboriginal participants ($Mean \text{ Rank } = 19.78, n = 20$) rate the cultural components as significantly more helpful than non-Aboriginal participants ($Mean \text{ Rank } = 14.25, n = 14$) $U = 94.50, z = -1.68$ (corrected for ties), $p = .05$, one-tailed. On a 5-point Likert scale ($1 = \text{unhelpful}, 5 = \text{extremely helpful}$) Aboriginal participants’ mean rating for the helpfulness of cultural components was 4.25, while non-Aboriginal participants’ mean rating was 3.57.

Further exploratory analysis was conducted by calculating the mean of participants’ treatment component evaluation scores across all treatment components and investigating whether this varied significantly between Aboriginal and non-Aboriginal participants. Using the Mann-Whitney $U$ test no significant difference was found between Aboriginal and non-Aboriginal participants on their mean treatment component evaluation score ($p = .12$). Further exploratory analysis was conducted using the Mann-Whitney $U$ test to investigate whether Aboriginal and non-Aboriginal participants differed in their response regarding the helpfulness of the other 15 components of treatment measured on the treatment component evaluation. Item 15, “advice about money or employment”, was the only other component of treatment on which Aboriginal and non-Aboriginal participants differed significantly in their ratings of helpfulness. This item was rated as significantly more helpful by Aboriginal participants ($Mean \text{ score } = 3.70, Mean \text{ Rank } = 20.50, n = 20$) than non-Aboriginal participants ($Mean \text{ score } = 2.79, Mean \text{ Rank } = 13.21, n = 14$) $U = 80.00, z = -2.18$ (corrected for ties), $p = .03$, two-tailed.

### 3.5 Summary of findings and further research directions

#### 3.5.1 Collecting outcome data from residential services

A high attrition rate (67%) was found, with 103 participants in treatment at baseline and 34 participants in treatment at discharge. This is comparable with other drug and alcohol treatment settings, with attrition rates reported to be between 42% and 75% (Fishman, Reynolds, & Riedel, 1999). The high attrition rate in Study 1 indicates a potential difficulty in collecting outcome data from residential rehabilitation services. Despite this, statistically significant improvements were
found for participants who completed the treatment program, including a reduction in psychological distress, and enhancements in refusal self-efficacy and empowerment.

The high attrition rate and the fact that outcomes were only measured for clients who remained in treatment are limitations of Study 1. Specific reasons for attrition and a participant flow diagram were not available for collection reliably, which represents another notable limitation. Although there were no major differences between completers and non-completers on baseline measures, it is likely that the results will be biased towards a more positive outcome picture for completers. Employment of alternative (e.g., cross-sectional) designs in further studies may decrease the potential impact of attrition.

Another limitation of Study 1 is the recruitment of participants from only one drug and alcohol service, which limits the generalisability of the findings. A related issue is the relatively small sample size, which when combined with the need to use nonparametric analyses, reduces the overall power of Study 1. Therefore, employment of a larger sample size recruited from several rehabilitation services in different locations may increase the generalisability of further research findings.

3.5.2 Appropriateness of the use of the GEM

Results indicate strong associations between the GEM and other outcome measures (i.e. the K10 and DTCQ-8). Results also indicate that the GEM was highly sensitive to change in the present drug and alcohol population, supporting its utility in drug and alcohol treatment settings. Effect sizes for the GEM subscales were of similar magnitude to the K10 and the DTCQ-8, two widely used and well-established measures. The Inner Peace subscale is of particular note due to its strong correlation with other measures and its effect sizes. Inner Peace continued to improve at an increasing rate throughout treatment, with a higher effect size from 8-weeks to 16-weeks than from baseline to 8-weeks. This suggests that Inner Peace may be an aspect of empowerment that can continue to grow relatively independently of other aspects of empowerment. The items included on the Inner Peace subscale are “dealing with anger”, “feeling calm and relaxed”, “feeling safe and secure”, “feeling centred and focused”, “confident”, “happy with self and life”, “feeling strong and full of energy” and “feeling skilful”. It is possible that Inner Peace continued to grow in the present study in part due to participants being in the setting of residential rehabilitation (i.e. involving safe housing, limited contact with everyday stressors,
and scheduled activities for skill enhancement). In any case, the findings contribute to previous psychometric research examining the validity of the GEM (Haswell et al., 2010), although the results are preliminary and should be interpreted cautiously. It is necessary for further studies to continue to examine the validity of the GEM, and in particular to consider the GEM’s association with other measures.

3.5.3 Value of cultural components of treatment

Aboriginal clients indicated that they found the cultural components of treatment significantly more helpful than did non-Aboriginal clients, although this difference was small in magnitude. It is necessary for further studies to consider how and why cultural components of treatment are helpful. Clearer descriptions are needed of the mechanisms by which cultural activities are considered to result in therapeutic benefits, and this will be explored in Study 2. A limitation of Study 1 was that the measurement of the helpfulness of cultural activities was limited to a single item. Further studies are needed to develop more detailed multi-item measures of engagement in cultural activities to allow for a more thorough understanding of the cultural activities which are important to Aboriginal Australians. This will also be carried out in Study 2.

There is a need to look more systematically at the relationship between participation in cultural activities and treatment outcomes. Further investigation is required of clients’ engagement in therapeutic cultural activities, and the association between engagement and positive outcomes such as empowerment and mental health. This will be investigated in Study 3.

In addition, further research which employs qualitative analysis of narrative interviews with Aboriginal clients of drug and alcohol services may yield more detailed data regarding what cultural activities are seen as beneficial by clients, and why. This will be also explored in Study 3.
STUDY 2
4 METHODS – STUDY 2

4.1 AIMS

1. Stage 1 aims to describe the cultural activities offered at several residential drug and alcohol treatment programs throughout NSW, and to establish the service providers’ view of the therapeutic benefits of these cultural activities.

2. Stage 2 aims to develop a measure of cultural engagement of Aboriginal Australians in their everyday life (the Aboriginal Cultural Engagement Survey, ACES; Berry et al., 2012).

4.2 STAGE 1 – TELEPHONE INTERVIEWS WITH STAFF OF SERVICE PROVIDERS

4.2.1 Participants

Participants were managers from five Aboriginal drug and alcohol rehabilitation service providers within New South Wales. The service providers were located across the state in urban, semi-urban and remote areas, and all offered a treatment program specific for Aboriginal Australian clients. The number of beds available at each service ranged from 14 to 37, with four services offering these beds to men only and one service accepting both men and women into their treatment program. Some services reported that up to 90% of their clients were mandated to attend rehabilitation by court, while other services reported receiving mostly voluntary clients. Programs ranged between three and six months in duration, offering a variety of educational, physical and cultural activities. It should be noted that three out of the five services involved in the research offered the cultural activities as a mandatory part of the treatment program, while two of the services offered the cultural activities as optional.

4.2.2 Procedure

4.2.2.1 Initial Telephone Interview

Telephone interviews were conducted to gather information regarding the cultural activities currently being incorporated into treatment programs. Interviews took place over a 12 month period, with timing of the interview dependent on when
each service began participating in the research as well as the availability of the participants. The questions were:

1. What activities/components have you included in your treatment program that makes the program culturally relevant for Aboriginal Australians? (i.e. what are the distinctly Aboriginal components of the treatment program?)
2. What do you believe are the therapeutic benefits of each of these activities/treatment components?
3. Which of these activities/components do you believe are the most valuable with regards to drug and alcohol treatment for Aboriginal Australians?
4. Are there any other cultural activities/components of treatment that you think may be beneficial for Aboriginal Australians? If so, what do you believe would be the therapeutic benefits of these activities/components?

A content analysis (Ramgoon, Dalasile, Paruk, & Patel, 2011) was conducted on the qualitative interview data, with responses categorised into dominant themes.

### 4.2.2.2 Follow-up telephone interview

A follow-up telephone interview was conducted with the same five participants, between four and 12 months after the participant’s initial interview. All follow-up interviews all took place within a two month period. The purpose of the follow-up interviews was to present the results of the initial interviews to the participants in order to seek feedback regarding the responses, and to further clarify the insights offered during the initial interviews. While the initial interview aimed to investigate what the therapeutic benefits of the cultural activities were perceived to be, the primary aim of the follow-up interview was to investigate why the cultural activities were perceived to be of benefit, and to describe the processes that facilitated therapeutic change. Participants were presented with the collated responses from the initial interview (see Appendices E, F, G, and H for documents presented to participants), and were asked for their thoughts regarding those responses. Participants were encouraged to expand on their responses from the initial interview by being asked the following questions:

*Part 1 - Regarding therapeutic benefits of cultural activities:*

1. The previous interview looked at the cultural activities, and the benefits of these. Now we’re trying to get at WHY they are helpful, i.e. what is the process by which they are helpful? Can you describe this for me?
2. If you were going to explain to a client why these activities are of benefit, what would you say?
3. What if someone was not sold on the idea of doing cultural activities? How might you promote the cultural activities?

Part 2 - Regarding the most beneficial cultural activities:
4. Can you choose two cultural activities which you view as the most beneficial?
5. Why do you think these activities are especially beneficial?
6. How do you think your service could improve the effectiveness of the cultural activities offered?

Part 3 - Regarding other cultural activities that could be offered:
7. Are there any cultural activities suggested in the responses that you agree/disagree would be beneficial?
8. Can you think of any other cultural activities that you think may be beneficial?

A content analysis (Ramgoon et al., 2011) was again conducted on the qualitative interview data, and responses were categorised into dominant themes.

4.3 Stage 2 – Development of a measure of cultural engagement

4.3.1 Participants and Procedure

Figure 1 outlines the phases of development of the Aboriginal Cultural Engagement Survey (ACES; Berry et al., 2012). All phases of validation of this instrument occurred within a semi-urban population in the Illawarra and South Coast regions of New South Wales, Australia.

Phase 1 involved development of the first version of the survey based on items from the Caring for Country Questionnaire (Burgess et al., 2008), Multigroup Ethnic Identity Measure (MEIM: Phinney, 1992), and the Sense of Culture Yarn (Westerman, 2008). This process was also informed by discussions with four Aboriginal individuals employed with Aboriginal drug and alcohol services, the Aboriginal Health and Medical Research Council, the Aboriginal Medical Service, and the University of Wollongong School of Nursing, Midwifery, and Indigenous Health. As a preliminary step prior to disseminating a draft survey to consultants in phase 2, the four discussants provided a varied base of opinion, reviewed the items
and made suggestions for changes in wording and additional items. These consultants were approached over a period of three weeks and were chosen based on their expertise in Aboriginal cultural issues, evident in their professional work. They were presented with a draft of questions derived from the measures listed above, and were asked to comment generally on the appropriateness and relevance of the questions to Aboriginal cultural engagement. Responses were collected in an informal interview with the primary researcher, and the consultants’ suggestions were used to amend existing questions and form additional questions, resulting in version 1 of the survey. Version 1 comprised 18 items answered on the same 4-point Likert scale used on the Caring for Country Questionnaire: not at all (none), a little (a few days in the year), a fair bit (a few weeks in the year), and a lot (a few months in the year) (Burgess et al., 2008).

Phase 2 involved providing a copy of the 18-item version 1 measure to five consultants who were then interviewed by telephone. The consultants comprised four males and one female, including three managers of remote Aboriginal drug and alcohol services, one Aboriginal drug and alcohol worker, and one member of staff from the Aboriginal Health and Medical Research Council (the latter consultant was also involved in the discussions in Stage 1). Five consultants were chosen for phase 2 to expand on the participant numbers in phase 1, and to provide an intermediate step between the initial discussions and the reference group in phase 3. Consultants were again selected based on their expertise in Aboriginal cultural issues demonstrated in their professional work. The telephone interview required consultants to respond to the items in version 1 of the survey and to rate each item on a Content Validity Index (CVI; see measures section below), that involved rating each item in terms of its relevance to Aboriginal cultural engagement. Consultants were asked to comment on the appropriateness of the items, suggest any changes they thought necessary, and suggest any additional items they believed should be included. This process resulted in some minor changes in wording of the existing items, and the addition of eight new items. Consequently version 2 included a total of 26 items, rated on the same Likert scale, which is included in Table 7 in the results section.

In Phase 3 13 Aboriginal consultants attended a reference group. Potential consultants were informed of the reference group via advertisements distributed
through local services, and consultants with specific cultural expertise (e.g., community Elders, Aboriginal cultural workers) were contacted by telephone and email. Potential consultants included Aboriginal staff members of drug and alcohol services, staff members of Aboriginal health services, community Elders accessed through local services, and community members accessed through local services and word-of-mouth. Eighteen consultants were invited to attend the reference group with the expectation that not all who were invited would be available to attend, and with the hope that 10 to 15 consultants would provide a robust yet manageable selection of consultants. The resulting reference group included thirteen consultants (11 females and two males), comprising one staff member of an Aboriginal drug and alcohol service, three staff members of the Aboriginal Medical Service, four local community Elders, and five community members. One member of the reference group was also involved in the discussion in phase 1. All consultants responded to the 26 items in version 2 of the survey, as well as rating each item on a CVI (see Appendix D). A group discussion was held in which consultants commented and made suggestions regarding the items. An item level CVI (I-CVI; see measures section below) was calculated for each item based on the ratings from the telephone interviews and the reference group. Review of the I-CVI along with suggestions from the reference group resulted in several items being revised, deleted, or added. A third and final version of the survey resulted from this process, and this is included in the right side of Table 7 in the results section.

Phase 4. Five expert consultants (three females and two males) were asked to complete a CVI for each item on the final version of the survey. Five experts were sought following recommendations of Polit, Beck, and Owen (2007), who suggest that three to five experts should provide ratings for the second round of CVI calculations. Three of the five experts were selected from the consultants in phase 3, the fourth expert was involved in phase 1 and phase 2, and the fifth expert was a consultant in phase 2. They were identified as experts based on their engagement with the community at different levels (e.g., as Elders, community representatives), and were seen to demonstrate a high level of expertise with regard to cultural engagement based on their contributions to the reference group and discussions. The experts included two community Elders, one staff member from the Aboriginal Medical Service, one staff member from the Aboriginal Health and Medical
Research Council, and one Aboriginal drug and alcohol worker. An I-CVI and scale level CVI (S-CVI; see measures section below) was calculated for the final revision based on the ratings of these five expert consultants.

**Figure 1.** Phases of development of the Aboriginal Cultural Engagement Survey (ACES).

### 4.3.2 MEASURES

#### 4.3.2.1 CONTENT VALIDITY INDEX

Evaluating a scale’s content validity is critical in establishing the construct validity of a new instrument (Haynes, Richard, & Kubany, 1995). Content validity refers to the extent to which an instrument has an appropriate sample of items to be
representative of the phenomena of interest (Waltz, Strickland, & Lenz, 2005). One of the most widely used methods of quantifying content validity is the content validity index (CVI), a proportion agreement procedure based on expert ratings of relevance (Polit et al., 2007). The CVI can be calculated for each individual item on a scale (referred to as the I-CVI) and for the overall scale (the S-CVI). To calculate the I-CVI experts are asked to rate the relevance of each item to Aboriginal cultural engagement on a 4-point Likert scale (1-not relevant, 2-somewhat relevant, 3-quite relevant, 4-highly relevant). See Appendix D for the document completed by the reference group for CVI ratings. The I-CVI is the proportion of experts who assign a rating of quite relevant or highly relevant to the item (i.e. the number of experts rating the item as 3 or 4 divided by the number of experts) (Davis, 1992, Polit et al., 2007). Polit and colleagues (2007) recommend that for an instrument to be judged as having excellent content validity, all items should have an I-CVI of .78 or higher. During a scale’s development, it is recommended that items with an I-CVI of .78 should be considered relevant and be kept in the survey, while items just below this cut-off point should be considered for revision and items well below should be considered for deletion. It is also recommended that if a scale requires significant changes following one round of I-CVI calculations, a second round of expert ratings should be conducted with between three and five expert raters (Polit et al., 2007).

To compute the content validity index for the overall scale (S-CVI), there are two common approaches (Polit et al., 2007). One is the universal agreement method, defined as the proportion of items on a scale that achieved a rating of 3 or 4 by all experts. The other is the average method, which involves computing the I-CVI for all items on the scale and then calculating the average across the items. These two methods can yield different values for the S-CVI. The average method, requiring an index of .90 or higher for excellent content validity, is recommended because the universal agreement approach is considered overly stringent and ignores the risk of chance agreement (Polit et al., 2007).
5 RESULTS – STUDY 2

5.1 Stage 1 – Telephone interviews with staff of service providers

5.1.1 Coding of participant responses for initial and follow-up interviews

Participant responses were examined in terms of the dominant themes, and these were then aggregated into theme categories. Every time a theme was mentioned in a statement made by a participant, that statement was coded under the appropriate theme category. If a statement included two themes, it was considered whether there was a primary and secondary theme, and if so it was included in the category of the primary theme. For example, in the initial interview, the statement “mentoring by Elders helps to reconnect with culture and community” included both theme categories reconnect with tradition and community. It was assessed that the primary theme was reconnect with tradition because it was understood by the rater that the main point being emphasised by the participant was the reconnection with tradition through contact with Elders. If a statement made by a participant included two themes which seemed of equal importance, the statement was coded under both theme categories. For example, in the follow-up interview, “working out your identity in a sense of belonging will start the healing process” was included under both theme categories sense of community/belonging and enhanced identity.

5.1.2 Initial interview with staff of service providers

Table 4 includes results from the first question of the interview, regarding what cultural activities were offered at each of the services involved in the research.
### Table 4

*Cultural activities offered at each service (S)*

<table>
<thead>
<tr>
<th>Cultural Activity</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Men’s group (group meetings to discuss men’s business &amp; cultural issues)</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>2. Activities with Elders (e.g., one-on-one mentoring, camping, talks about your heritage/land)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>3. Aboriginal-specific parenting program (e.g., <em>Hey, Dad! For Indigenous Dads, Uncles and Pops</em>, or Triple P Parenting adapted for Aboriginal men)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Aboriginal-specific Community meetings/events (e.g., NAIDOC week, Aboriginal AA meetings, Aboriginal Mental Health Day, Knockout)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>5. Visits to sacred/cultural sites</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>6. Excursions or talks related to Aboriginal history</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Learn/perform traditional Aboriginal music &amp;/or dance</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Aboriginal art/craft program (e.g., make didgeridoos, boomerangs, paintings)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9. Assisting or being involved in cultural rituals, (e.g., Aboriginal flag raising, Welcome to Country)</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Preparing bush tucker (e.g., collecting emu eggs, skinning and preparing meat)</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>
The second question of the initial interview referred to the therapeutic benefits of the cultural activities, and participant responses fell into the following themes:

- Reconnection with tradition
- Sense of community/belonging
- Skill-building
- Enhanced communication
- Restoration of authority/order
- Focus on the future
- Enhanced spirituality
- Living in a safe environment.

A total of 52 statements were coded into these eight categories across the five interviews. For the purpose of presenting participant responses, each participant was randomly assigned an identification number, i.e. “ID1” to “ID5”, which is used to denote the comments made by each participant. Seventeen statements made by participants fell under the category reconnection with tradition, such as “mentoring by Elders helps to reconnect with culture and community” (ID3) and “many people have never been involved in traditional art, they take it up with . . . enthusiasm” (ID5).

Sixteen statements made by participants fell under the category sense of community/belonging, such as “build a feeling of community and belonging, you belong somewhere, worth something, have meaning” (ID2), “[doing AA] with other Aboriginal people gives a sense of connectedness” (ID4), and “[a sense of belonging] begins to heal emotional and cultural trauma” (ID3). Five statements made were coded under the category skill-building, including “tools to put in your tool box” (ID1). Four statements were coded under the category enhanced communication, including “[they begin to] trust enough to disclose problems or concerns” (ID3), and “tell stories through art” (ID5). Three statements were coded under the category restoration of authority/order including “Elders held authority in the past, [their influence] restores order” (ID4). Three statements fell under the category focus on the future, such as “Rituals are cleansing, [they] allow people to move on” (ID1). Three statements fell under the category enhanced spirituality, including “when trying to restore spiritual values you need to draw on cultural values” (ID4), and
“clients report that rituals take them to a different world” (ID1). One statement was coded under the category *living in a safe environment*, “a safe environment where people don’t have to live on fear, anger, suspicion” (ID2). The full table of participant responses can be found in Appendix F.

The third question of the initial interview asked participants which of the cultural activities offered at their treatment program they believed to be the most valuable. Two participants responded traditional art/craft (ID1 and ID5), while the following activities were each mentioned once by participants as the most valuable: traditional dance (ID1), groups (ID1), visiting sacred sites (ID1), camps (ID1), yarning (ID2), Aboriginal AA meetings (ID4), and a combination of different activities (ID1). See Appendix G for the full list of participant responses.

The final question of the initial interview asked participants to suggest ideas of any other cultural activities that they think could be beneficial for Aboriginal Australians. Since most of the cultural activities offered at services were not offered at all five services, some responses made by participants related to activities that were already offered at other services (e.g., Welcome to Country ceremony). The full responses can be found in Appendix H, and included the following:

- Camps to the river (ID5)
- Welcome to Country ceremony (ID5)
- Traditional Aboriginal language classes (ID1)
- Sport (boxing, rugby league, touch football) (ID4)
- Family-oriented programs, in which clients “learn to live within the system of a family” (ID2)
- More consistency in program implementation, so that all activities are done more regularly (ID1)
- Community development and post-rehabilitation programs (ID3)

5.1.3 Follow-up interview with staff of service providers

5.1.3.1 Why therapeutic benefits result from cultural engagement

Part 1 of the follow-up interview asked participants to expand on their previous responses about what the therapeutic benefits of cultural activities are, and consider why these therapeutic benefits occur as a result of engagement in cultural
activities. Responses were aggregated into theme categories, and results are included in Table 5. The three most dominant themes, and the first themes included in Table 5, are reconnection with tradition/culture, sense of community/belonging, and enhanced spirituality. These three themes all emerged in the initial interviews regarding what are the therapeutic benefits of the cultural activities, and hence there was some repetition by participants when they were asked to expand on their responses and consider why the therapeutic benefits occur. It is possible that these themes can be seen as both therapeutic benefits of cultural activities as well as the mechanisms by which therapeutic benefits occur. For example, enhanced spirituality can certainly be understood as a therapeutic benefit of engagement in cultural activities, as it can be viewed as a result or product of cultural engagement. However, it can also be understood to be a mechanism of change. Participants referred to the “reawakening of the spirit [and the] cultural drivers inside” individuals, stating that this process can assist individuals to “heal from the inside first”. In this way enhanced spirituality can be understood to be a mechanism within the individual which brings about positive change when individuals engage in cultural activities. Nevertheless it was hoped that participants would be able to articulate more clearly the processes going on within individuals that result in therapeutic benefits, and the repetition of these three themes seems to indicate that participants had some level of difficulty in doing this.

The next four theme categories included in Table 5 are enhanced identity, enhanced self-esteem, sense of pride in Aboriginality, and distraction from addiction. These were not articulated by participants in the initial interviews, which suggests that participants attempted to look beyond the actual therapeutic benefits to consider the processes occurring that result in those benefits. Although each of these can be understood to be a therapeutic benefit, a result which comes from cultural engagement, they can also be understood to be a process or mechanism of change. Enhanced identity, for example, involves the growth of a personal construct within the individual, something which may be built upon through experience, exposure, and learning. It could be argued that the enhancement of identity is a mechanism which allows the individual to become more self-aware, more mindful of the present moment, and more effective in daily life, and therefore is a mechanism through which positive therapeutic change occurs. A similar argument could be made for
enhanced self-esteem and sense of pride in Aboriginality, in that enhanced self-esteem and cultural pride can be built upon to effect further positive changes in the self, such as confidence, self-efficacy, and social ability. These changes can act as the driving force within the individual leading to therapeutic benefits we associate with cultural engagement, such as increased empowerment.

Regarding distraction from addiction, distraction is a strategy employed by drug and alcohol services to assist clients to cope with cravings (Beck, Wright, Newman, & Liese, 1993). Many drug and alcohol services employ a wide variety of activities, some of which are not culturally-oriented. (The question of the additional value of cultural activities over non-cultural activities for the purpose of distraction is considered in the conclusions and recommendations). Whatever the activity undertaken, when an individual is distracted from an unpleasant experience such as pain or cravings, attention resources are drawn away from the unpleasant experience (Moont, Crispel, Lev, Pud, & Yarnitsky, 2012). As a result the intensity of the pain or craving for the individual is reduced (Silvestrini, Piguet, Cedraschi, & Zentner, 2011). Furthermore, engagement in enjoyable activities is expected to enhance positive emotional states, which has been found to reduce pain and unpleasant experiences felt by the individual (Keefe, Lumley, Anderson, Lynch, & Carson, 2001). Beck and colleagues (1993) explain that within drug and alcohol treatment distraction is used to get clients to change their focus of attention from the internal to external, and that distraction in the form of imagery can assist clients to gain a sense of mastery over cravings. As such, distraction resulting from engagement in treatment activities may be viewed as a process within the individual which allows for the reduction (or at least management) of cravings, the enhancement of positive emotions, and ultimately therapeutic benefits such as reduced symptoms of depression/anxiety, increased sense of mastery, and improved emotion regulation.
<table>
<thead>
<tr>
<th>Theme category</th>
<th>General point made by participant</th>
<th>Direct quote from participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconnection with tradition/culture (7)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- Reconnection or new connection from Art</td>
<td>“[traditional art] . . . gives someone a reconnection . . . or maybe a new connection altogether” (ID5)</td>
</tr>
<tr>
<td></td>
<td>- General reconnection or interest</td>
<td>“the general reconnection . . . with cultural aspects, not necessarily mattering . . . what the actual activity is” (ID3)</td>
</tr>
<tr>
<td></td>
<td>- Reconnecting with inherent culture</td>
<td>“It’s regaining a connection with what’s inherently inside a person no matter what their . . . ethnicity” (ID3)</td>
</tr>
<tr>
<td></td>
<td>- Makes it possible to grow more culturally</td>
<td>“planting a seed if you like that might awaken some interest in people to further develop . . . their cultural aspects of themselves” (ID3)</td>
</tr>
<tr>
<td></td>
<td>- Being surrounded by and immersed in culture helps it to feel natural</td>
<td>“Our approach is ‘this is a natural part of living’. The important thing about culture . . . it’s like language, you’ve got to be surrounded by it. . . We try to surround them with it” (ID4)</td>
</tr>
<tr>
<td></td>
<td>- Being involved in external Aboriginal community assists the reconnection with culture</td>
<td>“We have a sort of philosophy ‘one in all in’. . . to build that sense of community. . . ‘This is how you live in this community’” (ID4)</td>
</tr>
<tr>
<td></td>
<td>- Being involved in all activities, no exceptions, builds sense of community</td>
<td>“It’s a part of the cultural tradition . . . helping other people in the community . . . with a community focus rather than a self-focus” (ID2)</td>
</tr>
<tr>
<td>Sense of community/belonging (5)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- Sense of community in art projects and exhibition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Focus on helping others in wider community is in line with cultural values regarding community</td>
<td></td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Theme category</th>
<th>General point made by participant</th>
<th>Direct quote from participant responses</th>
</tr>
</thead>
</table>
| Enhanced spirituality (4) | - Spiritual and emotional healing  
- Spiritual awakening  
- Spiritual inspiration  
- Spiritual reconnection important for all (Aboriginal and non-Aboriginal), culture as one way to access this | “Heal from the inside first” (ID2)  
“It’s the lived experience, it’s the feeling of calmness, connection . . . sort of like a spiritual awakening” (ID1)  
“A tickling of the spirit . . . Reawaken the cultural drivers inside themselves” (ID3)  
“. . . the need for some spiritual reconnection of some sort in all our residents. . . Culture is a way to gain some awareness, gain some support, through a spiritual focus” (ID3) |
| Enhanced identity (4) | - Connecting with real self  
- Art as a form of creative expression and helping to know yourself  
- Enhancing identity can lead towards healing  
- Enhanced self-image from hearing stories of successful Aboriginal people | “connection with being here and having a period of abstinence . . . has one feeling what it’s like to . . . be reconnected back with . . . your real self” (ID3)  
“[Art] is a creative way of expressing themselves and coming to grips with themselves” (ID4)  
“Working out your identity in a sense of belonging will actually start [the] healing process” (ID2)  
“the more stories they hear about successful Aboriginal people, the greater their self image” (ID4) |
| Enhanced self-esteem (3) | - Being involved in external Aboriginal community enhances self-esteem  
- Cultural activities lead to increased self-esteem | “The [cultural] component and activities help them to gain self-esteem” (ID4)  
(continued) |
<table>
<thead>
<tr>
<th>Theme category</th>
<th>General point made by participant</th>
<th>Direct quote from participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sense of pride in Aboriginality</td>
<td>- Sense of pride in Aboriginality</td>
<td>“The [cultural] component and activities help them to gain . . . pride [in] being Aboriginal” (ID4)</td>
</tr>
<tr>
<td>(3)</td>
<td>- Sense of personal pride comes from being involved in the external Aboriginal community</td>
<td>“The [cultural] component and activities help them to gain . . . acceptance that you don’t have to hide the fact that you’re Aboriginal” (ID4)</td>
</tr>
<tr>
<td>- Acceptance of self as Aboriginal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction from addiction (2)</td>
<td>- Community involvement helps to distract</td>
<td>“Helping other people . . . takes the focus off the self” (ID2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“. . . being involved in community, then they’re not sitting around thinking about drinking or using drugs” (D2)</td>
</tr>
</tbody>
</table>

*Note. *Number of times this theme category was mentioned across all five interviews
5.1.3.2 Most beneficial cultural activities

Part 2 of the follow-up interview asked participants to choose two cultural activities they thought to be the most beneficial, and explain why they saw these activities as beneficial. Responses are included in Table 6.

The first seven activities named by participants as the most beneficial in the follow-up interview were also named by participants as the most beneficial in the initial interview. In the initial interview participants simply mentioned “groups”, and in the follow-up interviews participants specified further the activities men’s groups, talking circle with Elders, and weekly talks around the fire. There were two activities named as most beneficial in the follow-up interview that were not mentioned in the initial interview – education on personal heritage, and sport (boxing and rugby league). It should be noted that education on personal heritage was mentioned by a participant from one of the more remote services involved in the research, and therefore this activity is likely to be possible at this service due to the relatively small community within the locality of the service. It is likely that this type of activity would be more difficult to implement in an urban area where the community is larger and the individuals attending the rehabilitation service come from more distant communities. It could be argued that playing rugby league and boxing are not unique to Aboriginal culture and therefore should not be viewed as cultural. However, there are aspects of most cultures which are shared with other cultures, but which are still viewed as an important part of each individual culture. For example, beaches are not unique to Australia, however many Australians still view beach culture as an important and defining aspect of Australian culture. Rugby league in particular is a sport in which many Aboriginal communities are involved, and which many Aboriginal males play as they grow up. In addition, two participants referred to the community aspect of football tournaments, with one participant likening them to “a modern version of a corroboree” (ID2). The participants spoke about several mobs gathering together from all over the State, and individuals meeting other members of their mob for the first time. With community as one of the pivotal aspects of Aboriginal culture, it is possible that sports which bring the community together may be seen as cultural activities, however this debate is too broad for the scope of this thesis. It should be noted that one participant voiced significant concerns regarding rugby league and boxing being promoted as activities in rehabilitation services, not
because he did not view them as cultural, but because of their association with physical aggression. This participant stated:

What we’re trying to do in many respects is have people become fitter in their brains and their hearts rather than just the physical, and I think things like the boxing and [rugby] league just carry on the idea that muscles and aggression . . . are . . . the way to go. (ID3)

Part 2 of the follow-up interview then asked participants to reflect on what might improve the effectiveness of the cultural activities offered at their services. Participant responses included the following:

- “Getting Elders in to speak to the men . . . to tell the whole stories [about the cultural activities]” (ID3)
- More involvement from Elders and the community (ID4)
- “Link in with a greater diversity of Elders and people that can come in and teach [or run cultural activities]” (ID1)
- “Being more focused and emphasising [the cultural activities] more” (ID5)
- Improve the quality of the camps by brainstorming with staff for ideas. For example, the first camp may be a general cultural camp and the second may be more specific to the Country (ID2)
- More consistency and /regularity in the program, e.g., so that an activity occurs every four weeks (ID1)
Table 6
Participant responses in follow-up interviews with staff of service providers regarding which cultural activities are most beneficial and why

<table>
<thead>
<tr>
<th>Activity</th>
<th>Benefits suggested</th>
<th>Direct quote from participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Time on the land, including camps (3)¹</td>
<td>- Elder educate the younger</td>
<td>“They just like that whole sitting around yarning, and finding out more about the general Aboriginal culture. . . Sitting round with the older men. Talking about . . . the way that it’s been done in the past” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Clients experience positive feelings as a result</td>
<td>“People who have never been before . . . come back and are really buzzing” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- The environment is cultural</td>
<td>“The environment itself is cultural” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Spiritual experience</td>
<td>“You can’t conjure up cultural stuff, you can’t make it, it’s the people themselves that make it” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Importance of connection to land for Aboriginal people</td>
<td>“Alot of them come back with that ‘I felt something’ rather than ‘I learnt something’. . . They maybe don’t use the word spiritual . . . but they say something’s happened inside. . . They use words like ‘the hair on the back of their arms stood up’. . . which to me [refers to] something . . . other than the physical” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Allows for education regarding hunting and gathering</td>
<td>“The land is something particularly natural to [Aboriginal people]. . . Connection to land is important” (ID4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“There’s nothing they like more than camping on the beach, hearing the waves break in the distance” (ID4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“There’s a certain peace in being part of nature, and Aboriginal stories are all about nature” (ID4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“There’s a chance to . . . educate people about . . . hunting and gathering” (ID3)</td>
</tr>
<tr>
<td>Activity</td>
<td>Benefits suggested</td>
<td>Direct quote from participant responses</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Traditional art (1)</td>
<td>- Art leads to a feeling of connection</td>
<td>“Gives you that interest and that reconnection with where you are, who you are, and where you’ve come from” (ID5)</td>
</tr>
<tr>
<td></td>
<td>- Clients learn to use their time productively, and learn patience</td>
<td>“The things they do and make when they come here they . . . take their time, they do a good job and they make that for someone special in their life. . . . They’ve used their time in a productive way and it’s taught them to be patient, . . . manage their anger a bit better.” (ID5)</td>
</tr>
<tr>
<td></td>
<td>- Clients learn emotion regulation</td>
<td>“They can get up at any time and walk away and leave that work, and then come back to it later” (ID5)</td>
</tr>
<tr>
<td>3. Dance (1)</td>
<td>- Clients report feeling stronger through dance</td>
<td>“Dance is actually embodying . . . physical participation in an experience . . . the [men] say they feel stronger when they get dressed up and when they dance they feel different” (ID1)</td>
</tr>
<tr>
<td></td>
<td>- Rituals involved contribute to the experience</td>
<td>“What our [men] do is . . . before they dance they collect the ochre as well so that’s part of . . . the ritual and they make . . . their clothes as well, so it’s not just the practices in the performance that contribute” (ID1)</td>
</tr>
<tr>
<td>4. Men’s groups (1)</td>
<td>- Enhanced self-esteem</td>
<td>“There seems to be advances made with persons self-esteem . . ., and also . . . assertiveness” (ID5).</td>
</tr>
<tr>
<td></td>
<td>- Assertiveness</td>
<td></td>
</tr>
<tr>
<td>5. Talking circle with</td>
<td>- Less formal is more appropriate and beneficial</td>
<td>“Aboriginal men here always struggle with formal things like . . . one-on-one counselling in an office” (ID3)</td>
</tr>
<tr>
<td>Elders (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Weekly talk around</td>
<td></td>
<td>“Another thing that’s really important to [Aboriginal people] is fire” (ID4)</td>
</tr>
<tr>
<td>the fire (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. A combination (1)</td>
<td></td>
<td>“A combination, it’s a synergistic effect” (ID1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(continued)</td>
</tr>
<tr>
<td>Activity</td>
<td>Benefits suggested</td>
<td>Direct quote from participant responses</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>8. Education on personal heritage (1)</td>
<td>- Enhances identity</td>
<td>“. . . somebody in the program who can fill them in on their mob, on their belonging, or their identity” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Leads to a feeling of connection</td>
<td>“That connection, it connects them up, even fellas who come here who don’t even believe they’ve got any connection to this place” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Break down feeling of being alone</td>
<td>“We can break down very easily [the feeling of being alone] with a whole long list of family and . . . in the process they can start finding that line” (ID2)</td>
</tr>
<tr>
<td>9. Sport – boxing and rugby league (2)</td>
<td>- Aboriginal football tournaments are like a modern version of a corroboree</td>
<td>“. . . like a gathering, they caught up with alot of mob they didn’t know. . . . Maybe it’s a modern version of a corroboree” (ID2)</td>
</tr>
<tr>
<td></td>
<td>- Knockout competitions are a community gathering</td>
<td>“[At knockout competitions] they meet mobs from all over the state . . . you know it’s just the mobs together” (ID4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Most of our guys have just grown up with football and sport” (ID4)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Alot of famous Aboriginal football players come [from up North]” (ID4)</td>
</tr>
</tbody>
</table>

*Note. *Number of participants who mentioned the activity category across all five interviews
5.1.3.3 Other cultural activities that may be beneficial

Part 3 of the follow-up interview asked participants to consider the list of suggested cultural activities from the initial interview (see Appendix H), and to either comment on those suggested or to suggest any other ideas for cultural activities that they believe may be beneficial. Four participants stated that they believed language classes would be beneficial. Three participants stated that they believed a family-oriented program would be beneficial. Two participants stated that education regarding the land and traditional food would be beneficial. And one participant responded that each of the following would be beneficial: welcome to Country; touch football; smoking ceremonies; and qualified Aunties to provide counselling regarding trauma. One participant emphasised the importance of not providing too much for clients in rehabilitation, and the value in clients seeking out knowledge and engagement for themselves. The participant stated:

You don’t want to drown people who are coming in to rehab. . . . You want to give them enough knowledge for them to want to gain more knowledge. . . . If you work for something . . . it’s valued alot more and the lessons learnt are a lot better, and . . . responsibility comes into that, which again comes back as benefits from confidence and . . . self esteem, and the more confident you get the more you want to know and the more learning you’re most . . . likely to do, and the more risks you will take in that area, and there’s values ongoing. (ID2)

A table including all participant responses can be found in Appendix I.

5.2 Stage 2 – Development of a measure of cultural engagement

The participants in Study 2 Stage 1 offered varied opinions on what are the most important cultural activities for Aboriginal Australians. They also demonstrated mixed levels of understanding of the process by which cultural engagement is beneficial for Aboriginal clients. There is a need for a reliable and valid measure of cultural engagement which will allow future research to establish whether there is a clear association between cultural engagement and health benefits. Establishing a link between cultural engagement and health benefits will provide an empirical basis for the inclusion of culture in treatment planning for Aboriginal Australians.
5.2.1 Content validity of version 2 of the ACES

Table 7 provides the I-CVI for each item in version 2 of the survey. Items with an I-CVI of .78 were kept in the survey, while items just below this cut-off point were considered for revision and items well below were deleted. A total of 18 respondents rated items 1 through 18 (13 consultants in the reference group and five consultants in telephone interviews prior to the reference group). Only 13 consultants rated items 19 to 26 since these items were new additions suggested by consultants in the Stage 2 telephone interviews. The I-CVI for each item is included in Table 7, along with the amendments suggested by the reference group.

5.2.2 Content validity of the final version of the ACES

Five consultants completed a CVI for each item in the final revision (version 3) of the ACES. These I-CVI ratings are included in Table 7. The S-CVI was calculated using the S-CVI (average) method, and resulted in a value of 0.98.
Table 7  
*Items and their CVIs used in the development of the Aboriginal Cultural Engagement Survey (ACES)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Items in version 2</th>
<th>CVI</th>
<th>New Item</th>
<th>Amendments made (Version 3 - Aboriginal Cultural Engagement Survey)</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I spend time trying to learn about my Aboriginal culture, such as its history, traditions and customs</td>
<td>.94</td>
<td>1</td>
<td>Unchanged- <em>I spend time trying to learn about my Aboriginal culture, such as its history, traditions and customs</em></td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>I speak my traditional Aboriginal language (including pidgin, creole, and Aboriginal terms)</td>
<td>.67</td>
<td></td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I make traditional artworks (e.g., painting, weaving, carving)</td>
<td>.78</td>
<td>2</td>
<td><em>I make Aboriginal artworks (e.g., painting, weaving, carving)</em></td>
<td>.80</td>
</tr>
<tr>
<td>4</td>
<td>I participate in Aboriginal cultural practices of food preparation (e.g., bush meats, dampers, Johnny cakes)</td>
<td>.78</td>
<td>3</td>
<td><em>I participate in traditional Aboriginal practices of food preparation (e.g., bush meats, dampers, Johnny cakes)</em></td>
<td>.80</td>
</tr>
<tr>
<td>5</td>
<td>I eat Aboriginal foods prepared the traditional way</td>
<td>.59</td>
<td></td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I participate in Aboriginal cultural practices involving music/dance</td>
<td>.83</td>
<td>4</td>
<td><em>I participate in Aboriginal cultural practices involving music/dance (either traditional or modern)</em></td>
<td>.80</td>
</tr>
<tr>
<td>7</td>
<td>I participate in Aboriginal sports, or play in an Aboriginal sports team</td>
<td>.50</td>
<td></td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I actively follow Aboriginal sports, or follow Aboriginal sports team/s</td>
<td>.61</td>
<td></td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I have received traditional Aboriginal healing methods (e.g., traditional healers, bush medicine)</td>
<td>.78</td>
<td>5</td>
<td>Unchanged- <em>I have received traditional Aboriginal healing methods (e.g., traditional healers, bush medicine)</em></td>
<td>.80</td>
</tr>
<tr>
<td>10</td>
<td>I spend time on Country (e.g., living in homeland, travelling through Country)</td>
<td>.89</td>
<td>6</td>
<td>Unchanged- <em>I spend time on Country (e.g., living in homeland, travelling through Country)</em></td>
<td>1.00</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Item</th>
<th>Items in version 2</th>
<th>CVI</th>
<th>New Item</th>
<th>Amendments made</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>I care for Country (e.g., burning grass, cleaning up Country, fire work)</td>
<td>.89</td>
<td>7</td>
<td>I care for Country (e.g., burning grass, cleaning up Country, fire work, conservation, regeneration)</td>
<td>1.00</td>
</tr>
<tr>
<td>12</td>
<td>I use Country and land (e.g., for bush tucker, bush medicine, hunting, fishing)</td>
<td>.94</td>
<td>8</td>
<td>Unchanged- I use Country and land (e.g., for bush tucker, bush medicine, hunting, fishing)</td>
<td>1.00</td>
</tr>
<tr>
<td>13</td>
<td>I protect Country (e.g., sacred sites, animals, totems)</td>
<td>1.00</td>
<td>9</td>
<td>Unchanged- I protect Country (e.g., sacred sites, animals, totems)</td>
<td>1.00</td>
</tr>
<tr>
<td>14</td>
<td>I participate in ceremony (e.g., smoking ceremony, cleansing, Corroboree)</td>
<td>.78</td>
<td>10</td>
<td>Unchanged- I participate in ceremony (e.g., smoking ceremony, cleansing, Corroboree)</td>
<td>.80</td>
</tr>
<tr>
<td>15</td>
<td>I attend Aboriginal community meetings</td>
<td>.83</td>
<td>11</td>
<td>I attend/participate in Aboriginal community meetings</td>
<td>1.00</td>
</tr>
<tr>
<td>16</td>
<td>I participate in social engagements that include mostly Aboriginal people</td>
<td>.83</td>
<td>12</td>
<td>I participate in social engagements that are related to Aboriginal people (e.g., NAIDOC Week, Sorry Day events, Knockout)</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>I participate in traditional Aboriginal cultural activities (e.g., Law time, NAIDOC Week, Sorry Day events)</td>
<td>.94</td>
<td>I respect the traditional teachings of Elders</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I practice traditional and/or contemporary Aboriginal cultural relationships (e.g., respect for Elders, avoidance relationships, Law Men &amp; Law Women)</td>
<td>.94</td>
<td>Removed (incorporated into new item 18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I respect the Elders’ teaching of traditional Law</td>
<td>1.00</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Item</th>
<th>Items in version 2</th>
<th>CVI</th>
<th>New Item</th>
<th>Amendments made (Version 3- Aboriginal Cultural Engagement Survey)</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>I spend time learning about contemporary issues facing Aboriginal people</td>
<td>1.00</td>
<td>14</td>
<td>I spend time learning about issues facing Aboriginal people today</td>
<td>1.00</td>
</tr>
<tr>
<td>21</td>
<td>I make contemporary Aboriginal artworks</td>
<td>.62</td>
<td></td>
<td>Removed (incorporated into new item 2)</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>I am aware of what Country I belong to</td>
<td>1.00</td>
<td>15</td>
<td>I am aware of what Country I belong to and I acknowledge where I am from</td>
<td>1.00</td>
</tr>
<tr>
<td>23</td>
<td>I feel I belong to land in a specific area associated with my people</td>
<td>1.00</td>
<td>16</td>
<td>Unchanged- I feel I belong to land in a specific area associated with my people</td>
<td>1.00</td>
</tr>
<tr>
<td>24</td>
<td>I have strong kinship links / family links</td>
<td>1.00</td>
<td>17</td>
<td>Unchanged- I have strong kinship links / family links</td>
<td>1.00</td>
</tr>
<tr>
<td>25</td>
<td>I participate in traditional Aboriginal cultural activities (e.g., Law time, Men’s and Women’s business, initiations, burials)</td>
<td>.85</td>
<td>18</td>
<td>I participate in traditional Aboriginal cultural activities (e.g., Men’s and Women’s business, burials)</td>
<td>.80</td>
</tr>
<tr>
<td>26</td>
<td>I participate in Aboriginal community events (e.g., NAIDOC Week, Sorry Day Events, Knockout)</td>
<td>.93</td>
<td></td>
<td>Removed (incorporated into new item 12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td>I feel I contribute to my community (e.g., spending time with Elders, going to community events)</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td>My community accepts me as a part of the Aboriginal community</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21</td>
<td>I practise respect for Elders</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note.* Items in italics form the final Aboriginal Cultural Engagement Survey.
5.3 Summary of findings and further research directions

5.3.1 Culture in treatment and its benefits as perceived by service providers

Service managers described the cultural activities offered as a part of treatment for Aboriginal clients at their rehabilitation service. The number of distinct cultural activities offered at each service ranged between four and seven. Participants seemed to speak with ease during the initial interview regarding the therapeutic benefits of the cultural activities in their treatment program, naming such things as reconnection with tradition, sense of community/belonging, skill-building and enhanced communication.

When asked in the follow-up interview to consider why the cultural activities are of benefit, participants responded with relative difficulty. It was unclear whether some responses reflected participants’ beliefs about the mechanisms by which the activities are beneficial (i.e. the why) or the actual benefits/outcomes (i.e. the what). Between the five participants there appeared to be a varied range of consideration of why cultural activities are of benefit, with some demonstrating greater understanding than others of why they do what they do. It is also possible that some participants did not understand the question. It should be noted that when asked how they would promote the cultural activities to a client who was not keen to be involved in cultural activities, one participant responded that they would not tell clients what benefits could come from being involved in the cultural activities, because they did not believe it was their place to prescribe this. This indicates that some clients may currently not be given any therapeutic or culturally-driven reasons for taking part in cultural activities, and therefore the cultural activities may be seen by some clients as simply another part of their program, with little meaning or purpose behind them.

One of the most consistent themes which emerged across the initial and follow-up interviews was the benefit of a sense of community/belonging. One participant explained that a focus on helping others in the wider community while in rehabilitation is in line with cultural values of Aboriginal Australians regarding the importance of community. The sense of community gained while in rehabilitation may be a very important factor in the improvement of Aboriginal Australians while in treatment. In Study 1 the aspect of empowerment that yielded the most notable results was Inner Peace, which continued to improve at an increasing rate throughout
treatment. It is possible that a sense of community/belonging may be a benefit of cultural activities related to the experience of inner peace, and perhaps the ongoing experience of a therapeutic community contributed to the continued growth of Inner Peace in Study 1. Future research could focus on the benefits of the therapeutic community for Aboriginal Australians, and the associated changes and enhancements experienced by both the individual and the collective.

It is possible that there is limited understanding among service providers of the therapeutic reasons for engaging in cultural activities. It is also possible that service providers perceive the cultural activities as having clear and obvious benefits, and therefore have not thought to question something that they already perceive to be working. It may also be the case that cultural activities for Aboriginal clients have been considered an obvious addition to programs in order to make the programs culturally appropriate, and have been implemented from the top down, therefore leaving little reason or opportunity for service providers to consider the value of the activities. For whatever reason, it appears that to date there has been limited consideration of the processes effecting therapeutic change for clients, and limited consideration of these issues when planning cultural treatment programs. This will be discussed further in the conclusions and recommendations.

Having established what service providers believe about the cultural activities they offer, it is necessary to gain the perspective of the Aboriginal clients attending the rehabilitation services. The important questions of how clients view the cultural activities offered, which activities they view as most helpful and important, and which activities they would like to be included in their treatment programs, are considered in Study 3.

5.3.2 Development of the ACES

Four phases of development occurred, involving intensive consultation with the Aboriginal community, to arrive at the final version of the ACES (Berry et al., 2012). The ACES was found to have excellent content validity both at the item level and the scale level. In Study 3 the ACES is used to investigate the relationship of cultural engagement with outcomes such as empowerment and mental health.
6 METHODS – STUDY 3

Study 3 investigates the cultural engagement of Aboriginal Australians and its association with mental health. The extent to which an individual experiences their cultural engagement as autonomous has been shown to impact their motivation and outcomes associated with cultural engagement (Chirkov et al., 2003, 2005). Therefore it is necessary to consider the effect of participants’ level of autonomy and intrinsic motivation on outcomes. For the purpose of the present research, autonomy and intrinsic motivation in cultural engagement is labelled cultural identification. These are conceptually related, as the higher one’s level of cultural identification, the greater their autonomy and intrinsic motivation towards cultural engagement is expected to be.

In previous research the extent to which an individual identified with a clan was associated with social and health outcomes (Dockery, 2009a, 2009b, 2011). Cultural identification was also investigated as a predictor of drug and alcohol use in Australian adolescents (Gazis et al., 2010), with cultural identity found to be a protective factor. Considering the findings of these previous studies, it is expected that cultural identification will have an impact on the relationship between cultural engagement and outcomes.

6.1 AIMS

1. To seek the perspective of clients regarding the cultural activities offered in treatment, and their views on the most helpful and important cultural aspects that could be included in treatment programs.
2. To use the ACES and other measures of cultural engagement during treatment to investigate the relationship between engagement in cultural activities and outcomes (i.e. empowerment and mental health) for Aboriginal Australians.

6.2 HYPOTHESES

It was hypothesised that the extent to which cultural engagement was associated with empowerment and mental health during treatment for a particular participant would depend on the extent to which the participant identified with Aboriginal culture (cultural identification). More specifically, it was hypothesised that cultural identification would moderate the relationship between cultural
engagement and empowerment (see Figure 2). Secondly, it was hypothesised that cultural identification would moderate the relationship between a participant’s cultural engagement in the specific context of treatment and his mental health (see Figure 3).

**Figure 2.** Hypothesis 1 – Participants’ cultural identification will moderate the relationship between cultural engagement and empowerment.

**Figure 3.** Hypothesis 2 – Participants’ cultural identification will moderate the relationship between cultural engagement during treatment and mental health.

### 6.3 Design

This study was a cross-sectional design with data collected at one time-point four weeks or more following admission. This design was informed by three factors. Firstly, the results of Study 1 indicated some difficulty in collecting data at discharge due to high attrition rates, with participant numbers dropping from 103 to 50 in the first 8 weeks. Secondly, the services involved in the research admitted an average of between eight and 20 residents every four weeks, and therefore collecting data at
time periods at least four weeks apart made it worthwhile for research assistants to make the long journey to each of the services. Finally, it was expected that four weeks would be a sufficient treatment dose for clients to have been exposed to cultural aspects of treatment. Hierarchical multiple regression was used, and moderation analysis (Baron & Kenny, 1986) was intended to be the primary statistical analysis. It was estimated that a statistical power of .85 would be achieved with a sample size of 101 for the intended primary analysis (i.e. hierarchical multiple regression with three independent variables and an effect size of .15 and an alpha set at .025, to account for two regression equations).

### 6.4 Participants

Participants were 101 Aboriginal men in five residential drug and alcohol rehabilitation services in New South Wales. The need for a relatively large sample size recruited from several services in difference localities was informed by the limited generalizability of the results obtained in Study 1. Inclusion criteria included Aboriginality and being enrolled in residential drug and alcohol rehabilitation for at least four weeks. Exclusion criteria included female gender and not identifying as Aboriginal. Figure 4 details the participants captured during the data collection period. The mean age was 31.8 years (range 18 to 59 years), and the mean duration of treatment at the time of the interview was 7 weeks (range 4 to 20 weeks). Further description of participant characteristics are provided in the results section.
Procedure

Semi-structured interviews were conducted with treatment clients by one of two Aboriginal male research assistants. Participants were first asked demographic information, including details of any co-existing mental health diagnoses. Participants were asked whether a doctor had ever told them that they had a mental health illness. If they responded “yes” they were then asked what they were told they had, and how long ago they were first told they had a mental health illness. For all measures the interview protocol was placed in front of participants and read out loud.
by the research assistant. The semi-structured interview comprised the following seven components.

1. Narrative interview - Participants were asked the following questions regarding their experience in treatment:
   i) What activities have you been involved in during treatment that you consider cultural activities?
   ii) How relevant did you find these activities for you?
   iii) How helpful or enjoyable did you find these activities?
   iv) What cultural activities, if any, did you find particularly helpful?
   v) Were there any cultural activities which you found particularly unhelpful?
   vi) Would you have liked more or less cultural activities to have been incorporated into your treatment program?

2. The GEM (Haswell et al., 2010)
3. The ACES (Berry et al., 2012)
5. The General Cultural Engagement in Treatment measure
6. The Engagement in Specific Treatment Activities measure

The General Cultural Engagement in Treatment measure and the CGI were administered to clients and to clinicians, with clinicians asked to provide ratings regarding the clients. One clinician was identified for each service based on their level of contact with clients within their service. On the occasions when the appointed clinician was unavailable to provide ratings, they suggested the person within the service who had the next most meaningful level of contact with the clients. Table 8 lists the measures and who completed each measure.
Table 8
*Measures completed by clients and clinicians in Study 3*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Client completed</th>
<th>Clinician completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEM</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>ACES</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cultural Identity Subscale of AMAS-ZABB</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>General cultural engagement in treatment</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Specific engagement in treatment activities</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>CGI</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### 6.6 Measures

#### 6.6.1 Outcome measures

##### 6.6.1.1 Growth and Empowerment Measure (GEM)

The GEM (Haswell et al., 2010), described in detail in the measures section of Study 1, provides a measure of empowerment for Aboriginal participants. The four subscales of the GEM comprise four of the eight primary outcome measures of Study 3 - Inner Peace, Self-Capacity, Healing and Enabling Growth, and Connection and Purpose. The GEM is included in Appendix A.

##### 6.6.1.2 Clinical Global Impressions (CGI)

The CGI (Guy, 1976) provides a measure of mental health and includes two items: global severity and global change. The global severity item requires the respondent to rate the severity of the participant’s symptoms relative to other clients with the same diagnosis. The global change item requires the respondent to rate how much the participant has improved or worsened since baseline assessment (McEvoy, 2000). No population norms were found to be available for the CGI. The CGI has been found to have concurrent validity with the Health of the Nation Outcome Scales (HoNOS: Wing, Curtis, & Beevor, 1996) and the Depression Anxiety Stress Scales (DASS-21: Lovibond & Lovibond, 1995), and has been found to be a valid clinical outcome measure (Berk et al., 2008). Both the global severity and global change
items are rated on a 7-point Likert scale. The range for the global severity item is from 1=normal (not at all unwell) to 7=extremely ill (among the most extremely ill patients), while the range for the global change item is from 1=very much improved to 7=very much worse. In this study the CGI was self-rated by each participant, and rated by a clinician with regard to each individual participant. The CGI comprises the other four primary outcome measures of Study 3 – Improvement (client-rated), Improvement (clinician-rated), Severity (client-rated), and Severity (clinician-rated). The CGI is included in Appendix J.

6.6.2 Measures of cultural engagement

6.6.2.1 Aboriginal Cultural Engagement Survey (ACES)

The ACES (Berry et al., 2012) comprises a list of 21 items representing activities relevant to Australian Aboriginal culture. Respondents are required to rate how much they have engaged in each activity in the past year, prior to coming into residential drug and alcohol rehabilitation. The ACES was developed in Study 2 with the objective of providing an assessment tool for the level of cultural engagement of Aboriginal participants in their everyday lives. No population norms are yet available for this measure. The ACES has been found to have excellent content validity (Berry et al., 2012). Each item is answered on a 4-point Likert scale, ranging from not at all (none) to a lot (a few months in the year), and the measure has a total-score range of 21 to 84. The ACES is included in Appendix K.

6.6.2.2 General Cultural Engagement in Treatment

This is a 3-item measure developed for the purposes of this research. It aims to assess the extent of participants’ general engagement in cultural activities within the context of treatment. The measure includes three items for the purpose of reliability, and requires participants to rate their level of engagement in cultural activities during treatment. The items include “I have involved myself in the cultural activities offered during treatment”, “I have taken advantage of every opportunity available to be involved in the cultural activities of the treatment program”, and “when participating in the cultural activities of the program I have tried to get the most possible out of each activity”. No population norms are available for this measure, and its reliability and validity are yet to be assessed. Items are rated on a 5-point Likert scale from strongly agree to strongly disagree, with a total-score range
of 3 to 15. The participant rated themselves on each item, and a clinician also rated these items with regard to each individual participant.

### 6.6.2.3 Engagement in Specific Treatment Activities

This is an 11-item measure developed for this research which asks participants to respond regarding the amount they have engaged in specific cultural activities offered during their treatment program. Each item represents a type of cultural activity offered. The items were established from the interviews with the managers of the five services involved in the research in Study 2. The items include “Men’s group”, “Activities with Elders”, “Aboriginal-specific parenting program”, “Aboriginal-specific community meetings/events”, “Visits to sacred/cultural sites”, “Excursions/talks related to Aboriginal history”, “Learn/perform traditional Aboriginal music or dance”, “Aboriginal art program”, “Assisting or being involved in cultural rituals”, “Preparing bush tucker”, and “Other”. No population norms are available for this measure, and its reliability and validity are yet to be assessed. Participants responded regarding how much they engaged in each activity on the following scale: 0 (activity not offered), 1 (not at all), 2 (a little), 3 (a fair bit), 4 (a lot). The total-score range is from 0 to 44. Engagement in Specific Treatment Activities is included in Appendix L.

### 6.6.2.4 Cultural Identity subscale (AMAS-ZABB)

The Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB; Zea et al., 2003) is a 42-item scale measuring acculturation, defined as “a complex developmental process in which individuals are continuously changing as a result of social interaction with different cultures while at the same time retaining aspects of their culture of origin” (Zea et al., 2003, p. 120). The 6-item Cultural Identity Subscale was used in the present study. No population norms were found to be available for this subscale. The Cultural Identity Subscale has been found to have strong internal consistency (α = .89 to .96) (Zea et al., 2003). Participants responded on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree), yielding a total-score range of 6 to 24. The AMAS-ZABB was originally developed for use with immigrants living in America, and was adapted for use with Aboriginal Australians for this study by replacing “U.S. American” with “Aboriginal”, e.g., “I
have a strong sense of being Aboriginal”. The Cultural Identity Subscale of the AMAS-ZABB is included in Appendix M.

**6.7 Development of coding system for narrative interview with clients**

A coding system was developed for each of the six items included in the narrative interview. Details are included in Table 9.

Cultural activities engaged in by participants during treatment (item i) were coded into 25 categories representing different types of cultural activities (e.g., Aboriginal art, using traditional artefacts, hunting and gathering, visits to sacred sites, time with Elders). The full list of categories is included in Appendix N.

Responses regarding the perceived relevance of the cultural activities engaged in (item ii) were initially coded into the following three categories: no cultural activities were offered; activities were irrelevant; activities were relevant. If a participant responded that the activities were relevant and offered a rationale for why they were relevant, the response was then given an additional code to represent either a rationale related to Aboriginal culture or a general rationale not related to culture.

With regard to the perceived helpfulness and enjoyableness of the cultural activities (item iii), the perceived unhelpfulness of the cultural activities engaged in (item v), and the activities found most helpful by participants (item iv), details of the coding system are included in Table 9.

Responses regarding participants’ desire for more or less cultural activities in their treatment program (item vi) were initially coded into one of two categories: (1) more cultural activities; or (2) less cultural activities or neutral (e.g., “it was fine the way it was”). If a participant responded that they wanted more cultural activities, and gave examples of activities they would like included in their program, the response was then given an additional code to represent the cultural activity suggested. Twenty-one categories were used for this coding system to represent the ideas generated by participants themselves, and therefore this category system was different to that which was used in item i) (the activities engaged in) and item iv) (the most helpful activities). The 21 categories of activities participants would like to have offered in treatment programs include sporting activities, learning regarding
personal heritage, connection to spirituality, and traditional foods and medicines. The full list of categories is included in Appendix O.

The development of the categories for all six items was based initially on knowledge of the cultural activities offered in Aboriginal drug and alcohol rehabilitation services, and consideration of categorisation methods used in existing measures such as the Caring for Country Questionnaire (Burgess et al., 2008), the Sense of Culture Yarn (Westerman, 2008), and the ACES (Berry et al., 2012). With this background information in mind a preliminary scan of participant responses was undertaken, and a pilot categorisation system was established. This was then subject to extensive discussion among the author and research supervisors, and after two revisions the categorisation system was finalised. A detailed manual was written, providing examples of responses for each category and offering rules for making difficult distinctions.
### Table 9

*Details of the coding system used for narrative interviews, with Kappa (κ) values to indicate inter-rater reliability for each item*

<table>
<thead>
<tr>
<th>Item</th>
<th>Coding categories for responses</th>
<th>κ</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) What activities have you been involved in during treatment that you consider cultural activities?</td>
<td>25 <em>activity categories</em>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.00&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>ii) How relevant did you find these activities for you?</td>
<td><em>Part 1</em>&lt;br&gt;3 categories:&lt;br&gt;- No cultural activities offered&lt;br&gt;- Irrelevant&lt;br&gt;- Relevant</td>
<td>1.00&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td><em>Part 2</em>&lt;br&gt;2 categories:&lt;br&gt;- Rationale related to culture&lt;br&gt;- Rationale not related to culture</td>
<td></td>
</tr>
<tr>
<td>iii) How helpful or enjoyable did you find these activities?</td>
<td>3 categories:&lt;br&gt;- No cultural activities offered&lt;br&gt;- Not helpful and not enjoyable&lt;br&gt;- Helpful and enjoyable</td>
<td>1.00&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>iv) What cultural activities, if any, did you find particularly helpful?</td>
<td>25 <em>activity categories</em>&lt;sup&gt;a&lt;/sup&gt;</td>
<td>κ=1.00 for 24 categories; κ=.78 for one category</td>
</tr>
<tr>
<td>v) Were there any cultural activities you found particularly unhelpful?</td>
<td>3 categories:&lt;br&gt;- No cultural activities offered&lt;br&gt;- None unhelpful&lt;br&gt;- Some unhelpful</td>
<td>1.00&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>vi) Would you have liked more or less cultural activities to have been incorporated into your treatment program?</td>
<td><em>Part 1</em>&lt;br&gt;2 categories&lt;br&gt;- More&lt;br&gt;- Less or neutral</td>
<td>1.00&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td><em>Part 2</em>&lt;br&gt;21 <em>activity categories</em>&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

*Note.*<sup>a</sup> Full list of categories provided in Appendix N.<br><sup>b</sup> Full list of categories provided in Appendix O.<br><sup>c</sup> κ applies for each individual category.
6.8 Inter-rater reliability

For the purpose of calculating inter-rater reliability two individuals independently rated 30 participants’ interviews selected at random from the overall sample. One rater was the author and the second rater was an Aboriginal undergraduate research assistant. Training was provided by the author for the second rater, using a detailed manual written by the author for the purpose of this study. The manual provided examples of responses for each category and offered rules for making difficult distinctions.

Each rater considered each category within each item, and rated the category as either present or not present in the participants’ responses. Inter-rater reliability was evaluated with Cohen’s κ (Cohen, 1960). Each item had numerous categories to be coded by the raters, and therefore Cohen’s κ was calculated for every category in every item. Table 9 provides the Cohen’s κ.

Items i) and iv), and part 2 of item vi), all had the potential to be given multiple codes, and some individuals’ responses were given up to seven codes. A conservative criterion for inter-rater reliability was to require the raters to assign all of the same codes to a given case (Todd, Deane, & Bragdon, 2003). Where there was more than one instance of the same code in a participant’s response, raters were required to note the code as many times as it appeared in the response. To evaluate this form of agreement, multiple general codes by each rater were placed in ascending numeric order and concatenated into single codes (e.g., codes 17, 18, 10, 2, 10, became 210101718). In this example there were two instances of being on the land, and one instance each of Traditional art/craft, culturally-focused talks, and time with Elders. For inter-rater agreement we required an exact match between both raters. For item i) agreement was 25/30, i.e. 83% agreement. For the 5 cases of non-agreement, raters agreed on the categories but disagreed on the frequency of the category mentioned. For item iv) agreement was 29/30, i.e. 97% agreement. For the one case of non-agreement, one rater coded a category which was not coded by the other rater. For part 2 of item vi) agreement was 29/30, i.e. 97% agreement. For the one case of non-agreement, one rater coded a category which was not coded by the other rater.
7 RESULTS – STUDY 3

7.1 Participant characteristics

Table 10 includes participant demographic information including the service they attended, their identified culture of origin, marital status, living arrangements, primary drug of choice, and any coexisting mental health diagnoses. In Australia the estimated rate of coexisting mental health disorders among clients of residential drug and alcohol rehabilitation services is 64-71% (Mortlock et al., 2011). It should be noted that the rate of coexisting disorders for participants in Study 3 was low (28.7%), and as such there are concerns that there may be a high rate of undiagnosed mental health disorders among participants.
<table>
<thead>
<tr>
<th>Demographic details of participants</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 1</td>
<td>31</td>
<td>30.69</td>
</tr>
<tr>
<td>Service 4</td>
<td>28</td>
<td>27.72</td>
</tr>
<tr>
<td>Service 3</td>
<td>16</td>
<td>15.84</td>
</tr>
<tr>
<td>Service 2</td>
<td>13</td>
<td>12.87</td>
</tr>
<tr>
<td>Service 5</td>
<td>13</td>
<td>12.87</td>
</tr>
<tr>
<td>Culture of origin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aboriginal</td>
<td>98</td>
<td>97.03</td>
</tr>
<tr>
<td>Aboriginal &amp; Torres-Strait Islander</td>
<td>3</td>
<td>2.97</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>48</td>
<td>47.52</td>
</tr>
<tr>
<td>Defacto</td>
<td>45</td>
<td>44.55</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>5</td>
<td>4.95</td>
</tr>
<tr>
<td>Married</td>
<td>3</td>
<td>3.03</td>
</tr>
<tr>
<td>Living arrangements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family</td>
<td>60</td>
<td>59.04</td>
</tr>
<tr>
<td>Transient / move frequently for sleeping</td>
<td>35</td>
<td>34.65</td>
</tr>
<tr>
<td>Primary drug of choice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>55</td>
<td>54.46</td>
</tr>
<tr>
<td>Marijuana</td>
<td>32</td>
<td>31.68</td>
</tr>
<tr>
<td>Amphetamines (ice, speed, methamphetamines)</td>
<td>20</td>
<td>19.80</td>
</tr>
<tr>
<td>Heroin</td>
<td>10</td>
<td>9.90</td>
</tr>
<tr>
<td>Cocaine</td>
<td>3</td>
<td>2.97</td>
</tr>
<tr>
<td>Prescription drugs</td>
<td>2</td>
<td>1.98</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>1</td>
<td>.99</td>
</tr>
<tr>
<td>Valium</td>
<td>1</td>
<td>.99</td>
</tr>
<tr>
<td>Coexisting mental health diagnoses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>11</td>
<td>10.89</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>6</td>
<td>5.94</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>4</td>
<td>3.96</td>
</tr>
<tr>
<td>Attention-deficit/hyperactivity disorder</td>
<td>3</td>
<td>2.97</td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>2</td>
<td>1.98</td>
</tr>
<tr>
<td>Anxiety disorder (unspecified)</td>
<td>2</td>
<td>1.98</td>
</tr>
<tr>
<td>Drug-induced psychosis</td>
<td>1</td>
<td>.99</td>
</tr>
</tbody>
</table>

Note. *Twenty-one participants reported having two primary drugs of choice, three participants reported having three primary drugs of choice, and one participant described himself as a poly-drug user.*

*b Six participants reported having two mental health diagnoses, and one participant reported having three diagnoses.
Participants were asked what culture they identified with, and were asked to rate on a scale of one to ten how much they identified with that culture. The participants’ predominant response was Aboriginal, and Aboriginality was indicated by all participants in some way within their response. Some participants named a specific language group, and 13 participants gave two responses. Three reported being Aboriginal first, followed by their language group (i.e. Yuin, Kamilaroi, Koori), while one participant described himself as Aboriginal followed by White. Five participants referred to their language group first (i.e. Wiradjuri, Bundjalung, Yuin) and described themselves as Aboriginal second, and one participant referred to his language group first (Koori) followed by Christian. One participant described himself as Australian first and Aboriginal second, while another participant described himself as White first and Aboriginal second. One participant described himself as both Bundjalung and Kamilaroi. All responses are included in Table 11.

Table 11

*Culture stated by participants with which they identify*

<table>
<thead>
<tr>
<th>Culture</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal</td>
<td>65</td>
</tr>
<tr>
<td>Koori</td>
<td>16</td>
</tr>
<tr>
<td>Bundjalung</td>
<td>9</td>
</tr>
<tr>
<td>Wiradjuri</td>
<td>3</td>
</tr>
<tr>
<td>Aboriginal and Torres-Strait Islander</td>
<td>2</td>
</tr>
<tr>
<td>Yuin</td>
<td>4</td>
</tr>
<tr>
<td>Kamilaroi</td>
<td>3</td>
</tr>
<tr>
<td>Australian</td>
<td>2</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
</tr>
<tr>
<td>Christian</td>
<td>2</td>
</tr>
<tr>
<td>Gumbainggir</td>
<td>1</td>
</tr>
<tr>
<td>Eora</td>
<td>1</td>
</tr>
<tr>
<td>Murry</td>
<td>1</td>
</tr>
<tr>
<td>Muruwari</td>
<td>1</td>
</tr>
<tr>
<td>South Coast Mob</td>
<td>1</td>
</tr>
</tbody>
</table>
7.2 Qualitative analysis of narrative interview with clients

The cultural activities engaged in by participants during treatment (item i) and the cultural activities which participants found particularly helpful (item iv) are included in Table 12. The frequency indicates the total number of times a category was mentioned by all participants (i.e. if one participant mentioned three different activities that all fell under the same category, this would contribute three to the total frequency for that category). The total of the frequency column indicates the total number of times the activity was mentioned by all participants, not the total number of participants. Therefore the percentage column indicates the frequency (of that particular activity being mentioned) as a percentage of the total frequency (of all activities mentioned by participants). This applies to both the engaged-in columns and the helpful columns. For example, 19.7% of all responses made regarding what cultural activities were engaged in by participants were related to traditional art and craft, and 23.6% of all responses made regarding what cultural activities were helpful to participants were related to traditional art and craft.
Table 12  
*Frequency and helpfulness of cultural activities engaged in as a part of treatment programs*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Engaged-in Frequency</th>
<th>Percentage</th>
<th>Helpful Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional art/craft</td>
<td>42</td>
<td>19.7</td>
<td>29</td>
<td>23.6</td>
</tr>
<tr>
<td>Hunting and gathering</td>
<td>25</td>
<td>11.7</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Culturally-focused talks/meetings</td>
<td>25</td>
<td>11.7</td>
<td>15</td>
<td>12.2</td>
</tr>
<tr>
<td>Being on the land</td>
<td>21</td>
<td>9.9</td>
<td>10</td>
<td>8.1</td>
</tr>
<tr>
<td>Time spent with other Aboriginal people</td>
<td>14</td>
<td>6.6</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Visits to sacred sites</td>
<td>8</td>
<td>3.8</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Using traditional artefacts</td>
<td>7</td>
<td>3.3</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Aboriginal parenting program</td>
<td>7</td>
<td>3.3</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Getting involved in community</td>
<td>7</td>
<td>3.3</td>
<td>8</td>
<td>6.5</td>
</tr>
<tr>
<td>Music</td>
<td>6</td>
<td>2.8</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Excursions regarding history/culture</td>
<td>6</td>
<td>2.8</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Talks/presentations by Aboriginal visitors</td>
<td>6</td>
<td>2.8</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>Sport</td>
<td>6</td>
<td>2.8</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Traditional dance</td>
<td>5</td>
<td>2.3</td>
<td>3</td>
<td>2.4</td>
</tr>
<tr>
<td>Time with Elders</td>
<td>5</td>
<td>2.3</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>Making traditional artefacts</td>
<td>4</td>
<td>1.9</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Aboriginal AA or NA meetings</td>
<td>4</td>
<td>1.9</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>Self-improvement classes/workshops</td>
<td>4</td>
<td>1.9</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Traditional stories</td>
<td>3</td>
<td>1.4</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Traditional language class</td>
<td>2</td>
<td>.9</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Raising Aboriginal flag</td>
<td>2</td>
<td>.9</td>
<td>1</td>
<td>.8</td>
</tr>
</tbody>
</table>

(continued)
Self-directed cultural learning 2 .9 1 .8  
Preparing bush food 1 .5 0 0  
Poetry class 1 .5 0 0  

Total 213 123  

Note. When asked what they were engaged in, 12 participants responded no cultural activities were offered. When asked what was most helpful, 16 participants responded no cultural activities were offered.

Participant ratings of perceived relevance of the cultural activities engaged in during treatment (item ii) indicated that 86% found the cultural activities they engaged in relevant, 1% found them irrelevant, and 13% believed no cultural activities were offered during their treatment program. Of the 86% who responded that the cultural activities were relevant, 35 participants offered a rationale. Of these 35, eight participants (23%) offered a rationale for the activities’ relevance which was related to culture (e.g., “it helps to bring back the respect of Elders”, “it was the first time I’d experienced my culture”), while 27 (77%) offered a rationale which was not specifically related to culture (e.g., “it helps with healing”, “it gave me a more positive outlook”, “it brought back my self-esteem”).

Perceived helpfulness and enjoyableness of the cultural activities engaged in during treatment was rated in item iii). Eighty-six percent responded that the cultural activities they engaged in were helpful and enjoyable, 1% responded that they were not helpful and not enjoyable, and 13% indicated they believed no cultural activities were offered during their treatment program.

With regard to the perceived unhelpfulness of the cultural activities engaged in during treatment (item v), 80% indicated that there were no cultural activities they engaged in that they found unhelpful, 8% indicated that there were some cultural activities they found to be unhelpful (e.g., “the camping grounds they take us to are inappropriate for me as I’m from a different tribe”, “the cultural tour was unhelpful as it’s not my tribal Country”, “resources are provided for art but there’s no teacher to teach traditional ways of painting”), and 12% indicated they believed no cultural activities were offered as part of their treatment program.

Participants responded regarding their desire for more or less cultural activities in their treatment program in item vi). Ninety-four percent indicated that
they would like more cultural activities to be offered as part of treatment, while 6% responded either that they wanted less or that they were happy with what was offered. Suggestions of the cultural activities participants would like to see offered more in treatment programs are included in Table 13.

Table 13  
*Frequency of cultural activities participants would like to be offered more in treatment programs*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time on land/Country</td>
<td>23</td>
<td>18.85</td>
</tr>
<tr>
<td>Learn about culture, heritage, land</td>
<td>16</td>
<td>13.11</td>
</tr>
<tr>
<td>Make traditional artefacts</td>
<td>15</td>
<td>12.30</td>
</tr>
<tr>
<td>Traditional foods and medicine</td>
<td>11</td>
<td>9.02</td>
</tr>
<tr>
<td>Traditional art/craft</td>
<td>8</td>
<td>6.56</td>
</tr>
<tr>
<td>Traditional language classes</td>
<td>8</td>
<td>6.56</td>
</tr>
<tr>
<td>Time with Elders</td>
<td>7</td>
<td>5.74</td>
</tr>
<tr>
<td>Education regarding history</td>
<td>7</td>
<td>5.74</td>
</tr>
<tr>
<td>Excursions regarding history/culture</td>
<td>5</td>
<td>4.10</td>
</tr>
<tr>
<td>Learning regarding personal heritage</td>
<td>4</td>
<td>3.28</td>
</tr>
<tr>
<td>Dancing</td>
<td>4</td>
<td>3.28</td>
</tr>
<tr>
<td>Sporting activities</td>
<td>2</td>
<td>1.64</td>
</tr>
<tr>
<td>Get told traditional stories of our past</td>
<td>2</td>
<td>1.64</td>
</tr>
<tr>
<td>Groups with a cultural focus</td>
<td>2</td>
<td>1.64</td>
</tr>
<tr>
<td>Traditional music</td>
<td>2</td>
<td>1.64</td>
</tr>
<tr>
<td>Have more Aboriginal workers involved in the program</td>
<td>1</td>
<td>.82</td>
</tr>
<tr>
<td>Run Parenting Program longer</td>
<td>1</td>
<td>.82</td>
</tr>
<tr>
<td>Connecting with community</td>
<td>1</td>
<td>.82</td>
</tr>
<tr>
<td>Connection to spirituality</td>
<td>1</td>
<td>.82</td>
</tr>
</tbody>
</table>

(continued)
### 7.3 Quantitative Analysis of Predictors and Outcome Variables

#### 7.3.1 Descriptive Statistics

Descriptive statistics for all measures are included in Table 14. To investigate whether there was a significant difference between client and clinician ratings of each of the variables General Cultural Engagement in Treatment, Improvement (CGI), and Severity (CGI), a series of paired samples t-tests was considered. The assumption of normality was violated in each case, and therefore a series of Wilcoxon signed rank tests was conducted. The assumptions of independence, scale of measurement, and symmetry of the distribution of difference scores were met for all cases.

For General Cultural Engagement in Treatment, the Wilcoxon signed rank test indicated that there was no significant difference between client and clinician ratings, $T = 1471, z = -.90$ (corrected for ties), $N – Ties = 81, p = .37$, two-tailed.

For ratings of Improvement as measured by the CGI, the Wilcoxon signed rank test indicated that there was a significant difference between client and clinician ratings, $T = 340, z = -4.16$ (corrected for ties), $N – Ties = 57, p < .001$, two-tailed. Clinician ratings were higher than client ratings in 44 cases (Sum of Ranks = 1313). (Higher ratings indicate less improvement). Client ratings were higher than clinician ratings in only 13 cases (Sum of Ranks = 340). (In 42 cases client and clinician ratings were the same). This effect can be considered large, $r = .55$ (Cohen, 1988).

For ratings of Severity as measured by the CGI, the Wilcoxon signed rank test indicated that client ratings of severity were significantly higher than clinician ratings, $T = 252.50, z = -5.22$ (corrected for ties), $N – Ties = 63, p < .001$, two-tailed. Clinician ratings were higher than client ratings in 52 cases (Sum of Ranks = 1763.50). (Higher ratings indicate greater severity). Client ratings were higher than clinician ratings in only 11 cases (Sum of Ranks = 252.50). (In 36 cases client and
clinician ratings were the same). This effect can be considered large, $r = .66$ (Cohen, 1988).

Table 14

*Descriptive statistics for all predictors and outcome measures*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$N$</th>
<th>$M$</th>
<th>$SD$</th>
<th>$Min$</th>
<th>$Max$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of stay</td>
<td>101</td>
<td>7.10</td>
<td>3.13</td>
<td>4.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Age</td>
<td>101</td>
<td>31.83</td>
<td>9.13</td>
<td>18.00</td>
<td>59.00</td>
</tr>
<tr>
<td>Cultural Engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACES</td>
<td>101</td>
<td>2.70</td>
<td>.52</td>
<td>1.43</td>
<td>4.00</td>
</tr>
<tr>
<td>General Cultural Engagement in Treatment (client)</td>
<td>99</td>
<td>4.03</td>
<td>1.28</td>
<td>1.00</td>
<td>5.00</td>
</tr>
<tr>
<td>General Cultural Engagement in Treatment (clinician)</td>
<td>101</td>
<td>4.21</td>
<td>.73</td>
<td>1.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Engagement in Specific Treatment Activities</td>
<td>95</td>
<td>12.44</td>
<td>5.71</td>
<td>2.00</td>
<td>35.00</td>
</tr>
<tr>
<td>Cultural identification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscale of AMAS-ZABB</td>
<td>101</td>
<td>3.90</td>
<td>.24</td>
<td>2.67</td>
<td>4.00</td>
</tr>
<tr>
<td>GEM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner Peace</td>
<td>101</td>
<td>3.92</td>
<td>.82</td>
<td>1.88</td>
<td>5.00</td>
</tr>
<tr>
<td>Self-capacity</td>
<td>101</td>
<td>4.19</td>
<td>.72</td>
<td>2.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Healing &amp; Enabling Growth</td>
<td>101</td>
<td>4.58</td>
<td>1.20</td>
<td>1.71</td>
<td>7.00</td>
</tr>
<tr>
<td>Connection &amp; Purpose</td>
<td>101</td>
<td>5.08</td>
<td>1.06</td>
<td>2.60</td>
<td>7.00</td>
</tr>
<tr>
<td>CGI- Client</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>99</td>
<td>1.62</td>
<td>.71</td>
<td>1.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Severity</td>
<td>99</td>
<td>1.70</td>
<td>1.10</td>
<td>1.00</td>
<td>5.00</td>
</tr>
<tr>
<td>CGI- Clinician</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>101</td>
<td>2.02</td>
<td>.88</td>
<td>1.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Severity</td>
<td>101</td>
<td>2.80</td>
<td>1.66</td>
<td>1.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

*Note.* High scores indicate more of a construct, with the exception of CGI Improvement.
### 7.3.2 The Aboriginal Cultural Engagement Survey (ACES)

Table 15 includes descriptive statistics for each of the 21 items in the ACES. The items are listed in order from the most endorsed to the least endorsed, with the most endorsed items indicating the areas of culture which are engaged in most by participants in their everyday lives.

Table 15

*Endorsement of individual items on the ACES, ordered from most to least endorsed*

<table>
<thead>
<tr>
<th>Item #</th>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Practise respect for Elders</td>
<td>3.86</td>
<td>.55</td>
</tr>
<tr>
<td>15</td>
<td>Aware of what Country I belong to, acknowledge where I am from</td>
<td>3.82</td>
<td>.52</td>
</tr>
<tr>
<td>13</td>
<td>Respect traditional teachings of Elders</td>
<td>3.79</td>
<td>.53</td>
</tr>
<tr>
<td>20</td>
<td>Community accepts me</td>
<td>3.56</td>
<td>.84</td>
</tr>
<tr>
<td>16</td>
<td>Belong to land associated with my people</td>
<td>3.50</td>
<td>.91</td>
</tr>
<tr>
<td>17</td>
<td>Strong kinship links / family links</td>
<td>3.50</td>
<td>.87</td>
</tr>
<tr>
<td>12</td>
<td>Participate in social engagements related to Aboriginal people</td>
<td>2.86</td>
<td>1.02</td>
</tr>
<tr>
<td>8</td>
<td>Use Country and land</td>
<td>2.82</td>
<td>1.08</td>
</tr>
<tr>
<td>6</td>
<td>Spend time on Country</td>
<td>2.76</td>
<td>1.31</td>
</tr>
<tr>
<td>9</td>
<td>Protect Country</td>
<td>2.69</td>
<td>1.22</td>
</tr>
<tr>
<td>14</td>
<td>Learn about issues facing Aboriginal people</td>
<td>2.67</td>
<td>1.07</td>
</tr>
<tr>
<td>19</td>
<td>Contribute to my community</td>
<td>2.57</td>
<td>1.11</td>
</tr>
<tr>
<td>1</td>
<td>Learn about my culture, e.g., history, traditions, customs</td>
<td>2.47</td>
<td>1.07</td>
</tr>
<tr>
<td>7</td>
<td>Care for Country</td>
<td>2.46</td>
<td>1.19</td>
</tr>
<tr>
<td>3</td>
<td>Participate in traditional practices of food preparation</td>
<td>2.34</td>
<td>1.13</td>
</tr>
<tr>
<td>2</td>
<td>Make Aboriginal artworks</td>
<td>2.07</td>
<td>1.07</td>
</tr>
<tr>
<td>18</td>
<td>Participate in traditional cultural activities</td>
<td>2.00</td>
<td>1.16</td>
</tr>
</tbody>
</table>

(continued)
4. Participate in cultural practices involving music/dance

1.94 1.04

11. Attend/participate in community meetings

1.83 .99

10. Participate in ceremony

1.66 .94

5. Received traditional healing methods

1.45 .81

### 7.3.3 Engagement in Specific Treatment Activities

Table 16 indicates how many participants took part in each activity during their treatment program, as well as how many chose not to participate. All 10 activities were not offered at all services, and therefore participants were given the option of responding ‘activity not offered’. Table 16 also details how many participants across all five services had each activity offered to them, and how many participants believed the activity was offered to them at their service.

The activity participated in most by residents of the rehabilitation services was Aboriginal-specific community meetings/events, with 76 participants choosing to participate. The only activity with 100% participation was preparing bush tucker, however this was only offered at one rehabilitation service and only 3 participants were involved.

The measure also included the option to respond “other”, and a total of four participants endorsed this option. Under the “other” option, two participants responded that they participated in fishing, one saying he participated *alot* and the other saying he participated *a fair bit*. One participant responded that he participated *alot* in Moral Reconation Therapy (Armstrong, 2003). One participant responded that he participated *a little* in the three activities fishing, bushwalking, and the beach.
Table 16

*Specific activities participated in by participants during treatment*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Offered by service&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Believed it was offered&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Participated</th>
<th>Chose not to participate</th>
<th>% Participated&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing bush tucker</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Aboriginal-specific community meetings/events</td>
<td>72</td>
<td>81</td>
<td>76</td>
<td>5</td>
<td>93.80</td>
</tr>
<tr>
<td>Men’s Group</td>
<td>72</td>
<td>66</td>
<td>59</td>
<td>7</td>
<td>89.40</td>
</tr>
<tr>
<td>Excursions related to Aboriginal history</td>
<td>41</td>
<td>51</td>
<td>43</td>
<td>8</td>
<td>84.30</td>
</tr>
<tr>
<td>Aboriginal art/craft program</td>
<td>70</td>
<td>69</td>
<td>56</td>
<td>13</td>
<td>81.20</td>
</tr>
<tr>
<td>Aboriginal-specific Parenting Program</td>
<td>57</td>
<td>48</td>
<td>39</td>
<td>9</td>
<td>81.20</td>
</tr>
<tr>
<td>Activities with Elders</td>
<td>88</td>
<td>43</td>
<td>31</td>
<td>12</td>
<td>72.10</td>
</tr>
<tr>
<td>Visits to sacred/cultural sites</td>
<td>88</td>
<td>46</td>
<td>32</td>
<td>14</td>
<td>69.60</td>
</tr>
<tr>
<td>Learn Aboriginal music/dance</td>
<td>59</td>
<td>33</td>
<td>19</td>
<td>14</td>
<td>57.60</td>
</tr>
<tr>
<td>Involved in cultural rituals</td>
<td>29</td>
<td>38</td>
<td>16</td>
<td>22</td>
<td>42.10</td>
</tr>
</tbody>
</table>

*Note.*  
<sup>a</sup> Number of participants attending services where this activity was offered  
<sup>b</sup> Number of participants who reported that the activity was offered to them  
<sup>c</sup> Percentage of those who believed the activity was offered to them who chose to participate.

### 7.3.4 Correlations

Correlational analysis was conducted to investigate the association between measures. The assumption of normality was violated for the all variables except the
ACES, and therefore a Kendall’s tau-b correlation was used. Kendall’s tau-b has been found to have several advantages over Spearman’s $r$ when applied to data from psychiatric treatment settings (Arndt et al., 1999).

Firstly, correlational analysis was conducted to investigate the association between different measures of cultural engagement and Cultural Identification (see Table 17). For the variable Engagement in Specific Treatment Activities, participants’ ratings of their engagement were only included in the analysis for activities that were offered by the services at which they were in treatment. That is, if a client rated that they were engaged in a specific activity which was not stated by the manager to be offered at that client’s service, then that particular rating was not included in the analysis. There was a significant positive correlation between the ACES and client ratings of General Cultural Engagement in Treatment, and between the ACES and Cultural Identification, indicating that greater cultural engagement in daily life was associated with greater cultural engagement during treatment and greater identification with Aboriginal culture. In addition, client ratings of General Cultural Engagement during Treatment had significant but small positive correlations with Engagement in Specific Treatment Activities and Cultural Identification, indicating that greater cultural engagement during treatment was associated with more engagement in specific cultural activities during treatment and greater identification with Aboriginal culture.
Correlational analysis was also conducted to investigate the association between the outcome measures (see Table 18). All subscales of the GEM were strongly positively correlated with one another. All scales of the CGI were moderately positively correlated with one another, with the exception of client ratings of Severity and clinician ratings of Improvement. All subscales of the GEM were negatively correlated with clinician ratings of Severity (indicating that greater empowerment was associated with less symptom severity) and with client ratings of Improvement (indicating that higher empowerment was associated with more improvement). In addition, Inner Peace, Healing and Enabling Growth, and Connection and Purpose were negatively correlated with client ratings of Severity (indicating that higher empowerment was associated with less symptom severity). Clinician ratings of Improvement were not significantly correlated with any subscales of the GEM.
Table 18
Kendall’s Tau-B correlations between outcome measures, the four subscales of the GEM and the four scales of the CGI

<table>
<thead>
<tr>
<th>Measure</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEM(^a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Inner Peace</td>
<td>.59**</td>
<td>.50**</td>
<td>.49**</td>
<td>-.35**</td>
<td>-.33**</td>
<td>-.09</td>
<td>-.28**</td>
</tr>
<tr>
<td>2. Self-Capacity</td>
<td>-</td>
<td>.49**</td>
<td>.49**</td>
<td>-.23**</td>
<td>-.15</td>
<td>-.06</td>
<td>-.21**</td>
</tr>
<tr>
<td>3. Healing &amp; Enabling Growth</td>
<td>-</td>
<td>-</td>
<td>.58**</td>
<td>-.20*</td>
<td>-.18*</td>
<td>-.05</td>
<td>-.34**</td>
</tr>
<tr>
<td>4. Connection &amp; Purpose</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.21**</td>
<td>-.21*</td>
<td>.01</td>
<td>-.20**</td>
</tr>
<tr>
<td>CGI(^b) - Client</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Improvement(^c)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.34**</td>
<td>.35**</td>
<td>.24**</td>
</tr>
<tr>
<td>6. Severity</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.11</td>
<td>.24**</td>
</tr>
<tr>
<td>CGI(^b) - Clinician</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Improvement</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.24**</td>
</tr>
<tr>
<td>8. Severity</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. \(^a\) GEM = Growth and Empowerment Measure
\(^b\) CGI = Clinical Global Impressions
\(^c\) Improvement is scored in reverse, so lower scores indicate greater improvement
* \(p < .05\) (2-tailed). ** \(p < .01\) (2-tailed).

Correlational analysis was also conducted to investigate the association between all measures of cultural engagement, Cultural Identification, and outcome measures (see Table 19). All subscales of the GEM were strongly positively correlated with the ACES, client ratings of General Cultural Engagement in Treatment, and Cultural Identification. This indicates that greater self-rated cultural engagement during treatment, as well as greater cultural identification, is associated with greater empowerment. Client ratings of Severity were negatively correlated with Engagement in Specific Treatment Activities, indicating that less severity is associated with greater engagement in specific activities. Clinician ratings of Severity were negatively associated with clinician ratings of General Cultural Engagement in Treatment and Cultural Identification, indicating that less severity is
associated with greater cultural engagement in treatment and greater cultural identification.

Table 19

*Kendall’s Tau-B correlations between measures of cultural engagement and cultural identification, and outcome measures*

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>ACES&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Gen Eng&lt;sup&gt;b&lt;/sup&gt; (Client)</th>
<th>Gen Eng&lt;sup&gt;b&lt;/sup&gt; (Clinician)</th>
<th>Eng Spec&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Cultural Identification&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEM&lt;sup&gt;e&lt;/sup&gt;</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inner Peace</td>
<td>.24**</td>
<td>.25**</td>
<td>.09</td>
<td>.05</td>
<td>.27**</td>
</tr>
<tr>
<td>Self-Capacity</td>
<td>.26**</td>
<td>.22**</td>
<td>.09</td>
<td>-.05</td>
<td>.31**</td>
</tr>
<tr>
<td>Healing &amp; Enabling Growth</td>
<td>.27**</td>
<td>.24**</td>
<td>.09</td>
<td>.01</td>
<td>.33**</td>
</tr>
<tr>
<td>Connection &amp; Purpose</td>
<td>.27**</td>
<td>.19*</td>
<td>.01</td>
<td>.03</td>
<td>.24**</td>
</tr>
<tr>
<td><strong>CGI&lt;sup&gt;f&lt;/sup&gt; - Client</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement&lt;sup&gt;g&lt;/sup&gt;</td>
<td>-.11</td>
<td>-.12</td>
<td>-.04</td>
<td>-.06</td>
<td>-.08</td>
</tr>
<tr>
<td>Severity</td>
<td>-.01</td>
<td>-.12</td>
<td>.05</td>
<td>-.20*</td>
<td>-.17</td>
</tr>
<tr>
<td><strong>CGI&lt;sup&gt;f&lt;/sup&gt; - Clinician</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>.03</td>
<td>-.01</td>
<td>-.13</td>
<td>.05</td>
<td>-.01</td>
</tr>
<tr>
<td>Severity</td>
<td>-.09</td>
<td>-.13</td>
<td>-.17*</td>
<td>.11</td>
<td>-.25**</td>
</tr>
</tbody>
</table>

*Note.* <sup>a</sup>ACES = Aboriginal Cultural Engagement Survey  
<sup>b</sup>Gen Eng = General Cultural Engagement in Treatment  
<sup>c</sup>Eng Spec = Engagement in Specific Treatment Activities  
<sup>d</sup>Cultural Identification = Cultural Identity Subscale of Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB)  
<sup>e</sup>GEM = Growth and Empowerment Measure  
<sup>f</sup>CGI – Clinical Global Impressions  
<sup>g</sup>Improvement is scored in reverse, so lower scores indicate greater improvement  
* p < .05 (2-tailed). ** p < .01 (2-tailed).

As noted previously, for the variable Engagement in Specific Treatment Activities, participants’ ratings of their engagement were only included in the analysis for activities that were offered by the service at which they were in treatment. In Table 19 a significant negative correlation is evident between Engagement in Specific Treatment Activities and client ratings of Severity,
indicating that higher engagement in specific activities of treatment is associated with lower severity as rated by the client. This association is not strong, however, and when Engagement in Specific Treatment Activities was scored to include the clients’ perceptions of what they engaged in (i.e. not only the ratings for activities offered by their service), the strength of this correlation reduced further (−.13) and was no longer significant.

7.3.5 Moderation Analysis

The primary hypotheses for Study 3 were that cultural identification would moderate the relationship between cultural engagement and empowerment, and that cultural identification would moderate the relationship between cultural engagement during treatment and mental health. Cultural identification was measured by the Cultural Identity subscale of the AMAS-ZABB (Zea et al., 2003). All participants rated their level of identification as high (i.e. $M = 3.9$, on a rating scale of 1 to 4), and therefore there was insufficient variability to test this variable as a moderator. Hence hierarchical multiple regression analysis (MRA) was conducted to investigated the association between the predictors and outcome variables.

7.3.6 Hierarchical Multiple Regression Analysis

The hypotheses questioned the association between cultural engagement in everyday life and empowerment, and cultural engagement during treatment and mental health. Due to inability to carry out the intended moderation analysis, hierarchical MRA was conducted to investigate the association between all predictors and all outcome variables (i.e. the association between all measures of cultural engagement and all outcomes of empowerment and mental health).

Ratings of client improvement on the CGI comprise one of the primary outcome variables in the hierarchical MRA. Table 20 includes descriptive statistics of the client and clinician ratings of Improvement during treatment. As reported previously, there was a significant difference between client and clinician ratings of Improvement, with clients’ self-ratings reflecting a higher level of improvement than clinician ratings ($p < .001$).
Table 20

*Client and clinician ratings of Improvement during treatment, rated on the CGI*

<table>
<thead>
<tr>
<th>CGI Ratings</th>
<th>Client</th>
<th></th>
<th>Clinician</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percentage</td>
<td>N</td>
<td>Percentage</td>
</tr>
<tr>
<td>Very Much Improved</td>
<td>50</td>
<td>49.5</td>
<td>32</td>
<td>31.7</td>
</tr>
<tr>
<td>Much Improved</td>
<td>38</td>
<td>37.6</td>
<td>40</td>
<td>39.6</td>
</tr>
<tr>
<td>Minimally Improved</td>
<td>10</td>
<td>9.9</td>
<td>25</td>
<td>24.8</td>
</tr>
<tr>
<td>Did Not improve</td>
<td>1</td>
<td>1.0</td>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>Total</td>
<td>99</td>
<td>98.0</td>
<td>101</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note.* *a* CGI = Clinical Global Impressions

**7.3.6.1 Control variables of potential interest**

There were a number of control variables of potential interest. Length of stay, age, drug of choice, and coexisting mental illness were of interest due to previous research indicating the impact of variability in these factors on treatment outcomes (Chen et al., 2003; Darke et al., 2012; Hambley et al., 2010; Hampton & Margaret, 2006; Hunter et al., 2005; Sung & Richter, 2007; Wickizer et al., 1994). In addition, service was of interest due to the variability between the five services involved in the research, such as the inclusion of different types of cultural activities in their programs, and the offering of cultural activities as mandatory versus optional. It was necessary to select the most important of these, as the sample size would not allow inclusion of all five potential control variables. Selection was conditional upon the potential control variable being significantly associated with at least half of the outcome variables (suggesting a more consistent relationship with outcome variables). The outcome variables include the four subscales of the GEM, and the client and clinician ratings of Improvement and Severity on the CGI.

Before investigating the association between the potential control variables and the outcome variables it was necessary to consider the nature of the potential control variables. Length of stay and age were both continuous variables, and therefore correlational analysis was conducted to investigate their association with the outcome variables. The assumptions of normality and linearity were violated for both length of stay and age, hence a Kendall’s Tau-B correlation was used. Length of stay was highly correlated with client and clinician ratings of Improvement, clinician
ratings of Severity, and two subscales of the GEM. Age was correlated with clinician ratings of Severity and one subscale of the GEM. Length of stay was associated with five out of eight outcome variables, and therefore length of stay was selected as a control variable to be included in the hierarchical multiple regression analysis. Correlations relating to length of stay and age are included in Appendix P, Table P1.

The other three potential control variables were service, coexisting mental illness, and drug of choice, all of which were categorical variables. Therefore a one-way ANOVA was carried out to investigate whether there was an association between these variables and the outcome measures.

For drug of choice, where participants mentioned two or more primary drugs of choice, the first drug mentioned was taken to be the primary drug of choice. Due to small numbers in some categories of drugs, categories were combined into alcohol ($n = 48$), marijuana ($n = 25$), and other ($n = 28$, including cocaine, heroin, methamphetamines, ecstasy, valium, prescription drugs, and client-named poly drug use).

For service, coexisting mental illness, and drug of choice, there were some subscales on the GEM and some scales of the CGI for which the assumptions were violated. Therefore a parametric one-way ANOVA and a non-parametric (Kruskal-Wallis) one-way ANOVA was conducted for all combinations of the potential control variables and outcome variables. Results were similar for the parametric and non-parametric analysis, and therefore only the results of the parametric analysis are reported. Correlations relating to service, coexisting mental illness, and drug of choice are presented in Appendix P, Table P2. Service was significantly associated with Healing and Enabling Growth, clinician ratings of Improvement, and client and clinician ratings of Severity, while coexisting mental illness was associated with client ratings of Severity, and drug of choice was associated with Self-Capacity. Therefore, as service was associated with four out of eight of the outcome variables, it was selected as a control variable to be included in the regression analysis.

Due to service being a categorical variable with five groups, dummy coding was employed. Service 1 was selected as the reference group as it had the largest sample size of all services.
7.3.6.2 Correlations between predictors and dependent variables

The predictor variables to be included in the hierarchical multiple regression analysis (MRA) were service, length of stay, cultural engagement (ACES), General Cultural Engagement in Treatment (client and clinician ratings) and Engagement in Specific Treatment Activities. The dependent variables (DVs) to be included in the hierarchical MRA were the four subscales of the GEM and the four scales of the CGI. Correlations between the predictors and dependent variables are included in Table 21.
Table 21

*Kendall’s Tau-B correlations between predictors and dependent variables included in the hierarchical multiple regression analysis*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>GEM&lt;sup&gt;a&lt;/sup&gt;</th>
<th>CGI&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC&lt;sup&gt;c&lt;/sup&gt;</td>
<td>IP&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>Service (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1 v S2</td>
<td>.05</td>
<td>.11</td>
</tr>
<tr>
<td>S1 v S3</td>
<td>.04</td>
<td>-.01</td>
</tr>
<tr>
<td>S1 v S4</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>S1 v S5</td>
<td>-.11</td>
<td>-.03</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.14</td>
<td>.17*</td>
</tr>
<tr>
<td>Cultural engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACES&lt;sup&gt;i&lt;/sup&gt;</td>
<td>.26**</td>
<td>.24**</td>
</tr>
<tr>
<td>Gen Eng&lt;sup&gt;j&lt;/sup&gt;</td>
<td>.22**</td>
<td>.25**</td>
</tr>
<tr>
<td>(Client)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen Eng&lt;sup&gt;j&lt;/sup&gt;</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>Eng spec&lt;sup&gt;k&lt;/sup&gt;</td>
<td>-.05</td>
<td>.05</td>
</tr>
</tbody>
</table>

*Note.*  
<sup>a</sup>GEM = Growth and Empowerment Measure  
<sup>b</sup>CGI = Clinical Global Impressions  
<sup>c</sup>SC = Self-Capacity  
<sup>d</sup>IP = Inner Peace  
<sup>e</sup>HG = Healing and Enabling Growth  
<sup>f</sup>CP = Connection and Purpose  
<sup>g</sup>Imp = Improvement (Improvement is scored in reverse, so lower scores indicate greater improvement)  
<sup>h</sup>Sev = Severity  
<sup>i</sup>ACES = Aboriginal Cultural Engagement Survey  
<sup>j</sup>Gen Eng = General cultural engagement in treatment  
<sup>k</sup>Eng Spec = Engagement in specific treatment activities  
* p < .05 (2-tailed). ** p < .01 (2-tailed).
7.3.6.3 **Assumptions**

To test the hypothesis that cultural engagement can account for a significant proportion of variance in outcome variables, beyond what already accounted for by service and length of stay, hierarchical MRA was employed. Before interpreting the results of the hierarchical MRA, a number of assumptions were tested. First, an inspection of the normal probability plot of standardised residuals and the scatterplot of standardised residuals against standardised predicted values indicated that the assumptions of normality, linearity, and homoscedasticity of residuals were met for all DVs. Second, the Mahalanobis distance did exceed the critical $\chi^2 (9)$ (at $\alpha = .001$) of 27.88 for one case in the data file. Analysis was conducted including and excluding this case, and the results were the same. Therefore it was concluded that multivariate outliers were not of concern, and all cases were included in the analysis. Third, relatively high tolerances for all predictors in the models (i.e. for all DVs) indicated that multicollinearity would not interfere with our ability to interpret the outcome of the models.

7.3.6.4 **Hierarchical MRA - Self-Capacity (GEM)**

On step 1 of the hierarchical MRA, service accounted for a non-significant 5% of the variance in Self-Capacity, $R^2 = .05$, $F (4, 88) = 1.05$, $p = .39$. On step 2, length of stay was added to the regression equation, and accounted for an additional 3% of the variance in Self-Capacity, $\Delta R^2 = .03$, $\Delta F (1, 87) = 2.44$, $p = .12$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 18% of the variance in Self-Capacity, $\Delta R^2 = .18$, $\Delta F (4, 83) = 5.12$, $p = .001$. In combination, the nine predictor variables explained 17% (adjusted) of the variance in Self-Capacity, $R^2 = .26$, adjusted $R^2 = .17$, $F (9, 83) = 3.16$, $p = .003$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered large ($f^2 = .34$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 22.
Table 22

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Self-Capacity (GEM)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>β</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>.21</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>Service 3</td>
<td>.20</td>
<td>.11</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>.33</td>
<td>.21</td>
<td>.03</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.08</td>
<td>-.04</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>.19</td>
<td>.09</td>
<td>.01</td>
</tr>
<tr>
<td>Service 3</td>
<td>.17</td>
<td>.09</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>.26</td>
<td>.16</td>
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</tr>
<tr>
<td>Service 5</td>
<td>-.06</td>
<td>-.03</td>
<td>.00</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.04</td>
<td>.17</td>
<td>.03</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Service 2</td>
<td>.07</td>
<td>.04</td>
<td>.00</td>
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<tr>
<td>Service 3</td>
<td>.23</td>
<td>.12</td>
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<tr>
<td>Service 4</td>
<td>.24</td>
<td>.15</td>
<td>.01</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.12</td>
<td>-.06</td>
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<tr>
<td>ACES a</td>
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<tr>
<td>General cultural engagement in treatment (client)</td>
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<td>General cultural engagement in treatment (clinician)</td>
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<td>Specific engagement in treatment activities</td>
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</tr>
</tbody>
</table>

*Note. Service 1 is reference category

a ACES = Aboriginal Cultural Engagement Survey

* p < .05. *** p < .001.*

As can be seen in Table 22, the significant predictors of Self-Capacity in the final regression model were the ACES (sr² = .16) and General Cultural Engagement in Treatment (sr² = .05).
7.3.6.5 Hierarchical MRA - Inner Peace (GEM)

On step 1 of the hierarchical MRA, service accounted for a non-significant 4% of the variance in Inner Peace, $R^2 = .04$, $F (4, 88) = .98$, $p = .42$. On step 2, length of stay was added to the regression equation, and accounted for an additional 2% of the variance in Inner Peace, $\Delta R^2 = .02$, $\Delta F (1, 87) = 1.39$, $p = .24$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 15% of the variance in Inner Peace, $\Delta R^2 = .15$, $\Delta F (4, 83) = 4.04$, $p = .005$. In combination, the nine predictor variables explained 13% (adjusted) of the variance in Inner Peace, $R^2 = .21$, adjusted $R^2 = .13$, $F (9, 83) = 2.47$, $p = .015$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered medium to large ($f^2 = .27$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 23.
Table 23

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Inner Peace (GEM)*

<table>
<thead>
<tr>
<th>Variable</th>
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<th>sr²</th>
</tr>
</thead>
<tbody>
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<td>.02</td>
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<td>Service 3</td>
<td>.14</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Service 4</td>
<td>.42</td>
<td>.23</td>
<td>.04</td>
</tr>
<tr>
<td>Service 5</td>
<td>.14</td>
<td>.06</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
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<td></td>
</tr>
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<td>Service 2</td>
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<td>Service 3</td>
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</tr>
<tr>
<td>Service 4</td>
<td>.36</td>
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</tr>
<tr>
<td>Service 5</td>
<td>.16</td>
<td>.07</td>
<td>.00</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.03</td>
<td>.13</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>.22</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>Service 3</td>
<td>.17</td>
<td>.08</td>
<td>.00</td>
</tr>
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<td>Service 4</td>
<td>.32</td>
<td>.18</td>
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</tr>
<tr>
<td>Service 5</td>
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<td>.02</td>
<td>.00</td>
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<td>Length of stay</td>
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<td>ACES⁴</td>
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<td>General cultural engagement in treatment (client)</td>
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<td>General cultural engagement in treatment (clinician)</td>
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<td>Specific engagement in treatment activities</td>
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</tr>
</tbody>
</table>

*Note. Service 1 is reference category

⁴ ACES = Aboriginal Cultural Engagement Survey

* p < .05. ** p < .001.

As can be seen in Table 23, the only significant predictor of Inner Peace in the final regression model was the ACES (sr² = .13).
7.3.6 Hierarchical MRA - Healing and Enabling Growth (GEM)

On step 1 of the hierarchical MRA, service accounted for a significant 14% of the variance in Healing and Enabling Growth, $R^2 = .14$, $F(4, 88) = 3.65$, $p = .008$. On step 2, length of stay was added to the regression equation and accounted for an additional 3% of the variance in Healing and Enabling Growth, $\Delta R^2 = .03$, $\Delta F (1, 87) = 3.11$, $p = .08$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 16% of the variance in Healing and Enabling Growth, $\Delta R^2 = .16$, $\Delta F (4, 83) = 4.88$, $p = .001$. In combination, the nine predictor variables explained 26% (adjusted) of the variance in Healing and Enabling Growth, $R^2 = .33$, adjusted $R^2 = .26$, $F(9, 83) = 4.53$, $p < .001$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered large ($f^2 = .49$).

Unstandardised ($B$) and standardised (β) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 24.
<table>
<thead>
<tr>
<th>Variable</th>
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<th>$\beta$</th>
<th>$sr^2$</th>
</tr>
</thead>
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</tr>
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<tr>
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<td>.01</td>
</tr>
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<td><strong>Step 2</strong></td>
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<td>.01</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.07</td>
<td>.18</td>
<td>.03</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
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<td></td>
</tr>
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<td>-.04</td>
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<td>Service 4</td>
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<td>.16</td>
<td>.02</td>
</tr>
<tr>
<td>Service 5</td>
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<td>-.15</td>
<td>.02</td>
</tr>
<tr>
<td>Length of stay</td>
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<td>.18</td>
<td>.03</td>
</tr>
<tr>
<td>ACES$^a$</td>
<td>.87***</td>
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<td>.12</td>
</tr>
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<td>General cultural engagement in treatment (client)</td>
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<td>.17</td>
<td>.02</td>
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<td>General cultural engagement in treatment (clinician)</td>
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<td>-.05</td>
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<tr>
<td>Specific engagement in treatment activities</td>
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<td>-.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note. Service 1 is reference category

$^a$ ACES = Aboriginal Cultural Engagement Survey

* $p < .05$. *** $p < .001$.

As can be seen in Table 24, the significant predictors of Healing and Enabling Growth in the final regression model were the ACES ($sr^2 = .12$) and service (Service 2) ($sr^2 = .04$).
### 7.3.6.7 Hierarchical MRA - Connection and Purpose (GEM)

On step 1 of the hierarchical MRA, service accounted for a non-significant 6% of the variance in Connection and Purpose, $R^2 = .06$, $F (4, 88) = 1.39$, $p = .24$. On step 2, length of stay was added to the regression equation, and accounted for an additional 2% of the variance in Connection and Purpose, $\Delta R^2 = .02$, $\Delta F (1, 87) = 2.02$, $p = .16$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 15% of the variance in Connection and Purpose, $\Delta R^2 = .15$, $\Delta F (4, 83) = 4.04$, $p = .005$. In combination, the nine predictor variables explained 15% (adjusted) of the variance in Connection and Purpose, $R^2 = .23$, adjusted $R^2 = .15$, $F (9, 83) = 2.77$, $p = .007$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered medium to large ($f^2 = .30$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 25.
Table 25

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Connection and Purpose (GEM)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>β</th>
<th>sr²</th>
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</thead>
<tbody>
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<tr>
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<td>-.04</td>
<td>.00</td>
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<tr>
<td>Service 4</td>
<td>.31</td>
<td>.13</td>
<td>.01</td>
</tr>
<tr>
<td>Service 5</td>
<td>.10</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
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<td></td>
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<tr>
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<td>.09</td>
<td>.01</td>
</tr>
<tr>
<td>Service 5</td>
<td>.12</td>
<td>.04</td>
<td>.00</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.05</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
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<tr>
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<td>-.03</td>
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<tr>
<td>Service 4</td>
<td>.21</td>
<td>.09</td>
<td>.00</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.05</td>
<td>-.02</td>
<td>.00</td>
</tr>
<tr>
<td>Length of stay</td>
<td>.05</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>ACESa</td>
<td>.79***</td>
<td>.36</td>
<td>.12</td>
</tr>
<tr>
<td>General cultural engagement in treatment (client)</td>
<td>.07</td>
<td>.08</td>
<td>.00</td>
</tr>
<tr>
<td>General cultural engagement in treatment (clinician)</td>
<td>-.17</td>
<td>-.11</td>
<td>.01</td>
</tr>
<tr>
<td>Specific engagement in treatment activities</td>
<td>.01</td>
<td>.02</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note. Service 1 is reference category

a ACES = Aboriginal Cultural Engagement Survey

* p < .05. *** p < .001.

As can be seen in Table 25, the significant predictors of Connection and Purpose in the final regression model were service (Service 2) (sr² = .04) and the ACES (sr² = .13).
7.3.6.8 Hierarchical MRA – Improvement, client-rated (CGI)

On step 1 of the hierarchical MRA, service accounted for a significant 11% of the variance in client ratings of Improvement, $R^2 = .11$, $F (4, 87) = 2.59$, $p = .04$. On step 2, length of stay was added to the regression equation and accounted for an additional 24% of the variance in client ratings of Improvement, $\Delta R^2 = .24$, $\Delta F (1, 86) = 31.69$, $p < .001$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 1% of the variance in client ratings of Improvement, $\Delta R^2 = .01$, $\Delta F (4, 82) = .34$, $p = .85$. In combination, the nine predictor variables explained 29% (adjusted) of the variance in client ratings of Improvement, $R^2 = .36$, adjusted $R^2 = .29$, $F (9, 82) = 5.07$, $p < .001$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered large ($f^2 = .56$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 26.
Table 26

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Client ratings of Improvement (CGI)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>β</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
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</tr>
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<td>.03</td>
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<td>.01</td>
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<td>-.13</td>
<td>.01</td>
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<td>.01</td>
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</tr>
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<td>ACESa</td>
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<td>.00</td>
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<td>.00</td>
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<tr>
<td>General cultural engagement in treatment (clinician)</td>
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<tr>
<td>Specific engagement in treatment activities</td>
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<td>.00</td>
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</table>

*Note. Service 1 is reference category

ACES = Aboriginal Cultural Engagement Survey

* p < .05. ** p < .01. *** p < .001.

As can be seen in Table 26, the significant predictors of client ratings of Improvement in the final regression model were the length of stay (sr² = .24) and service (Service 2) (sr² = .06).
7.3.6.9 Hierarchical MRA – Improvement, clinician-rated (CGI)

On step 1 of the hierarchical MRA, service accounted for a non-significant 10% of the variance in clinician ratings of Improvement, $R^2 = .10$, $F (4, 88) = 2.41$, $p = .055$. On step 2, length of stay was added to the regression equation and accounted for an additional 9% of the variance in clinician ratings of Improvement, $\Delta R^2 = .09$, $\Delta F (1, 87) = 9.34$, $p = .003$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 4% of the variance in clinician ratings of Improvement, $\Delta R^2 = .04$, $\Delta F (4, 83) = 1.05$, $p = .385$. In combination, the nine predictor variables explained 14% (adjusted) of the variance in clinician ratings of Improvement, $R^2 = .23$, adjusted $R^2 = .14$, $F (9, 83) = 2.68$, $p = .009$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered medium to large ($f^2 = .30$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 27.
Table 27

Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Clinician ratings of Improvement (CGI)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>β</th>
<th>sr²</th>
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</thead>
<tbody>
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<td>.09</td>
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<td>-.09</td>
<td>.00</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.77*</td>
<td>-.30</td>
<td>.06</td>
</tr>
<tr>
<td>Length of stay</td>
<td>-.09**</td>
<td>-.34</td>
<td>.10</td>
</tr>
<tr>
<td>ACESa</td>
<td>.26</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>General cultural engagement in treatment (client)</td>
<td>-.07</td>
<td>-.10</td>
<td>.01</td>
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<tr>
<td>General cultural engagement in treatment (clinician)</td>
<td>.03</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>Specific engagement in treatment activities</td>
<td>.04</td>
<td>.13</td>
<td>.01</td>
</tr>
</tbody>
</table>

Note. Service 1 is reference category

* ACES = Aboriginal Cultural Engagement Survey

* p < .05. ** p < .01.

As can be seen in Table 27, the significant predictors of clinician ratings of Improvement in the final regression model were service (Service 2) (sr² = .06), service (Service 5) (sr² = .06), and length of stay (sr² = .10).
7.3.6.10  **Hierarchical MRA – Severity, client-rated (CGI)**

On step 1 of the hierarchical MRA, service accounted for a significant 13% of the variance in client ratings of Severity, $R^2 = .13$, $F (4, 87) = 3.23$, $p = .016$. On step 2, length of stay was added to the regression equation and accounted for an additional 3% of the variance in client ratings of Severity, $\Delta R^2 = .03$, $\Delta F (1, 86) = 2.92$, $p = .091$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 1% of the variance in client ratings of Severity, $\Delta R^2 = .01$, $\Delta F (4, 82) = .18$, $p = .95$. In combination, the nine predictor variables explained 7% (adjusted) of the variance in client ratings of Severity, $R^2 = .17$, adjusted $R^2 = .07$, $F (9, 82) = 1.80$, $p = .08$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered medium ($f^2 = .20$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 28.
Table 28

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations ($sr^2$) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Client ratings of Severity (CGI)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>β</th>
<th>$sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-.27</td>
<td>-.09</td>
<td>.01</td>
</tr>
<tr>
<td>Service 3</td>
<td>.29</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>-.65*</td>
<td>-.27</td>
<td>.05</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.80*</td>
<td>-.26</td>
<td>.05</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-.24</td>
<td>-.08</td>
<td>.00</td>
</tr>
<tr>
<td>Service 3</td>
<td>.35</td>
<td>.12</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>-.54</td>
<td>-.22</td>
<td>.03</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.83*</td>
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<td>.05</td>
</tr>
<tr>
<td>Length of stay</td>
<td>-.06</td>
<td>-.18</td>
<td>.03</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-.31</td>
<td>-.10</td>
<td>.01</td>
</tr>
<tr>
<td>Service 3</td>
<td>.29</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>-.54</td>
<td>-.22</td>
<td>.03</td>
</tr>
<tr>
<td>Service 5</td>
<td>-.82*</td>
<td>-.26</td>
<td>.05</td>
</tr>
<tr>
<td>Length of stay</td>
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<td>.03</td>
</tr>
<tr>
<td>ACES (a)</td>
<td>.12</td>
<td>.06</td>
<td>.00</td>
</tr>
<tr>
<td>General cultural engagement in treatment (client)</td>
<td>-.01</td>
<td>-.02</td>
<td>.00</td>
</tr>
<tr>
<td>General cultural engagement in treatment (clinician)</td>
<td>.08</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>Specific engagement in treatment activities</td>
<td>-.02</td>
<td>-.05</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note. Service 1 is reference category*

\(a\) ACES Aboriginal Cultural Engagement Survey

* \(p < .05\).

As can be seen in Table 28, the only significant predictor of client ratings of Severity in the final regression model was service (Service 5) ($sr^2 = .05$).
7.3.6.11 Hierarchical MRA – Severity, clinician-rated (CGI)

On step 1 of the hierarchical MRA, service accounted for a significant 61% of the variance in clinician ratings of Severity, $R^2 = .61$, $F (4, 88) = 34.51$, $p < .001$. On step 2, length of stay was added to the regression equation and accounted for an additional 4% of the variance in clinician ratings of Severity, $\Delta R^2 = .04$, $\Delta F (1, 87) = 8.48$, $p = .005$. On step 3, the cultural engagement predictors (ACES, General Cultural Engagement in Treatment (client), General Cultural Engagement in Treatment (clinician), and Engagement in Specific Treatment Activities) were added to the regression equation, and accounted for an additional 2% of the variance in clinician ratings of Severity, $\Delta R^2 = .02$, $\Delta F (4, 83) = .92$, $p = .459$. In combination, the nine predictor variables explained 62% (adjusted) of the variance in clinician ratings of Severity, $R^2 = .66$, adjusted $R^2 = .62$, $F (9, 83) = 17.92$, $p < .001$. By Cohen’s (1988) conventions, a combined effect of this magnitude can be considered large ($f^2 = 1.94$).

Unstandardised ($B$) and standardised ($\beta$) regression coefficients, and squared semi-partial (or ‘part’) correlations ($sr^2$) for each predictor on each step of the hierarchical MRA are reported in Table 29.
Table 29

*Unstandardised (B) and Standardised (β) Regression Coefficients, and Squared Semi-Partial Correlations (sr²) For Each Predictor Variable on Each Step of a Hierarchical Multiple Regression Predicting Clinician ratings of Severity (CGI)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>β</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-2.61***</td>
<td>-.54</td>
<td>.22</td>
</tr>
<tr>
<td>Service 3</td>
<td>-.34***</td>
<td>-.08</td>
<td>.00</td>
</tr>
<tr>
<td>Service 4</td>
<td>-2.53***</td>
<td>-.68</td>
<td>.31</td>
</tr>
<tr>
<td>Service 5</td>
<td>.62</td>
<td>.13</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-2.56***</td>
<td>-.53</td>
<td>.21</td>
</tr>
<tr>
<td>Service 3</td>
<td>-.25</td>
<td>-.06</td>
<td>.01</td>
</tr>
<tr>
<td>Service 4</td>
<td>-2.34***</td>
<td>-.63</td>
<td>.25</td>
</tr>
<tr>
<td>Service 5</td>
<td>.58</td>
<td>.12</td>
<td>.01</td>
</tr>
<tr>
<td>Length of stay</td>
<td>-.10*</td>
<td>-.19</td>
<td>.03</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service 2</td>
<td>-2.61***</td>
<td>-.54</td>
<td>.19</td>
</tr>
<tr>
<td>Service 3</td>
<td>-.17</td>
<td>-.04</td>
<td>.00</td>
</tr>
<tr>
<td>Service 4</td>
<td>-2.41***</td>
<td>-.64</td>
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</tr>
<tr>
<td>Service 5</td>
<td>.52</td>
<td>.11</td>
<td>.01</td>
</tr>
<tr>
<td>Length of stay</td>
<td>-.10**</td>
<td>-.19</td>
<td>.03</td>
</tr>
<tr>
<td>ACES*</td>
<td>-.28</td>
<td>-.08</td>
<td>.01</td>
</tr>
<tr>
<td>General cultural engagement in treatment (client)</td>
<td>.02</td>
<td>.02</td>
<td>.00</td>
</tr>
<tr>
<td>General cultural engagement in treatment (clinician)</td>
<td>.12</td>
<td>.05</td>
<td>.00</td>
</tr>
<tr>
<td>Specific engagement in treatment activities</td>
<td>.05</td>
<td>.09</td>
<td>.01</td>
</tr>
</tbody>
</table>

*Note. Service 1 is reference category*

*ACES = Aboriginal Cultural Engagement Survey*

** p < .01, *** p < .001.

As can be seen in Table 29, the significant predictors of clinician ratings of Severity in the final regression model were service (Service 2) (sr² = .19), service (Service 4) (sr² = .26), and length of stay (sr² = .03).
7.3.7 Mandatory versus optional engagement in cultural activities

Due to the significance of service in the regression analysis, it was deemed necessary to consider whether the variability between the services in how they offered their cultural activities (i.e. as mandatory or optional) had any impact on client outcomes. An independent samples t test was used to compare the average score on the outcome variables for clients attending services where the cultural activities were mandatory (n = 57) and clients attending services where the cultural activities were optional (n = 44). There were minor violations of the normality assumption for some outcome variables, however it was considered that the t test would be robust against these due to the reasonably large sample size and the relatively equal group sizes. Levene’s test was non-significant for all outcome variables, thus equal variances can be assumed. The t test was not statistically significant for any of the outcome variables (all p’s > .22) indicating that there was no significant difference in outcomes for clients who attended services where the cultural activities were mandatory compared with clients who attending services where the cultural activities were optional.
8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Association between cultural engagement and outcomes

The study aimed to investigate the relationship between cultural engagement and the outcomes of empowerment and mental health. Results indicate that, overall, engagement in cultural activities is associated with empowerment. Cultural engagement in everyday life significantly predicted all four subscales of empowerment, even after controlling for the effects of service and length of stay. In addition, General Cultural Engagement in Treatment when rated by the client significantly predicted one subscale of empowerment (Self-Capacity), after controlling for service and length of stay. Specific Engagement in Treatment Activities and General Cultural Engagement in Treatment when rated by the clinician did not predict empowerment.

No measure of cultural engagement, whether in everyday life or in treatment, was associated with mental health after controlling for service and length of stay. With regards to cultural engagement in everyday life it is possible that, since cultural engagement in everyday life was rated on the basis of life prior to admission into treatment, and ratings of mental health were based on the clients’ presentation on the day of the interview (i.e. between four and 20 weeks after admission), the time period between the cultural engagement and the ratings of mental health was too great for an association to be evident. With regard to cultural engagement during treatment, it is possible that the nature of the cultural activities, in many cases being imposed by the service rather than enacted autonomously, limited the impact that these activities had on participants’ mental health (see section 8.8 for further discussion). These results suggest that engagement in cultural activities has the most positive benefits for Aboriginal Australians, impacting mainly on empowerment, when the cultural engagement is carried out in everyday life. Previous research has found that by internalizing cultural practices and performing them autonomously individuals can experience greater cultural fit and enhance their wellbeing (Chirkov et al., 2003, 2005). In the context of this research, those activities performed in everyday life may be seen as more likely to be internalised and
performed autonomously. Therefore the research findings support that of previous studies.

It was intended that the present research would investigate outcomes in relation to the extent of cultural identification of participants. The primary hypotheses were that cultural identification would moderate the relationship between cultural engagement and empowerment, and that cultural identification would moderate the relationship between cultural engagement during treatment and mental health. Unfortunately the measure of cultural identification, the Cultural Identity subscale of the AMAS-ZABB (Zea et al., 2003), demonstrated a ceiling effect and was not able to be tested as a moderator. Therefore it was not possible to directly test the impact of cultural identification on outcomes. None the less, the findings support the association between cultural engagement and positive outcomes, particularly when the cultural engagement occurs in everyday life. Cultural engagement which is enacted in everyday life may be considered to indicate a higher level of cultural identification, and therefore it may be argued that the findings provide some support for the first hypothesis. That is, a higher level of cultural identification, demonstrated by enactment of cultural engagement in everyday life, is associated with greater empowerment.

The ceiling effect of the Cultural Identity subscale of the AMAS-ZABB suggests that the subscale is too insensitive. This is the first time it has been adapted for and used within an Australian Aboriginal population (to the author’s knowledge), and thus its suitability may be questioned. Alternatively, it is possible that there were very high levels of cultural identification among participants. If the latter is true, this highlights the importance of providing culturally-relevant activities within treatment for Aboriginal clients. In contrast to this subscale, the ACES showed considerable variability among participants, indicating that participants had diverse levels of engagement in culture in their everyday lives. Thus, a high level of identification appears to be present even for those reporting lower levels of cultural engagement. It is possible that individuals with high cultural identification and low cultural engagement may benefit most from cultural engagement during treatment, as they may have previously lacked opportunities to engage in culture. Alternatively it is possible that individuals with high cultural identification and high cultural engagement may benefit most from cultural engagement during treatment, as they
may be aware of the personal benefits they receive from cultural engagement and may therefore place more value on cultural activities. The impact of cultural identification on cultural engagement and treatment outcomes is an important consideration for future research. If its impact can be established, cultural identification may be used to guide the intensity of cultural interventions delivered to individuals.

It is noted that there was no significant correlation between client- and clinician-ratings of General Cultural Engagement in Treatment. Client’s self-ratings were higher than clinician-ratings. This was likely due to a lack of knowledge of clinicians regarding clients’ level of engagement, or a discrepancy in which activities clients and clinicians viewed as cultural. This difference in client- and clinician-ratings may also explain why there was very little correlation between clinician-ratings of General Cultural Engagement in Treatment and other ratings made by clients, such as the ACES and Engagement in Specific Treatment Activities.

There was also very little relationship found between cultural engagement measures and mental health (as measured by the CGI) in both the correlational analyses and hierarchical multiple regression analyses. There are several possible explanations for this. The reliability of the CGI can be questioned, considering it includes only two items and is designed to be used by clinicians only. The ability of clients to rate their own severity and improvement is likely to be somewhat limited. The ratings of General Cultural Engagement in Treatment by clients and clinicians may also be unreliable, given the aforementioned differences in perspectives on what constitutes a cultural activity as well as the confusion expressed by some clients regarding what cultural activities were actually offered at their rehabilitation service (discussed below). As such the lack of results between the CGI and cultural engagement measures may be the product of several issues in reliability of measurement.

8.2 THE VALUE AND EFFECTIVENESS OF CULTURAL ACTIVITIES IN TREATMENT

In general, the vast majority of participants stated that they found the cultural activities helpful and enjoyable. The remainder stated that there were no cultural activities offered during their treatment program. It is a positive finding that most clients perceived the cultural activities to be helpful and enjoyable, although it is also
concerning that a proportion of participants had a low level of awareness of the cultural activities in their treatment program. All five services involved in the research were promoted as offering an Aboriginal-specific program and all services provided a list to the author of the cultural activities offered. However, it was clearly stated by service providers in Study 2 interviews that more consistency is needed in programs so that activities occur more regularly, and that more focus and emphasis on the cultural activities would likely improve the effectiveness of the activities. Therefore it is possible that some participants had not been involved in cultural activities during their time in treatment due to inconsistency in program delivery.

Some participants indicated that they believed they were involved in certain cultural activities which were not actually offered at their treatment program. As such there seems to be a lack of communication between service providers and clients regarding the cultural activities offered, and some confusion among clients about the activities in which they actually participate. For this reason it is highly recommended that service providers arrange for more regular delivery of cultural activities within a more structured timetable (e.g., it was suggested by one service provider that each activity occur at least every four weeks), to improve clients’ understanding of what is offered and to ensure that all clients have an opportunity to be engaged in all cultural activities offered within their treatment program. Values focused interventions should be included regularly to allow clients an opportunity to explore their own values, particularly with regards to cultural identity, in order to enhance intrinsic motivation towards the cultural activities offered.

It was mentioned by service providers in Study 2 interviews that the cultural activities could be made more effective by inviting Elders to speak with clients about “the whole stories” of the cultural activities. It is highly recommended that service providers endeavour to arrange for Elders to visit the services regularly to provide an explanation of the cultural significance and the historical context of the cultural activities. In addition, two-way communication should occur between Elders and service providers, so that service providers can develop a clear rationale for the potential therapeutic benefits of cultural engagement. Elders and service providers can work together to explain the cultural and therapeutic rationale for engaging in cultural activities to clients. For example, in Study 2 service providers noted one of the potential therapeutic benefits of traditional art was improved emotion regulation
and patience. Emotion regulation is an important coping skill identified in models of drug and alcohol relapse prevention (e.g., Witkiewitz & Marlatt, 2007). While Elders can offer insight into the cultural significance and historical context of traditional art, service providers can assist to link this with the aims of treatment and explain how art can help clients with their current difficulties (e.g., emotion regulation). It has been suggested that any treatment approach should be presented to clients as producing reliable improvements over time (Greenberg, Constantino, & Bruce, 2006). By enhancing these outcome expectancies hope is promoted, and it is expected that the effectiveness of cultural engagement in treatment may increase.

One service provider stated that he does not explain to the clients the meaning behind the cultural activities or the benefits they might expect to receive, as he does not believe it is his place to prescribe this. It appears that at present clients are not given much explanation of the purpose of doing cultural activities, either regarding the cultural significance or the expected clinical benefits. Previous research has suggested that clients should be educated about the treatment process, including what to expect and how they might best participate in treatment. Most importantly, it has been stated that it is the service providers’ role to inform their clients about the aspects involved in treatment and how those aspects are designed to influence therapeutic change (DeFife & Hilsenroth, 2011). Degree of improvement during treatment has been shown to be positively associated with client expectations (Dimcovic, 2001; Friedman 1963; Goldstein 1960). Thus providing a rationale for clients regarding their treatment and expected improvement is an important ingredient of treatment.

When service providers were asked in Study 2 interviews to consider why cultural activities are of benefit, participants appeared to have some difficulty responding. It is possible that the question of why cultural activities are therapeutic is not currently well-understood or well-articulated by service providers, which may impact on their ability or willingness to provide a rationale for cultural engagement to clients.
8.3 Cultural activities participated-in and desired by participants

The research contributes knowledge regarding specific cultural activities that are currently being offered to clients in treatment services in NSW, and more importantly what clients themselves would like to have available to them. Participant responses indicate that the eight activities they would most like to engage in during treatment (in order from most requested) are: “time on Country”, “learning about culture/heritage/land”, “making traditional artefacts”, “learning about or making traditional foods and medicines”, “traditional art/craft”, “traditional language classes”, “time with Elders”, and “education regarding history”. The five services involved in this research each provided opportunities to engage in some of these activities, although no service offered all of the activities, and some services offered the activities more regularly than others.

The activities participants stated they would most like to engage in are similar to the items included on the Caring for Country questionnaire (Burgess et al., 2008). The Caring for Country questionnaire was developed in a large remote Aboriginal community in Arnhem Land in the Northern Territory of Australia, and includes the items “time on Country”, “burning grass” (i.e. cleaning up Country), “using Country”, “protecting Country”, “Ceremony”, and “making artworks”. Arnhem Land is up to 3000km away from the NSW rehabilitation services involved in the present research, however participants in both regions articulated the cultural importance for them of time on Country, using Country, and making artworks. Australian Aboriginal culture is known for its vast diversity, but these results indicate a degree of underlying agreement among Aboriginal Australians regarding what really matters to them in terms of culture. This suggests that the results of this research, particularly with regard to the activities wanted by clients in treatment, may be generalised to other parts of Aboriginal Australia.

“Time on Country” appears to be of primary importance, with participants rating this as their most desired cultural activity, and previous research linking time spent on Country with enhanced identity, self-esteem, pride, and a sense of connection (Kingsley et al., 2009). “Time on Country” is an activity category suggested by participants, and therefore was not rated by participants in terms of their participation. However “being on the land” is closely associated with time on
Country, and this was rated as the activity fourth most participated-in and third most helpful/enjoyable by participants. This is a positive finding as it indicates that services are offering time on the land/Country as a relatively regular cultural activity, and this is in line with the desires of service users.

“Learning about culture/heritage/land” and “education regarding history” were also activity categories suggested by participants, and so were not rated in terms of participation. The categories most closely associated with these, and which were rated in terms of participation, are “culturally-focused talks/meetings” (3rd most participated-in), “excursions regarding history/culture” (11th), “talks/presentations by Aboriginal visitors” (12th), “traditional stories” (19th), and “self-directed cultural learning” (22nd). “Culturally-focused talks/meetings” was rated second most helpful/enjoyable activity, and “excursions regarding history/culture” was rated as seventh. From these results it appears that service users are finding existing activities related to education about culture/heritage/land and history helpful, and that they want more of these activities. “Learning about culture/heritage/land” and “education about history” have the potential to encompass many things, and it may be a valuable direction for future research to consider what specific components of culture, heritage, land and history service users would like more education in, and what format is most effective for service-delivery.

“Learning about or making traditional foods and medicines” was another activity category suggested by participants, and so was not rated in terms of participation. The most closely associated categories which were rated in terms of participation are “preparing bush food” and “hunting and gathering”. “Preparing bush food” was not a focus of any of the five services involved in the research and was only offered minimally by one service, the most remote service involved in the research. “Preparing bush food” was only stated as participated-in by one participant. “Hunting and gathering” was a category of activities which had high participation rates, and was rated as fourth for both participation and helpfulness/enjoyment. Hunting and gathering included the following activities stated by participants - beach hunting and gathering, catching snake, fishing, working with the land, gardening, living off the land, using fish traps, and crabbing. These participant responses suggest that it is possible some education about traditional foods and medicines was given during these activities. This may have helped participants to
specify explicitly that they would like to learn more in this area. Traditional food preparation was part of a treatment program for Native Americans (Wendt & Gone, 2012), however the outcomes of this program are yet to be empirically assessed. Results of the present research indicate that although services are offering some activities closely associated with “learning about or making traditional foods and medicines”, education specifically on the topic of traditional foods and medicines is desired by clients and is not currently offered by the majority of services.

“Making traditional artefacts”, “traditional language classes”, and “time with Elders” were only noted as participated-in by four, two, and five participants respectively. These are all categories of activities which participants expressed wanting to see offered more in treatment programs.

“Traditional art/craft”, on the other hand, was the most highly participated-in activity, with 42 participants (42%) stating their participation. Despite this high participation rate, participants still expressed that they would like this activity to be offered more in their treatment programs. In the context of this research there were 59 participants (58%) who did not participate in this activity, and it is possible that non-participation was a result of personal choice. However, it is also possible that non-participation was due to a lack of opportunity, and therefore it is recommended that “traditional art/craft” be made more accessible to all clients.

In general, services could improve participant satisfaction with the cultural activities within their treatment program by implementing more regular activities in the areas most desired by participants. In particular, there appears to be some cultural activities which are highly desired by participants and which are offered only minimally within services, including “learning about or making traditional foods and medicines”, “making traditional artefacts”, “traditional language classes”, and “time with Elders”. It is highly recommended that the availability and regularity of these cultural activities increase within treatment programs.

The activities described by participants as most enjoyable/helpful were “traditional art/craft”, “culturally-focused talks/meetings”, “being on the land”, “hunting and gathering”, “getting involved in the community”, and “time spent with other Aboriginal people”. These activities were all among the five most participated-in activities, except for “getting involved in the community”, which was the ninth most participated-in activity. Therefore it is recommended that services prioritise
community involvement as a part of the cultural program in order to meet cultural and community needs of participants.

There were two formats for participants to report their participation in cultural activities. First, participants were asked an open-ended question regarding which activities they had participated in that they viewed as cultural, and later they were shown a list of the cultural activities offered across all five services and were asked to rate their participation in each activity. It should be noted that there was some discrepancy in participant responses between the open-ended question format (responded to by 101 participants) and the listed-activity format (responded to by 95 participants). For example, with regard to “getting involved in the community”, in the open-ended question format only seven participants (7%) stated their participation, but in the listed-activity format 76 participants (80%) rated that they participated in “Aboriginal-specific community meetings/events”. With regard to “time with Elders”, in the open-ended question format only five participants (5%) reported that they participated in this activity, but in the listed-activity format 31 participants (33%) said they participated in “activities with Elders”. It is possible that participants did not view these activities as cultural, and so when asked an open-ended question regarding the activities they viewed as cultural, participants did not mention these activities. It is also possible, however, that the data simply reflects that recall of information is generally poorer than recognition of information. In order to ensure that participant views are reported most accurately, however, the results discussed above have been limited to participant responses in the open-ended question format.

8.4 Cultural engagement – more than cultural activities alone

It was indicated by participants in several stages of the research that it is not simply behavioural aspects (i.e. participation in cultural activities) which result in cultural engagement, but that internal aspects also play an important role in culture. During the reference group in Study 2, when considering what comprises cultural engagement in everyday life, participants spoke passionately about the need to include items referring to internal aspects of the individual (i.e. knowledge-based and attitudinal aspects), such as respect for Elders and their traditional teachings, having
strong kinship links, being aware of one’s Country and acknowledging where one is from, belonging to land associated with one’s people, and feeling accepted as a part of the Aboriginal community. It was expressed very clearly by participants that a picture of culture could not be complete with only the consideration of behaviours and participation in concrete activities. Participants emphasised the need to consider the more abstract side of culture, the experienced rather than the enacted, the invisible and non-tangible aspects of culture which lie within individuals and communities themselves. These may be argued to be the more spiritual components of culture.

In accordance with the views of the reference group participants, when Study 3 participants rated their cultural engagement in everyday life on the ACES, the six most highly endorsed items were not related to any specific behaviour but rather to attitudes and inner experiences (i.e. the six internal aspects noted above). The importance of the experiential side of culture was echoed by service providers in Study 2 interviews when participants expressed that the environment created by the people themselves is the real essence of culture. It was explained that culture cannot be conjured up, but that the people themselves make culture, and that being immersed or surrounded by a cultural environment is key in providing clients with a sense of cultural engagement.

For this reason it seems that the task of services in providing cultural engagement for clients is more difficult than simply placing activities on a timetable. It is possible that the reason cultural engagement in treatment was not associated with the same positive outcomes as cultural engagement in everyday life is that there is a vital aspect of culture that is not being captured or implemented within treatment programs (or by the measures used in the present research). This begs the question, is it the role of drug and alcohol services to provide this deeply personal, experiential side of cultural engagement, and is that even possible? One service provider expressed concern about giving too much to clients when they are in rehabilitation. He suggested that giving only a taste of culture is best, as this can be enough to motivate the client to pursue more knowledge and experience for himself, which is likely to result in greater and more valuable benefits for the client. This view is in line with previous research linking more autonomous enactment of cultural practices with greater wellbeing (Chirkov et al., 2003, 2005). However, if the aim is to only
provide a taste of culture and limit culture to simple concrete activities, there is likely an increased risk of reducing culture to something which is less than its whole, and providing clients with a picture of culture which is incomplete and fails to do justice to the complexity of Aboriginal culture.

In an endeavour to offer clients an experience of cultural engagement which is more holistic and more likely to result in benefits for the individual, consultation with the Aboriginal community must be sought. Firstly, the Aboriginal community’s views on the appropriateness of rehabilitation services in trying to implement an authentic and holistic experience of Aboriginal culture for clients must be established. It is important that, if rehabilitation services are to continue to implement cultural programs, the Aboriginal community supports the scope and presentation of traditional culture being made to Aboriginal clients.

It is recommended that a body representative of the local Aboriginal community be established by each service to act as an advisory board for the cultural programs. The role of the advisory board would be similar to that of the cultural consultant in therapy (Westerman, 2004), and would include providing information to the service regarding necessary cultural information. It is recommended that all recommendations from this research be taken to this advisory board prior to implementation, and that any future program changes be made after consultation with the board.

8.5 The importance of the Elders and the community

Consistent with the need for cultural programs to provide holistic cultural experiences rather than simple concrete activities, it is recommended that Elders take a lead role in orienting clients to the history, meaning, and significance of the cultural activities before any participation occurs. It is recommended that Elders, community members, and prior Aboriginal clients of the services be involved as much as possible in designing and implementing the cultural program in a way which embodies Aboriginal culture. Further, it is recommended that the community play a large part in cultural activities, including both the inner community of the rehabilitation service and the wider local Aboriginal community, so that the clients may experience an alignment of themselves within the Aboriginal community and so that community wellness and individual wellness may be enhanced together. Previous research has indicated that re-establishing and promoting traditional culture
is an important way of restoring social and emotional wellbeing for Aboriginal Australians (Hunter & Garvey, 1998; Hunter et al., 2002). It should be noted that concern has been expressed regarding the authenticity of cultural activities provided in treatment programs for Native Americans (Moghaddam & Momper, 2011). Therefore cultural activities which are holistic and authentic are necessary, and these may best be designed in consultation with Elders and community members.

With regards to community involvement, sport was noted to be an important medium by which Aboriginal people gather together as a community. In Study 2 service providers likened Aboriginal football tournaments to a modern-day corroboree. Sense of belonging could be enhanced for clients by accepting sporting activities as cultural experiences and including them within treatment programs. It should be noted, however, that during the reference group in Study 2 community members did not highly endorse sport as relevant to Aboriginal culture, and as a result sport was not included in the final version of the ACES (Berry et al., 2012). In general, it is necessary to consider that culture is whatever culture means to the individual or community, and thus there can never be a line drawn between what is and what is not cultural. Perhaps what is needed is a broadening of the definition of culture, and an understanding within services that there will be unique experiences which are legitimate and potentially cultural. A key future direction is to further explore the meaning of a broad range of cultural experiences with particular reference to their therapeutic or healing potential.

8.6 Culture as treatment and its benefits

The culture as treatment hypothesis proposes that returning to traditional cultural orientations and activities is sufficient for effecting recovery from drug and alcohol use for many Aboriginal people (Brady, 1995). There has been limited empirical research to support this hypothesis to date (Gone & Calf Looking, 2011). The present research suggests that cultural engagement is certainly an important part of treatment for Aboriginal clients, with qualitative data demonstrating client views that cultural activities are a relevant, helpful, and enjoyable part of treatment, and quantitative data indicating a strong association between cultural engagement in everyday life and empowerment.

In other samples receiving drug and alcohol treatment it has been found that the two things they most wanted to gain from treatment were “strengthening of self-
esteem” and “tranquillity” (Schneider, Kroemer-Olbrisch, Wedegartner, Cimander, & Wetterling, 2004). Although participants in the present research were not asked to articulate what they most want to get out of treatment, service providers were asked what they expected clients to gain from engagement in cultural activities. Their responses included reconnection with tradition/culture, sense of community/belonging, enhanced spirituality/identity/self-esteem, sense of pride in Aboriginality, and distraction from addiction. It may be that many of the cultural activities described by participants in Study 3 have the potential to meet the treatment wishes/expectations articulated by participants in previous research (Schneider et al., 2004). For example, involvement in a men’s group (i.e. a culturally-focused talk/meeting) was stated by service providers to enhance self-esteem, and time on land/Country was said to involve a spiritual experience for participants, which may be conceptualised as similar to tranquillity. In short, the views of service providers demonstrate qualitative associations between particular cultural activities and therapeutic benefits. The research also provides quantitative data linking cultural engagement in everyday life with empowerment. Thus the research contributes knowledge in the area of outcomes associated with cultural engagement, thus providing some indirect support for the culture as treatment hypothesis. This support is indirect and limited due to the lack of an association between cultural engagement during treatment and mental health outcomes.

8.7 The value of cultural activities versus general non-cultural activities

One of the benefits of cultural activities described by service providers was distraction from the effects of addiction. Distraction is a strategy employed to help clients to cope with cravings (Beck et al., 1993), and drug and alcohol services often use a wide variety of activities which are not culturally-oriented. Therefore it could be questioned whether, for the purpose of distraction alone, there is any greater value in cultural activities than non-cultural activities. In other words, is table tennis as valuable a treatment activity as visiting a sacred cultural site?

For the simple purpose of distraction, any activity which serves to shift an individual’s attention from their pain or cravings is likely to be beneficial (Beck et al., 1993; Silvestrini et al., 2011). Therefore activities such as table tennis, reading, drawing, or soccer could be equally beneficial to cultural activities with regards to
distraction. However, there are other potential benefits of engagement in cultural activities over and above the shifting of attention. Benefits such as reconnection with tradition, a sense of community/belonging, enhanced spirituality/self-esteem/identity, skill-building, and a sense of pride in Aboriginality were all articulated by service providers in the Study 2 interviews to be benefits of cultural engagement. Engagement in cultural activities has also been linked to benefits in previous research, such as identity, self-esteem, and pride (Kingsley et al., 2009). It is difficult to imagine general non-cultural activities that have the potential to deliver all of these benefits.

In exploring this question further we may consider the responses of the clients themselves in the Study 3 interviews. When asked how relevant they found the cultural activities, many participants offered a rationale for why the cultural activities were relevant. The majority of rationales (77%) offered by participants were not related specifically to culture. It could be argued, therefore, that the majority of participants perceived the activities to be relevant simply because the activities had a general positive impact on their wellbeing, not because of any positive cultural impacts. It should be noted, however, that even though the responses of these participants did not refer specifically to culture, they still involved some of the concepts mentioned by service providers noted above, such as self esteem and enhanced spirituality. It is therefore possible that, although these participants didn’t refer specifically to culture in their responses, they may have still been speaking of benefits closely linked with enhanced cultural awareness/connectedness/knowledge.

Twenty-three percent of participants who offered a rationale for why they viewed the cultural activities as relevant specifically noted their cultural relevance. These participants articulated more clearly that the cultural activities were relevant to them because they allowed for some sort of cultural growth or enhancement. For these participants in particular, the results suggest that there is value in cultural activities over and above general non-cultural activities. The vast majority of participants expressed that they would like more cultural activities to be offered as a part of their treatment program. This alone indicates that clients themselves view cultural activities as having a value unique to that of general non-cultural activities.

Previous research in Canada and USA has suggested that there are benefits of cultural activities in treatment for Aboriginal populations (Moghaddam & Momper,
2011; Moran & Bussey, 2007; Tolman & Reedy, 1998; Wendt & Gone, 2012; Wright et al., 2011). However none of these studies used a control group to investigate the differential effects of treatment as usual (i.e. no cultural activities) and treatment including cultural activities. Therefore the benefits of cultural activities as independent from general non-cultural activities are yet to be empirically established.

8.8 **Self-determination and mandatory cultural activities in treatment**

Results show that General Cultural Engagement in Treatment and Specific Engagement in Treatment Activities were generally not associated with empowerment or mental health. Previous research indicates that more internalised and autonomous cultural engagement is associated with greater wellbeing (Chirkov et al., 2003, 2005). Three out of the five services involved in the present research offered cultural activities as a mandatory part of their treatment program. The practice of having cultural activities as a mandatory part of treatment for Aboriginal Australians is contrary to principles of self-determination theory and cognitive evaluation theory, and has the potential to negatively impact on the clients’ sense of autonomy. Autonomy is a basic need stated within self-determination theory to be necessary for self-motivation, personality integration, and general wellbeing (Ryan & Deci, 2000). Cognitive evaluation theory suggests that individuals need to experience themselves as autonomous, and to see their own behaviour as self-determined, for intrinsic motivation to develop (Deci & Ryan, 1985). In the context of cultural activities in treatment, it is arguable that cultural activities must be optional in order for clients to experience autonomy, to in turn develop intrinsic motivation towards cultural engagement, and to achieve optimal benefits from cultural engagement.

It should be noted that the same could be argued for all treatment components. That is, if all treatment components were optional clients may experience greater autonomy, develop greater intrinsic motivation, and therefore achieve greater benefits. It is acknowledged, however, that there are established reasons for having mandatory components of residential rehabilitation programs (e.g., ensure provision of all aspects of the treatment program, fair and equal management of all residents, provide structure) and it is beyond the scope of this research to make recommendations to the contrary. It is possible that the benefits of cultural engagement in treatment may be lost among client resistance to imposed
treatment components, i.e. due to reduced autonomy experienced overall in the context of residential rehabilitation.

Previous research has directly linked more autonomous engagement in cultural activities with greater wellbeing (Chirkov et al., 2003, 2005). The results of the present research indicate no difference in outcomes for participants engaged in services which offered the cultural activities as mandatory compared to those which offered them as optional. It is possible that the potential gains for some clients were limited by having mandatory rather than optional cultural activities. Previous research has found that the more individuals view others as supporting their need for autonomy, the greater their experience of cultural fit and wellbeing (Chirkov et al., 2005). Services may be viewed by individuals as supporting their need for autonomy by providing optional cultural activities. In the interests of practicing in line with self-determination theory and cognitive evaluation theory, it is highly recommended that services offer their cultural activities as an optional part of treatment for Aboriginal Australians.

It may also be argued that due to disconnection from traditional culture, Aboriginal Australians have negative and inaccurate stereotypes of Aboriginality (e.g., Gorringe et al., 2011). Therefore there may be a need to initially compel or influence those attending treatment towards engaging in cultural activities, so that they may be exposed to more accurate portrayals of Aboriginal culture. Values focused interventions (see e.g., Flaxman, Blackledge, & Bond, 2011) which explore identity and cultural identity may be employed in order to enhance intrinsic motivation towards cultural engagement.

The term self-determination within Australian government policies has referred to the need for Aboriginal Australians to be involved in the decision-making and management of their affairs (Pratt & Bennett, 2004). Throughout this research there has been a focus on obtaining the opinions of the Aboriginal community, and primarily the Aboriginal clients of the drug and alcohol services involved in the research. With particular regard to the cultural activities offered, participants were asked if they wanted more cultural activities as a part of treatment, and the vast majority responded “yes”. Participants were also asked which cultural activities they found most helpful, which they found unhelpful, and of which they would like more. It was intended that this research provide an avenue for Aboriginal clients to voice
their opinions and needs to service providers, and in doing so operate in accordance with the principle of self-determination for Aboriginal Australians. It is recommended that services endeavour to consider the opinions of the participants included in this research, and implement the suggestions made by them, in order to provide services which are appropriate to the needs and desires of Aboriginal clients.

8.9 The impact of the service attended on mental health outcomes

Service was a significant predictor explaining unique variance in all four scales of mental health, even after controlling for length of stay in treatment. Service was a particularly strong predictor of clinician ratings of severity, indicating that clinicians rated clients’ severity very differently depending in which service they were employed. It is possible that the severity of client presentations varied significantly between services. Alternatively, this high variability in ratings may suggest differences in the way raters used the scale (i.e. inter-rater reliability).

While there were significant differences in outcomes for different services, there was no service which consistently obtained better or worse outcomes on the four mental health measures (improvement and severity rated by client and clinician). For example, for client ratings of Severity the order of the services from highest mean score to lowest mean score was Service 3, Service 1, Service 2, Service 4, Service 5, and for clinician ratings of Improvement the order of services was Service 1, Service 4, Service 3, Service 5, Service 2. Given that there were no distinct patterns of particular services performing better than others, it is difficult to speculate about what service factors may lead to better outcomes.

The five services involved in the research varied in several ways. As mentioned previously, three services offered the cultural activities as mandatory while two offered them as optional. The services also varied in terms of how many participants were mandated by court to attend treatment and how many attended voluntarily. In addition, the type, number and regularity of cultural activities offered at the services varied depending on many organisational factors, including access to funding, the skill level of staff, the accessibility of certain skill sets (e.g., to teach traditional language), available resources, and the structure of the program. The services varied further in terms of staff numbers, bed numbers, management
philosophies, and whether they accepted men only or men and women into their programs. Finally, the services varied in terms of their location and remoteness. With so many variables involved, it is not surprising that the service attended predicted mental health outcomes in some cases.

The type, number, and regularity of cultural activities offered at services could potentially contribute to differences in outcomes between services. While variation in the organisational factors noted above will necessarily always exist, it is important to work towards minimising their impact so that well-rounded, structured, varied, and consistently delivered cultural programs may be offered to all clients regardless of the timing of their stay at the residential service. It is also necessary to identify the most effective components of treatment for particular client groups, such as those living in remote areas, or those attending a service in/away from their home Country. Future research could examine particular client groups with regards to the best cultural activities as viewed by the clients, and the most effective cultural activities as informed by outcomes.

8.10 Relationship between length of stay and mental health

Length of stay was a significant predictor explaining unique variance in three out of the four scales of mental health (e.g., $r = -.48$ for client-rated improvement, $r = -.27$ for clinician-rated improvement). The results support previous research findings that the length of time in treatment is positively associated with post-treatment outcomes (Darke et al., 2012; Farabee et al., 2004; Sung & Richter, 2007). For the services involved in this research, this suggests that the longer clients remain in their treatment programs the more likely it is they will experience positive mental health outcomes.

8.11 Alcohol Treatment Guidelines for Indigenous Australians

The Department of Health and Ageing (2007) developed the Alcohol Treatment Guidelines for Indigenous Australians. These guidelines state that healthcare providers need to consider several domains of Aboriginal wellbeing when designing interventions: spiritual, cultural, social, psychosocial, and physical.

With regard to spiritual wellbeing, the guidelines suggest that strategies developed to improve health within Aboriginal populations will be more accepted if
they are directed at rebuilding traditional connections in consultation with the community. The present research involved consultation with the community and investigated outcomes of cultural engagement with the primary aim of establishing an empirical basis for the inclusion of culture in treatment for Aboriginal Australians. It is hoped that, by establishing this, the present research will affect an increase in cultural activities within services, increase exposure to cultural activities for Aboriginal Australians, improve links between cultural activities and therapeutic outcomes, and help to rebuild traditional connections for individuals.

The guidelines (Department of Health and Ageing, 2007) regarding cultural wellbeing state that changes since colonisation have resulted in many losses in connection to languages, land, and family. It was an aim of the present research to investigate outcomes related to activities associated with language, land, and family/community. Participants articulated that time on land/Country and community involvement were helpful and enjoyable parts of their treatment, and service providers stated that the associated benefits include a sense of community belonging, enhanced spirituality and self-esteem, and a sense of pride in Aboriginality. Participants also articulated that language is something they highly desire in treatment programs, and efforts are being made within services to source individuals who can provide this for clients.

With regards to social wellbeing the guidelines refer to the importance of family and kinship networks in Aboriginal culture (Department of Health and Ageing, 2007). Some services in the present research offered clients an opportunity to learn about their personal heritage from local Elders, and service providers suggested that this can enhance identity and feelings of connection for clients. Participants stated that they would like more opportunities to learn about their heritage and family background. The struggle of Aboriginal Australians to empower themselves within society is also discussed in the guidelines. The present research investigates outcomes in terms of empowerment, aiming to provide data regarding self-perceived empowerment in a sample of Aboriginal Australians. This is the first study to provide empirical support for the link between cultural engagement and empowerment in treatment-seeking Aboriginal people.

It is suggested that for psychosocial wellbeing a sense of cultural pride, identity, sense of self, and sense of belonging are all important factors, and that these
must be considered in developing holistic programs for Aboriginal Australians (Department of Health and Ageing, 2007). Cultural pride, identity, self-esteem, and sense of belonging were all mentioned by service providers as being therapeutic benefits of cultural activities, and were linked specifically to involvement in men’s groups, education on personal heritage, community involvement, and traditional art. Enhanced self-esteem was also mentioned to by participants as a product of cultural engagement during treatment.

Finally, the importance of physical wellbeing is described in the guidelines (Department of Health and Ageing, 2007). It is suggested that knowledge of traditional diet and lifestyle practices, as well as retrieving cultural values, are important in treating drug and alcohol issues in Aboriginal populations. Traditional food and medicine is an area of cultural practice which is highly desired by service users, and which is offered to an extent through time on Country and hunting and gathering activities. Traditional practices in general inform all cultural activities within the services in the present research. Cultural values were well articulated by participants in the Study 2 reference group, and included respect for Elders and their traditional teachings, strong kinship links, awareness of one’s Country and acknowledgement of where one is from, a sense of belonging to land associated with one’s people, and feeling accepted as a part of the Aboriginal community. These cultural values are included in items in the ACES (Berry et al., 2012).

The present research aimed to build on existing knowledge, such as that demonstrated in the Department of Health and Ageing (2007) guidelines, and contribute information regarding cultural activities offered in treatment for Aboriginal Australians and their associated benefits. The cultural activities detailed above have been shown to be associated with benefits for Aboriginal clients in the areas of spiritual, cultural, social, psychosocial, and physical wellbeing.

8.12 Contribution of the research

The present research provides evidence of culture as an important and positive context for healing. This research supports the previous research of Chirkov and colleagues (2003) which found that individuals who performed cultural practices autonomously experienced greater cultural fit and wellbeing. This research extends previous research by demonstrating that autonomous engagement in cultural
practices is associated with wellbeing and empowerment for Aboriginal Australian men.

The present research is the first within Australia to directly measure engagement in cultural activities for Aboriginal Australians in drug and alcohol treatment. Furthermore, it is the first research within Australia to employ quantitative methods to link cultural engagement with positive health outcomes in the context of drug and alcohol treatment. Having established this link between cultural engagement and positive health outcomes, there is now a stronger empirical basis for the inclusion of culture in treatment for Aboriginal clients of drug and alcohol services.

In addition, the qualitative analysis of interviews with service providers and Aboriginal clients contributes knowledge regarding the types of cultural activities offered and their expected therapeutic benefits, as well as the cultural activities desired by clients themselves. Research investigating these issues has not been conducted within Australia to date. These findings can potentially inform the development of culturally appropriate services which better meet the needs and preferences of Aboriginal Australians.

The use of the GEM as a primary outcome measure was informed by a movement within mental health literature to focus on aspects of subjective wellbeing rather than exclusively on reduction in symptoms. This is the first research within Australia to use the GEM in the context of drug and alcohol treatment. This is also the first research to provide empirical support for the link between cultural engagement and empowerment for Aboriginal Australians.

8.13 Limitations of the research

8.13.1 Limited generalizability of the research findings

During the process of this research it was often communicated by Aboriginal community members and Aboriginal health workers that it is very difficult to generalise between different tribes and language groups, and that research conducted in one area of Australia will not contribute to knowledge about Aboriginal communities in other areas of Australia. It is acknowledged that Aboriginal culture is extremely varied, and that this limits the generalisability of the findings of this research. However, similarities were evident between the cultural activities desired by clients in Study 2 and the Caring for Country Questionnaire (Burgess et al., 2008).
developed in a remote community in Arnhem Land. This suggests that some of the findings from this research may potentially be generalised to other Australian Aboriginal communities.

Several measures have been taken to attempt to minimise the limitation of generalisability. The residential services involved in Study 2 and Study 3 spanned several regions of NSW, and as such it was intended that participants from many language groups and backgrounds would be recruited to participate in the research. The final sample in Study 3 consisted of participants from nine regions/language groups (Koori, Bundjalung, Wiradjuri, Yuin, Kamilaroi, Gumbainggir, Eora, Murry, and Muruwari). When designing the research it was considered important to ensure that the geographical research area was not too large, as this had the potential to create so much diversity in the participant sample that the research became less manageable (i.e. costs and pragmatics). For this reason and due to funding constraints, the research was confined to NSW.

It is hoped that, by including a large number of participants from several regions and by limiting the intended scope of the research findings to NSW, the results of this research are at least generalizable to this region of Australia. It is acknowledged that culture is a complex entity, and that it is not possible to capture culture in absolute terms. This research does not intend to do this, but simply to offer a snapshot of a particular group of Aboriginal men at a particular point in time, to present information regarding their cultural engagement, to consider their opinions on the cultural programs offered to them, and to investigate any positive outcomes associated with their engagement in such programs.

8.13.2 Cross-sectional design of Study 3

Study 3 employed a cross-sectional design with the primary purpose of limiting the effects of attrition associated with taking multiple measures over time. A significant attrition rate was evident in Study 1, which created results which were biased towards a more positive picture for treatment completers. It was considered appropriate to employ a cross-sectional design for Study 3 in order to avoid the difficulty of attrition and a bias in results. This design also made the research more feasible given the time constraints. Analysis of Study 3 was therefore confined to correlations and regressions to investigate associations between variables at one
given time-point. As such, the findings of Study 3 are somewhat limited due to a lack of the data required to consider changes over time.

Future research may investigate cultural engagement over time in order to consider whether engagement increases or decreases with more time in residential rehabilitation. Research could also consider changes over time in the GEM, and its association with cultural engagement over time, in order to investigate whether increases in cultural engagement are associated with increases in empowerment, or whether perhaps empowerment continues to grow while in residential rehabilitation (as was found in Study 1) regardless of patterns of engagement in cultural activities.

### 8.13.3 Limited cultural engagement of participants at the time of interview

Some participants in Study 3 had not had the opportunity to be engaged in cultural activities during treatment at the time of their interview. Participants were required to be in treatment for at least four weeks prior to participating in the Study 3 interviews. Four weeks was chosen for three reasons: to minimise the effects of attrition; to ensure the long journey to the services for data collection was worthwhile (considering turn-over rates of services); and to ensure that participants had ample time to become familiar with the cultural activities offered in their treatment program. Unfortunately, about one sixth of participants reported limited awareness of the cultural activities in their treatment program. The minimum time period of four weeks may have been too short, considering the difficulties noted by service providers in providing regular and consistent cultural activities within programs. Similar future research may consider setting a greater minimum time period so that participants may have more opportunity to become familiar with the cultural activities offered at their treatment service.

### 8.13.4 Exclusion of women from the research

The present research included only men for several reasons. Firstly, the majority of services within NSW are available to men only or to women only, with very few services including programs for both men and women. Recruiting services which catered to both men and women would have significantly increased the number of services involved and the geographical area within which the research was being conducted. Secondly, the majority (80%) of Aboriginal clients who are in Australian Government-funded residential drug and alcohol rehabilitation programs
are men (Blakey-Fahey, 2009). Therefore it is likely that there would have been a significant difference in group sizes if both men and women were included. Alternatively, to establish proportional groups of men and women would have required the length of the research to be extended significantly. Thirdly, it was considered likely that the aspects of culture viewed as helpful by clients, as well as the mechanisms by which cultural activities were viewed as beneficial by service providers, may have differed between the sexes. This expectation was informed by literature noting the differences between men’s and women’s roles within traditional Aboriginal culture (Dudgeon et al., 2010). Therefore it was concluded that more clear and focused findings may be possible if the research was confined to men only.

Future research may investigate the perceived helpfulness of cultural activities, as well as the association between cultural engagement and therapeutic outcomes, for Aboriginal Australian women. The ACES was developed for use with both men and women, and therefore further use of the ACES within a sample of Aboriginal Australian women may contribute knowledge regarding its usability within a female sample.

8.14 Summary of recommendations

- It is recommended that Elders, community members, and prior Aboriginal clients of the services be involved as much as possible in designing and implementing the cultural program in a way which embodies Aboriginal culture.
- It is recommended that the cultural significance and expected therapeutic benefits of cultural activities be more clearly articulated to clients prior to their engagement in cultural activities. Elders should be employed to orient clients to the history and significance of the cultural activities. Two-way communication should occur between Elders and service providers so that service providers can link the cultural information with the aims of treatment, and explain to clients how cultural activities can help them with their current difficulties. It is hoped that grounding the cultural activities in an historical context may make the activities more understood, and that communicating the expectation of improvement as a result of cultural engagement may make the cultural activities more effective for clients.
- It is recommended that the community play a large part in cultural activities, including both the inner community of the rehabilitation service and the wider local Aboriginal community, so that the clients may experience an alignment of
themselves within the Aboriginal community, and so that community wellness and individual wellness may be enhanced together.

- It is recommended that values focused interventions which explore identity and cultural identity are employed to enhance intrinsic motivation towards cultural engagement.

- It is recommended that a body representative of the local Aboriginal community be established by each service to act as an advisory board for the cultural programs. Recommendations from this research should be provided to this advisory board prior to implementation, and future program changes should be made in consultation with the board.

- It is highly recommended that services offer their cultural activities as an optional (rather than mandatory) part of treatment for Aboriginal Australians.

- It is recommended that services consider the cultural activities most wanted by service users in designing their cultural program timetable, namely “time on Country”, “learning about culture/heritage/land”, “making traditional artefacts”, “learning about or making traditional foods and medicines”, “traditional art/craft”, “traditional language classes”, “time with Elders”, and “education regarding history”. In particular, the following activities are highly desired by service users but seem not to be offered regularly by services – “learning about or making traditional foods and medicines”, “making traditional artefacts”, “traditional language classes”, and “time with Elders”.

- It is recommended that sport be considered by services as a possible cultural activity to be included within their treatment programs. It is recommended that this possibility be discussed with the each service’s advisory board, however, due to some inconsistency between participants in different stages of the research regarding the relevance of sport to Aboriginal culture.

- It is recommended that a structured timetable of cultural activities be implemented by services (e.g., with each activity occurring at least every four weeks) so that clients understand what is available to them and have an opportunity to be engaged in all cultural activities offered within their treatment program. Values focused interventions which explore cultural identity should be included within this timetable.
It is recommended that services endeavour to provide a well-rounded, structured, varied, and more consistently delivered cultural program for all Aboriginal clients, regardless of the timing of their stay at the residential service. It is acknowledged, however, that organisational factors such as staff numbers and resource availability can affect program delivery, and that therefore programs may vary over time.


Cross, T. L., Bazron, B. J., Dennis, & Isaacs (1989). *Towards a culturally competent...*
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Appendix A

Growth and Empowerment Measure

The GEM:
Growth and Empowerment Measure

A package of questions designed to measure empowerment & wellbeing

The Kauri Pine is one of the oldest, strongest living trees in the world, and its presence in Australia can be traced back 30 million years. This measurement tool incorporates the Kauri Pine Tree as a symbol of empowerment and the reclaiming of Aboriginal culture and strength. While many other Australian trees have significant meaning for different Aboriginal groups, the choice of the Kauri Pine in our work aims to represent the collective strengths of Aboriginal culture as one of the oldest surviving cultures in the world.

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The word “Empowerment” has been adopted by Aboriginal people to mean healing from past wounds, developing strength and skills to live life in a positive way, to have good relationships with others and to work together to make communities a better place. As one young Aboriginal woman commented,

“... Empowerment... it’s like a tree – there is a foundation (seeds, roots), then the energy and self-esteem to look after yourself (trunk), so you can grow – the more you grow the bigger it gets... on the branches (of the tree) are education, job opportunities, housing”.

We have talked to lots of people about “empowerment” and heard many stories about changes people made in their lives that allowed them to grow. Sometimes they were helped by services and programs, such as the Family Well Being Program. In today’s world, getting funding to keep programs going depends on how well we can ‘measure’ change through time and show whether a program has made a difference for people or not. If we can measure a positive change and show that a program is making a difference, we are more likely to get funding and support to bring it to more people.

The GEM was developed to measure empowerment and growth within yourself, your family and your community. The questions have come from lots of listening and consultation about what people think is important about empowerment in workshops in Alice Springs, Yarrabah, Hopevale and Cairns. Aboriginal people have given their ideas about what we should be asking and how the form should look. People who complete the form also help us improve the questions.

We would like to invite you to answer the questions on the pages that follow. It will take about 30 minutes. Please be aware that it is completely your choice if you participate or not. You are free to stop at any time or not answer any of the questions that you don’t want to. We ask you to write a nickname on this form – if you use the same nickname in the future, we can tell you what changes you have made over time. We will write reports about what we find, but the report won’t have anybody’s name next to any of the information provided. We welcome your involvement and hope that you are happy to be part of this.

One thing we would like you to keep in mind when you answer these questions is to be careful that you are really thinking about where you are now, not where you’d like to be. In order to say things have gotten better, we have to know exactly where we started from – try to be as true about this as you can.

Thank you for your time and contribution!

Collaborative Research on Empowerment & Wellbeing Team (CREW)
Empowerment Research Program, James Cook University/ University of QLD,
Cairns, QLD (contact m.haswell@unsw.edu.au; 0415-568-536)
SECTION 1: GETTING TO KNOW YOU

These questions ask about your age, education and training, the place you live and if you are currently working.
Please tick the correct boxes and write your answers in the lines.

Your Name or Nickname ___________________________ Today’s Date ________________

Your Sex: □ Female □ Male Your Age ______

Are you: □ Aboriginal □ Torres Strait Islander
□ Both Aboriginal & Torres Strait Islander □ Non-Indigenous Australian
□ Other ____________________________

Have you completed this survey before? □ No □ Yes

If yes, where? ____________________________ When (approx month & year)? ________________

What Community do you live in now? ________________

Have you always lived here? □ No □ Yes

If no, where else have you lived? ____________________________

Do you have a partner? □ No □ Yes

Do you have children? □ No □ Yes If yes, how many? ____________

Are you currently employed? □ No □ Yes, part time □ Yes, full time

What work do you do? ____________________________

Do you volunteer your time helping people or groups in your community?
□ Not much time □ Yes, some of my time □ Yes, a lot of my time

How far did you go in school? (Highest grade completed) ______________

Have you done any University study? □ No □ Yes

Have you done any Technical training, like TAFE? □ No □ Yes

Have you done any of the Family Well Being program? □ No □ Yes □ Just started

If yes, what parts have you done? (Please tick appropriate boxes below)
□ □ □ □ □ □ □

Some Stage 1 All Stage 1 Stage 2 Stage 3 Stage 4 Facilitator Stage

How would you describe the place you live?
□ □ □ □ □

Very Bad □ Doesn’t meet our needs at all
Mostly Bad □ Mostly good
□ Mostly Good □ Some problems, but mostly problems
□ OK □ Some good, but mostly problems
□ Very Good □ Half and half

How many people live there with you? (count all adults & children) ______
SECTION 2: HOW I FEEL ABOUT MYSELF

Please tick the appropriate box that matches:
The way you usually feel about yourself most of the time

1. I feel like I don’t know anything.  
   half ‘n’ half  
   I am knowledgeable about things that are important to me.

2. I feel like I don’t know how to do much of anything.  
   half ‘n’ half  
   I am skilful and able to do things that are important to me.

3. I feel slack, like I can’t be bothered to do things even when I want to.  
   half ‘n’ half  
   I am strong and full of energy to do what is needed.

4. I feel very unhappy with myself and my life.  
   half ‘n’ half  
   I feel very happy in myself & with my life.

5. I am held back from what I could do, there are no opportunities for me.  
   half ‘n’ half  
   I am satisfied with my opportunities and what I’m doing.

6. I feel that other people don’t admire or value me.  
   half ‘n’ half  
   I feel that other people admire me and value me.

7. I have no voice, I can’t express myself. Nobody listens to me.  
   half ‘n’ half  
   I can speak out and explain my views. People listen.
8. I feel isolated and alone, like I don't belong.  
I belong in community. I feel connected.

9. I am not hopeful that anything will change for me.  
I am hopeful for a better future.

10. Mostly I feel shame or embarrassed.  
I have confidence in myself.

11. I do things for other people all the time. I'm not looking after myself or my family well.  
I am centered and focused on meeting the needs of myself and my family.

12. I'm always worrying and nervous. I can't relax or slow down.  
I feel calm and relaxed, even when I'm busy.

I feel safe and secure, I can face whatever is ahead.

14. I feel a lot of anger about the way my life is.  
I don't hold anger inside of me about bad things in my life.
### SECTION 3: YOUR FEELINGS IN THE LAST MONTH

Please tick the appropriate box that matches:
How much of the time did you have these feelings in the last month?

* Questions 1 through 10 are the Kessler 10 Psychological Distress Scale developed by Professors Ron Kessler and Dan Mroczek in 1992.

<table>
<thead>
<tr>
<th>In the last one month,</th>
<th>None of the time</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 How often did you feel happy in yourself?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>1 How often did you feel tired out for no good reason?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td>O</td>
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<td>2 How often did you feel nervous?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td>O</td>
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<tr>
<td>3 How often did you feel so nervous that nothing could calm you down?</td>
<td>O</td>
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<td>O</td>
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<tr>
<td>4 How often did you feel without hope?</td>
<td>O</td>
<td>O</td>
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<tr>
<td>5 How often did you feel restless or fidgety?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>6 How often did you feel so restless that you could not sit still?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td>7 How often did you feel depressed?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>8 How often did you feel everything was an effort/struggle?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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</tr>
<tr>
<td>9 How often did you feel so sad that nothing could cheer you up?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10 How often did you feel worthless?</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11 How often did you feel angry with yourself or others?</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<td>O</td>
</tr>
</tbody>
</table>

### SECTION 4: THINKING ABOUT MY EVERYDAY LIFE

This next section presents you with twelve questions about your everyday life. It describes four different situations that are possible answers.

Please think carefully and tick ONLY ONE box in the circles provided that best describes how you generally see yourself in your situation.

For question 12, you are asked to describe how you see the community you are currently living in.

If you see yourself in between two of the answers described, or sometimes one way and sometimes the other, please tick the “partly this partly that” box in between.
1. How do you deal with painful feelings and the bad things that have happened in your life?

Please tick ONLY ONE box below that best describes the way you see your situation.

- So much pain, anger and bad feelings are bottled up inside me. I haven't begun to address this. It stops me from moving ahead.
- I am beginning to open up and talk about myself. I have started to deal with the feelings that are bottled up inside me. Its painful, but I can see the benefits.
- I have been able to work through some of my feelings and emotions. I am beginning to move ahead in my life. I still have some ways to go to deal with what has happened to me and my community.
- I can say that I have worked through or moved on from much of the bad experiences and struggles I've had. These no longer hold me back from moving ahead with others into a better future.

Are you here? If so, please tick this Box.

Are you partly this & partly that? If so, please tick box.

Are you partly this & partly that? If so, please tick box.

Are you partly this & partly that? If so, please tick box.
2. How do you deal with safety for yourself and your family?

Please tick ONLY ONE box below that best describes the way you see your situation.

- I just put up with things that harm me. I feel too shame to get help.
- When things get frightening, I escape in order to protect myself and my family. I find it hard to trust anyone. But I am starting to be able to ask for help for physical safety if I need it.
- I am learning to take positive steps to protect myself and family against physical and emotional harm. I am starting to trust people to help me stay safe emotionally as well as physically.
- I have a strong ability to protect myself and my family from things that could harm us. I feel emotionally and physically secure. I don't have to run away. I am able to trust other people when appropriate.
3. How do you respond when people ask you to do things that they should do themselves?

Please tick ONLY ONE box below that best describes the way you see your situation.

People are always asking me to do things they should take responsibility for.
I always say **yes** even if it makes me angry or stressed.
I can’t say no.

I have learned how to **avoid situations** where I might get humbugged by somebody.
But I **usually say yes** when it happens even when I want to say no.

I am starting to **gain the confidence** to set boundaries and **say no** when somebody is humbugging me for things.
I think that **people are starting to respect me** for that.

I am **happy to help people**.
But, when somebody is humbugging me,
I can **gently but firmly tell the person no** and my ‘no’ is respected.
4. How do you feel about making changes in your life?
Please tick ONLY ONE box below that best describes the way you see your situation.

- **There are things that I should change in my life to be Healthier and Happier.**
  - But it seems all too hard.
  - **I don’t think I can change anything at this time.**

- **I have started to think about some changes I’d like to make that would be good for me.**
  - But I **don’t have skills or confidence to make the changes.**
  - I **try but I usually fall back to my old ways.**

- **I have thought a lot about changes I’d like to make that will be good for me.**
  - I **have gained some skills & confidence to make changes.**
  - I **have had some successes, but I still don’t feel fully confident about making change.**

- **I have gained skills and confidence and have succeeded in making many important changes in my life.**
  - I feel fully confident about my ability to make changes.
5. Are you engaging in learning opportunities?

Please tick ONLY ONE box below that best describes the way you see your situation.

- I know that more people are taking courses and doing other kinds of training, but there’s no way I could do that even if I wanted to.

- I am starting to think through some kinds of training and education opportunities that I think I could do. But I haven’t started anything yet.

- I have started or completed training to increase my skills and knowledge. However, I haven’t been able to use this yet in my work or my everyday life.

- I have reached some educational / training goals that I set for myself. I use these skills in my work or everyday life.

- I actively encourage others to do the same as part of my work or in my personal life.
6. How do you think about your own spirituality?

Please tick ONLY ONE box below that best describes the way you see your situation.

- I never think about 'spirituality'.
  It doesn’t mean anything to me.

- I have noticed spirituality in other people.
  I have thought about what spirituality means to me.
  But I don’t focus on spirituality in my own life.

- I have decided that spirituality is important for me.
  I have made some progress in developing my spirituality.
  I am gaining a spiritual focus in the things I do.

- I feel that I am a deeply spiritual person.
  I recognise the power of spirit through my experiences and my connections with other people, my culture, the land and our past. This gives me strength and guides my actions.
7. Do you have a strong sense of knowing who you are?

Please tick ONLY ONE box below that best describes the way you see your situation.

- I don't know who I am.
  - I don't know where I am going in my life.
  - Without this, I feel lost.

- I have a pretty good idea of who I am, but people put labels on me and these affect me.
  - I am struggling with being myself and pretending to be what others expect of me.

- I am lifting off the labels that other people have given me and other things about me that are not really who I am.
  - I've stopped pretending.
  - But I still have a long way to go to truly know and be myself.

- I'm very strong about who I am.
  - I am proud of my cultural identity.
  - I now fully understand what that means to me.
8. Are you able to speak out and be heard in your community?

Please tick ONLY ONE box below that best describes the way you see your situation.

I am too shy or shame to speak out in this community.

I have little or no say in what happens here.

I have no voice.

I am beginning to speak out and have some say on some issues.

I have a long way to go to make sure my voice is heard and respected.

I am able to speak out and be heard.

My views are considered when decisions are made in this community.

But I could be more involved in how things are decided and done here.

I am fully part of the decision-making process in this community as an individual or a member of an active group. People respect what I say even when we disagree.
9. Do you feel that you are respected in your workplace?

☐ Tick here, if you are not currently in paid employment and skip to the next question.

My workplace does not value us workers. There is no opportunity to express our needs or to contribute our ideas and skills to the way things are done.

Are you partly this & partly that? If so, please tick box

My workplace helps us in some ways to express our needs and contribute our skills to a satisfying level. But we don’t feel that our work is valued much and there is little chance for us to develop further.

Are you partly this & partly that? If so, please tick box

My workplace has shown that it is interested in our well being and in the work that we do – we feel valued. But there is little chance to grow and not much security.

Are you partly this & partly that? If so, please tick box

My workplace values its staff, and listens to us. Our current and future needs are considered. We feel that our work is considered essential and we are given appropriate responsibilities to match our skills.

Are you here? If so, please tick box
10. What do you do when you feel like you’re being judged?

Please tick ONLY ONE box below that best describes the way you see your situation.

I either take the criticism as truth without questioning it and feel worthless; or

I immediately get angry and start reacting and talking about that person.

I put up a protection around myself and stop myself from thinking about what they said.

Sometimes I get over it quickly; other times I avoid the person for a long time.

I keep an angry feeling inside myself.

I think about what the person said and try to understand why they said it. I think about my response.

If they are being fully unfair I ‘pull them up’ and tell them to stop.

If there is some truth in what they say, I take their comments on board even if it’s painful.

I use traditional structures to address my conflicts.

I help others to do the same by making things clear for them.

I have earned cultural status because of these skills. I work with others to improve our social environment and our ways of interacting with each other.
11. How do you see your relationships with other people?

Please tick ONLY ONE box below that best describes the way you see your situation.

- I feel completely trapped in my relationships.
  - My life is now rich and happier because of many good relationships.
  - I am gaining an understanding of my difficult relationships.
  - I have made a lot of progress in improving my relationships.
  - I think a lot about listening and talking sensitively to people.
  - I see improvement in the way people respond to me.

- I am dealing with things like: kids out of control, anger and fighting, gossiping, bullying.
  - Most of my relationships are harmful, not healthy.
  - I still have a lot of work to do to improve my relationships.
  - I am here? If so, please tick Box
  - Are you here? If so, please tick Box
  - Are you partly this & partly that?
    - If so, please tick Box
  - Are you partly this & partly that?
    - If so, please tick Box
  - Are you partly this & partly that?
    - If so, please tick Box
  - Are you partly this & partly that?
    - If so, please tick Box
  - Are you partly this & partly that?
    - If so, please tick Box

- I think more about what I’m saying.
12. How empowered do you think your community is?

Please tick ONLY ONE box below that best describes the **community that you currently live in**.

- In this community, there is **little harmony or safety**.
  - People don’t seem to know where to start to make things better.
  - Mostly we just blame each other.

- People in this community are **becoming aware** that things could be different.
  - There is more talk and hope about making things better.
  - But we have a **long way to go** to address our problems effectively.
  - Are you partly this & partly that? If so, please tick box

- Although it is early days, there is a **ripple effect happening here**.
  - Families and households are changing.
  - People are **working better together**.
  - We share **common goals**.
  - Our confidence has increased.
  - Are you partly this & partly that? If so, please tick box

- In this community, we are **working together for the betterment of our people**.
  - People are working with services and organisations to improve life here.
  - Healing has taken place at community level.
  - We can see the **fruits of change**.
  - Are you partly this & partly that? If so, please tick box
Appendix B

Drug Taking Confidence Questionnaire (DTCQ-8)

Instructions

Imagine yourself as you are right now in each of these situations. Indicate on the scale provided how confident you are that you will be able to resist the urge your primary drug of choice in that situation.

I would like to be able to resist the urge to use:
……………………………………………………………………
(specify your primary drug of choice e.g., alcohol, speed)

1. If I were angry at the way things had turned out

2. If I had trouble sleeping

3. If I remembered something good that had happened
4. If I wanted to find out whether I could use ______ occasionally without getting hooked

5. If I unexpectedly found some _____ or happened to see something that reminded me of using _____

6. If other people treated me unfairly or interfered with my plans

7. If I were out with friends and they kept suggesting we go somewhere and use _____
8. If I wanted to celebrate with a friend
### Appendix C

#### Treatment Component Evaluation

**Instructions**
How helpful did you find the following in assisting you reach your recovery goals?

<table>
<thead>
<tr>
<th></th>
<th>Unhelpful</th>
<th>Neutral</th>
<th>Moderately Helpful</th>
<th>Very Helpful</th>
<th>Extremely Helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your relationship with the Oolong staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Attending Program groups</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. One to one support sessions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Support from other staff members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Attending AA, NA or GA meetings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. The cultural specific component of the program (e.g., art groups)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Support of other residents</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Involvement in work activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. The treatment environment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Other treatment program activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please specify:
_______________________________
_______________________________
_______________________________
_______________________________

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Appendix D

Reference Group - Content Validity Index

How relevant to Aboriginal culture do you believe the following questions to be? Please place a cross in the appropriate square based on the response scale below.

1 = Not relevant  
2 = Somewhat relevant  
3 = Quite relevant  
4 = Highly relevant

<table>
<thead>
<tr>
<th>Question</th>
<th>1 Not relevant</th>
<th>2 Somewhat relevant</th>
<th>3 Quite relevant</th>
<th>4 Highly relevant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Spending time trying to learn about Aboriginal culture, such as its history, traditions and customs</td>
<td></td>
<td></td>
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<tr>
<td>2. Speaking traditional Aboriginal language (including pidgin, creole, and Aboriginal terms)</td>
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<tr>
<td>3. Making traditional artworks (e.g., painting, weaving, carving)</td>
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<tr>
<td>4. Participating in Aboriginal cultural practices of food preparation (e.g., bush meats, dampers, Johnny cakes)</td>
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<tr>
<td>5. Eating Aboriginal foods prepared the traditional way</td>
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<tr>
<td>6. Participating in Aboriginal cultural practices involving music/dance</td>
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<tr>
<td>7. Participating in Aboriginal sports, or playing in an Aboriginal sports team</td>
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<tr>
<td>8. Actively following Aboriginal sports, or following Aboriginal sports team/s</td>
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<tr>
<td>9. Receiving traditional Aboriginal healing methods (e.g., traditional healers, bush medicine)</td>
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<tr>
<td>10. Spending time on Country (e.g., living in homeland, travelling through Country)</td>
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<tr>
<td>11. Caring for Country (e.g., burning grass, cleaning up Country, fire work)</td>
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<tr>
<td>12. Using Country and land (e.g., for bush tucker, bush medicine, hunting, fishing)</td>
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<tr>
<td>13. Protecting Country (e.g., sacred sites, animals, totems)</td>
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<tr>
<td>14. Participating in ceremony (e.g., smoking ceremony, cleansing, Corroboree)</td>
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<tr>
<td>15. Attending Aboriginal community meetings</td>
<td></td>
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</tr>
</tbody>
</table>
16. Participating in social engagements that include mostly Aboriginal people

17. Participating in traditional Aboriginal cultural activities (e.g., Law time, NAIDOC Week, Sorry Day events)

18. Practicing traditional and/or contemporary Aboriginal cultural relationships (e.g., respect for Elders, avoidance relationships, Law Men & Law Women)

**Additional possible items:**

19. Respecting the Elders’ teaching of traditional Law

20. Spending time learning about contemporary issues facing Aboriginal people

21. Making contemporary Aboriginal artworks

22. Being aware of what Country one belongs to

23. Feeling one belongs to land in a specific area associated with their people

24. Having strong kinship links / family links

25. Participating in traditional Aboriginal cultural activities (e.g., Law time, Men’s and Women’s business, initiations, burials)

26. Participating in Aboriginal community events (e.g., NAIDOC Week, Sorry Day Events, Knockout)
Appendix E

Document presented to participants for follow-up telephone interviews with staff of service providers, Study 2

Cultural activities offered across the five services

*Question in initial interview - “What activities/components have you included in your treatment program that makes the program culturally relevant for Aboriginal Australians? (i.e. what are the distinctly Aboriginal components of the treatment program?)”*

Responses:

1. Men’s group (group meetings to discuss men’s business & cultural issues)

2. Activities with Elders (e.g., one-on-one mentoring, camping, talks about your heritage/land)

3. Aboriginal-specific parenting program (e.g., ‘Hey, Dad! For Indigenous Dads, Uncles and Pops’, or Triple P Parenting adapted for Aboriginal men)

4. Aboriginal-specific Community meetings/events (e.g., NAIDOC week, Aboriginal AA meetings, Aboriginal Mental Health Day, Knockout)

5. Visits to sacred/cultural sites

6. Excursions or talks related to Aboriginal history

7. Learn /perform traditional Aboriginal music &/or dance

8. Traditional art/craft program (e.g., make didgeridoos, boomerangs, paintings)

9. Assisting or being involved in cultural rituals, (e.g., Aboriginal flag raising, Welcome to Country)

10. Preparing bush tucker (e.g., collecting emu eggs, skinning and preparing meat)
Appendix F

Document presented to participants for follow-up telephone interviews with staff of service providers, Study 2

Therapeutic benefits stated by participants in initial staff telephone interviews

Question in initial interview – What do you believe are the therapeutic benefits of the cultural components of your treatment program?

1. Reconnection with tradition/culture (17)\textsuperscript{a}
   “A lot of young people have disattachment with culture and traditions” (ID3)
   “Mentoring by Elders helps to reconnect with culture” (ID3)
   “Many people have never been involved in traditional art. They take it up with interest and enthusiasm” (ID5)
   “Older clients become mentors for the younger – respect builds … for Elders” (ID3)

2. Sense of community/belonging (16)\textsuperscript{a}
   “[Aboriginal AA meetings] “Philosophy of AA is to share stories and grow strength together. So doing this with other Aboriginal people gives a sense of connectedness.” (ID4)
   “The way community living is supposed to be. Everything you do is for the benefit of the community” (ID2)
   “Build feeling of community and belonging. You belong somewhere, worth something, have meaning”(ID2)
   “Getting Kooris back to the community, back to family” (ID2)
   “People heal people” (ID2)
   “[Sense of belonging] begins to heal emotional and cultural trauma” (ID3)

3. Skill-building (5)\textsuperscript{a}
   “Brings men into the present moment” (mindfulness) (ID1)
   “Tools to put in your tool box” (ID1)
   “Get outside” (behavioural activation) (ID1)

(continued)
4. Enhanced communication (4)*
“Gets things out of their heads” (ID1)
“Tell stories through art” (ID5)
“[They begin to] trust enough to disclose problems or concerns” (ID3)

5. Restoration of Authority/Order (3)*
“Culture lays down rules of society” (ID4)
“Elders held authority in past, [their influence] restores order” (ID4)

6. Focus on the future (3)*
“Gives a sense of hope” (ID1)
“They can make their own choices” (ID2)
“Rituals are cleansing, allows people to move on” (ID1)

7. Enhanced spirituality (3)*
“Clients report that rituals take them to a different world” (ID1)
“When trying to restore spiritual values you need to draw on cultural values” (ID4)
“Cultural emphasis in the program addresses spiritual needs of people with D&A problems. Like AA, but it needs to be in a cultural form” (ID3)

8. Living in a safe Environment (1)*
“Safe environment where people don’t have to live on fear, anger, suspicion” (ID2)

Note. *Number of times this theme category was mentioned across all five interviews
Appendix G

Document presented to participants for follow-up telephone interviews with staff of service providers, Study 2

Cultural activities stated by participants to be most valuable with regards to drug and alcohol treatment in initial staff interviews

<table>
<thead>
<tr>
<th>Question in initial interview - Which of these activities/components [offered at your service] do you believe are the most valuable with regards to drug and alcohol treatment for Aboriginal Australians?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Traditional art/craft (2)</td>
<td>“Dot painting. Because of accessibility. You’re able to do it whenever” (ID1)</td>
</tr>
<tr>
<td></td>
<td>“Something everyone is interested in and participates in. Everyone wants to do it.” (ID5)</td>
</tr>
<tr>
<td>2. Dance (1)</td>
<td>“Dance, because of ceremony” (ID1)</td>
</tr>
<tr>
<td>3. Groups (1)</td>
<td>“Groups - Talking about identity and belonging” (ID1)</td>
</tr>
<tr>
<td>4. Visiting sacred sites (1)</td>
<td></td>
</tr>
<tr>
<td>5. Camps (1)</td>
<td></td>
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<tr>
<td>6. Yarning (1)</td>
<td>“The informal is more valuable than the formal” (ID2)</td>
</tr>
<tr>
<td>7. Aboriginal AA meetings (1)</td>
<td>“Doing this with other Aboriginal people gives a sense of connectedness.” (ID4)</td>
</tr>
<tr>
<td>8. A combination (1)</td>
<td>“There’s a synergistic effect. All activities complement each other. You can use different things, i.e. not just painting all the time because it’s the best”. (ID1)</td>
</tr>
</tbody>
</table>

Note. a Number of times this activity was mentioned across all five interviews
Appendix H

Document presented to participants for follow-up telephone interviews with staff of service providers, Study 2

Other cultural activities that could be offered, stated by participants in initial staff telephone interviews

*Question in initial interview – Are there any other cultural activities/components of treatment that you think may be beneficial for Aboriginal Australians? If so, what do you believe would be the therapeutic benefits of these activities/components?*

Need a more consistent approach. Do all these things more regularly and consistently.

Language classes.

A program which is family-oriented, with a vision of family. Ideal to do individual treatment for 3-6 months, then clients go to another place where they live with family for 3-6 months. Learn to live in the system of a family.

More to be done on community development and work following on from what is done in rehab services.

More sport – boxing, league, touch football. Most young Aboriginal males are very interested in sport. Sport is a way of life for Aboriginal people as they grow up. Has the benefits of:

- exercise
- encouraging to have fun without an esky
- they are often good at it and enjoy it. “They shine”.

More camps to the river

Welcome to Country
### Appendix I

Other cultural activities that may be beneficial, suggested by participants in follow-up interviews with staff of service providers, Study 2

<table>
<thead>
<tr>
<th>Activity</th>
<th>Direct quote from participant responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language classes (4)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“Language classes is an interesting one and I’d . . . love to try that, . . . our problem is finding someone to do that” (ID3)</td>
</tr>
<tr>
<td></td>
<td>“Language . . . that’s certainly something we would like to get going if we could because I think having . . . language is a very powerful tool” (ID5)</td>
</tr>
<tr>
<td></td>
<td>“Language classes . . . would be a good thing . . . but I think it’s unrealistic. . . . No mob have the same language” (ID4)</td>
</tr>
<tr>
<td>Family-oriented program, in which clients learn to live within the system of a family (i.e. normal rehabilitation for 3-6 months, followed by 3-6 months of living at the service with their family) (3)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“In theory it’s a good idea but . . . because that would be resource dependent . . . you’d have to be sure you’re picking the people that are most likely to . . . go through with that” (ID3)</td>
</tr>
<tr>
<td></td>
<td>“That’s one of the areas we’ve identified as needing more work done. . . . Educate the family around how to . . . handle . . . someone who’s got some drug or alcohol issues” (ID5)</td>
</tr>
<tr>
<td></td>
<td>“That’s a solution . . . you’ve got to wonder how practical it is. . . . Some blokes will never get well with their family because their family is dysfunctional where they all drink and the whole mob drinks and if you don’t drink they don’t talk to you” (ID4)</td>
</tr>
<tr>
<td>Education regarding the land and traditional food (2)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“Part of what we’re trying to do is create a bush garden for food things and also teach people about . . . what foods . . . could be eaten from the wild” (ID3)</td>
</tr>
<tr>
<td></td>
<td>“Show them different types of trees and wood for spears and didgeridoos” (ID2)</td>
</tr>
<tr>
<td>Welcome to Country (1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“Do a Welcome to Country and use our Elder . . . so that they know they’re getting welcomed here by a traditional Elder from this area and than that . . . makes them more comfortable” (ID5)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Indicates the number of participants suggesting the activity.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Quote</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch football (1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“Touch football I think would be much more from my personal view beneficial than . . . [rugby] league or boxing” (ID3)</td>
<td></td>
</tr>
<tr>
<td>Smoking ceremonies (1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“There’s the smoking ceremonies . . . that probably assists” (ID1)</td>
<td></td>
</tr>
<tr>
<td>Qualified Aunties to provide counselling regarding trauma (1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“Many of our men have suffered a lot of trauma from sexual abuse . . . They’re reluctant to talk to other men about it” (ID4)</td>
<td></td>
</tr>
<tr>
<td>Give just enough knowledge so they can seek more for themselves (1)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>“You don’t want to drown people who are coming in to rehab . . . You want to give them enough knowledge for them to want to gain more knowledge . . . If you work for something . . . it’s valued alot more and the lessons learnt are alot better, and . . . responsibility comes into that, which again comes back as benefits from confidence and . . . self esteem, and the more confident you get the more you want to know and the more learning you’re most . . . likely to do and the more risks you will take in that area and there’s values ongoing” (ID2)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Number of times this activity was mentioned across all five interviews
Appendix J

Clinical Global Impressions

Client version

1. How unwell do you believe you are at this time?

1 = Normal, not at all unwell
2 = Borderline mentally ill
3 = Mildly ill
4 = Moderately ill
5 = Markedly ill
6 = Severely ill
7 = Among the most extremely ill patients

2. If you think back to when you first came into rehab, how much have you changed? (Have you changed for the better or for the worse?)

1 = Very much improved
2 = Much improved
3 = Minimally improved
4 = No change
5 = Minimally worse
6 = Much worse
7 = Very much worse

Clinician version

1. Severity of illness
Considering your total clinical experience with this particular population, how unwell is the client at this time?

0 = Not assessed
1 = Normal, not at all ill
2 = Borderline mentally ill
3 = Mildly ill
4 = Moderately ill
5 = Markedly ill
6 = Severely ill
7 = Among the most extremely ill patients

2. Global improvement: Rate total improvement.
Compared to his condition at admission to the program, how much has he changed?

0 = Not assessed
1 = Very much improved
2 = Much improved
3 = Minimally improved
4 = No change
5 = Minimally worse
6 = Much worse
7 = Very much worse
### Aboriginal Cultural Engagement Survey

Please answer the following questions based on the past year, prior to coming into your current drug and alcohol service.

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all (None)</th>
<th>A little (A few days in the year)</th>
<th>A fair bit (a few weeks in the year)</th>
<th>Alot (a few months in the year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I spend time trying to learn about my Aboriginal culture, such as its history, traditions and customs</td>
<td></td>
<td></td>
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<tr>
<td>2. I make Aboriginal artworks (e.g., painting, weaving, carving)</td>
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<tr>
<td>3. I participate in traditional Aboriginal practices of food preparation (e.g., bush meats, dampers, Johnny cakes)</td>
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<tr>
<td>4. I participate in Aboriginal cultural practices involving music/dance (either traditional or modern)</td>
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<tr>
<td>5. I have received traditional Aboriginal healing methods (e.g., traditional healers, bush medicine)</td>
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<tr>
<td>6. I spend time on Country (e.g., living in homeland, travelling through Country)</td>
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<tr>
<td>7. I care for Country (e.g., burning grass, cleaning up Country, fire work, conservation, regeneration)</td>
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<tr>
<td>8. I use Country and land (e.g., for bush tucker, bush medicine, hunting, fishing)</td>
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<tr>
<td>9. I protect Country (e.g., sacred sites, animals, totems)</td>
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<tr>
<td>10. I participate in ceremony (e.g., smoking ceremony, cleansing, Corroboree)</td>
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<tr>
<td>11. I attend/participate in Aboriginal community meetings</td>
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<tr>
<td>12. I participate in social engagements that are related to Aboriginal people (e.g., NAIDOC Week, Sorry Day events, Knockout)</td>
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<tr>
<td>13. I respect the traditional teachings of Elders</td>
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<tr>
<td>14. I spend time learning about issues facing Aboriginal people today</td>
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<tr>
<td>15. I am aware of what Country I belong to and I acknowledge where I am from</td>
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<tr>
<td>16. I feel I belong to land in a specific area associated with my people</td>
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</table>

(continued)
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>17. I have strong kinship links / family links</td>
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<tr>
<td>18. I participate in traditional Aboriginal cultural activities (e.g., Men’s and Women’s business, burials)</td>
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<tr>
<td>19. I feel I contribute to my community (e.g., spending time with Elders, going to community events)</td>
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<tr>
<td>20. My community accepts me as a part of the Aboriginal community</td>
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<tr>
<td>21. I practise respect for Elders</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix L

**Engagement in Specific Activities of Treatment**

<table>
<thead>
<tr>
<th>Question - How much have you engaged in the following activities within your treatment program?</th>
<th>Activity not offered</th>
<th>Not at all</th>
<th>A little</th>
<th>A fair bit</th>
<th>Alot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Men’s group (group meetings to discuss men’s business &amp; cultural issues)</td>
<td></td>
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<tr>
<td>2. Activities with Elders (e.g., one-on-one mentoring, camping, talks about your heritage/land)</td>
<td></td>
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<tr>
<td>3. Aboriginal-specific parenting program (e.g., ‘Hey, Dad! For Indigenous Dads, Uncles and Pops’, or Triple P Parenting adapted for Aboriginal men)</td>
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<tr>
<td>4. Aboriginal-specific Community meetings/events (e.g., NAIDOC week, Aboriginal AA meetings, Aboriginal Mental Health Day, Knockout)</td>
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<tr>
<td>5. Visits to sacred/cultural sites</td>
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<tr>
<td>6. Excursions or talks related to Aboriginal history</td>
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<tr>
<td>7. Learn /perform traditional Aboriginal music &amp;/or dance</td>
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<tr>
<td>8. Aboriginal art/craft program (e.g., make didgeridoos, boomerangs, paintings)</td>
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<tr>
<td>9. Assisting or being involved in cultural rituals, (e.g., Aboriginal flag raising, Welcome to Country)</td>
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<tr>
<td>10. Preparing bush tucker (e.g., collecting emu eggs, skinning and preparing meat)</td>
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<tr>
<td>11. Other. Please specify..................................................</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
**Appendix M**

**Cultural Identity Subscale of the Abbreviated Multidimensional Acculturation Scale**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree Somewhat</th>
<th>Agree Somewhat</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I think of myself as being Aboriginal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I feel good about being Aboriginal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Being Aboriginal plays an important part in my life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I feel proud that I am part of Aboriginal culture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I have a strong sense of being Aboriginal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I am proud of being Aboriginal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix N

Coding of narrative interviews, Study 3

Categories of cultural activities engaged in by participants

1. None
2. Traditional art/craft
   includes: painting; art and craft program; traditional craftwork
3. Making traditional artifacts
   includes: Didgeridoo cutting; making spears; making coolamons
4. Using traditional artifacts
   includes: playing didgeridoo; didgeridoo classes/lessons; didgeridoo; throwing boomerangs
5. Traditional dance
6. Music
   includes: playing music; performing music
7. Traditional Language Classes
   includes: teaching traditional language
8. Hunting and gathering
   includes: beach hunting and gathering; catching snake; fishing; working with the land; gardening; living off the land; using fish traps; crabbing
9. Prepare bush food
   includes: cooking snake
10. Being on the land
    includes: walking in the bush; bushwalks; swimming; camping; visits to National Park; experiencing Country; getting to know native trees; spending time at the farm
11. Aboriginal parenting program
    includes: parenting program; Hey Dad; Nuts and Bolts Program; Triple P Parenting
12. Aboriginal AA or NA Meetings
    includes: Drug and Alcohol meetings; Koori AA meetings
13. Visits to sacred sites
    includes: visits to traditional Aboriginal Country; excursions to sites; visits to cultural sites
14. Excursions regarding history/culture
    includes: museum trip; trip to land council; trip to Aboriginal Medical Centre; excursions to coastlines; cultural tour
15. Getting involved in community
    includes: NAIDOC week; NAIDOC celebrations; attend opening of Native Title Claims; attend opening of cultural sites; Gala Day
16. Talks/presentations by Aboriginal visitors
    includes: talks given by visitors; Ashley Moran talk from National Parks and Wildlife; talks from outsiders; Indigenous network of people coming to have a talk
17. Culturally-focused talks/meetings
   Includes: cultural meetings for Kooris; talking about history/culture/the past; men’s business, people in rehab speaking about their experiences; men’s group; men’s group around the fire; talks/yarns about culture; talks about Aboriginality; men’s circle; talking circle; learning about another tribe; culture classes/workshops; talk on identity.

18. Time with Elders
   Includes: talking to Elders; Elders talking about cultural rules; outings with Elders

19. Time spent with other Aboriginal people
   Includes: Aboriginal meetings; group talks around the fire; spending time with other Aboriginal clients; talks among residents; groups; socializing with brothers; yarning with other Aboriginal people; association with other Aboriginal people; campfire talks; talking to people; bonfire

20. Raising Aboriginal flag

21. Traditional stories
   Includes: stories about the didgeridoo, Dreamtime Stories

22. Sport
   Includes: football; sport Aboriginal + people; touch footy

23. Self-directed cultural learning
   Includes: personal research into culture; Aboriginal books

24. Self-improvement workshops/classes
   Includes: Anger management; self-esteem workshop; learning skills; Moral Reconation Therapy (M.R.T.)

25. Poetry class
Appendix O

Coding of narrative interviews, Study 3

Categories of cultural activities suggested by participants

1. Sporting activities
   Includes: sports connects people; sporting cultural activities

2. Education regarding history
   Includes: learn more about history; knowledge about where we come from; teaching about history like stolen generations and the past; Aboriginal studies;

3. Excursions regarding history/culture
   Includes: Site visits to the mission; go out more to other places; sacred sites; visits to sacred sites; go away and look at artifacts and sacred sites

4. Get told traditional stories of our past
   Includes: dreams

5. Have more Indigenous workers involved in the program

6. Time on the land/Country
   Includes: get out and learn about the land; take us onto the land; hunting; hunting and gathering; walkabout/bushwalking; camping; hunting trip out bush; get connected to land; take the boys out bush; get connected to land and heritage; bush trips; getting out on the land; go out into bush; excursions out to the bush

7. Make traditional artifacts
   Includes: Cut didgeridoos; make spears; making hunting tools; making dilly-bags; tool-making; making instruments; making didgeridoos, making boomerangs; making clapsticks

8. Time with Elders
   Includes: excursions to talk to Elders; get Elders in to connect with the boys; have Elders in to share knowledge; connection with Elders about the land; Elders come in

9. Learn about culture, heritage, and land
   Includes: cultural practices; have people to teach culture; learn more about culture; traditional teachings; knowledge of traditions and customs; have talks on culture and heritage; connection to land and heritage; learn about land and heritage; I would like to connect with my heritage and culture; teach about culture and heritage; incorporate the old ways; courses about obligations to Country; culture teacher; rituals; practice; learn what the lore was

10. Run Triple P Parenting longer

11. Traditional art/craft
    Includes: painting workshops; art teacher; traditional jewellery-making; basket weaving
12. Traditional Language
   Includes: sharing of language; learning traditional language;

13. Traditional foods and medicine
   Includes: Bush tucker; bush medicine; education on traditional food; courses
   about bush medicine; natural remedies (medicines); bush foods (tucker); bush
   tucker gathering and cooking; healing

14. Connecting with community

15. Connection to spirituality

16. Learn regarding personal heritage
   Includes: Family tree; totem; tribe; research bloodline

17. Dancing
   Includes: dance

18. Job start program

19. Groups with a cultural focus
   Includes: men’s group; cultural meetings

20. Traditional music
   Includes: music; song

21. Talks/presentations by Aboriginal visitors
   Includes: National Parks talk
### Associations between potential control variables and outcome variables for regression analysis, Study 3

Table P1

*Kendall’s-Tau-B correlations between continuous potential control variables and outcome variables

<table>
<thead>
<tr>
<th>Outcome variables</th>
<th>Potential control variables</th>
<th>Length of stay</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Capacity</td>
<td></td>
<td>.17*</td>
<td>.04</td>
</tr>
<tr>
<td>Inner Peace</td>
<td></td>
<td>.14</td>
<td>.01</td>
</tr>
<tr>
<td>Healing &amp; Enabling Growth</td>
<td></td>
<td>.17*</td>
<td>.09</td>
</tr>
<tr>
<td>Connection &amp; Purpose</td>
<td></td>
<td>.13</td>
<td>.16*</td>
</tr>
<tr>
<td><strong>CGI^b - Client</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td></td>
<td>-.48**</td>
<td>.08</td>
</tr>
<tr>
<td>Severity</td>
<td></td>
<td>-.15</td>
<td>.10</td>
</tr>
<tr>
<td><strong>CGI^b - Clinician</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td></td>
<td>-.27**</td>
<td>-.03</td>
</tr>
<tr>
<td>Severity</td>
<td></td>
<td>-.23**</td>
<td>.15*</td>
</tr>
</tbody>
</table>

*Note.* ^a GEM = Growth and Empowerment Measure  
^b CGI = Clinical Global Impressions  
* p < .05 (2-tailed). ** p < .01 (2-tailed).

Table P2

*Results of parametric one-way ANOVAs investigating the relationship between categorical potential control variables and outcome variables*

<table>
<thead>
<tr>
<th>Outcome variables</th>
<th>Potential control variables</th>
<th>Service F (p)</th>
<th>Mental illness F (p)</th>
<th>Drug of choice F (p)</th>
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<tr>
<td><strong>GEM</strong></td>
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<td></td>
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<tr>
<td>Self-Capacity</td>
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<td>.63 (.64)</td>
<td>.06 (.80)</td>
<td>3.42* (.00)</td>
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<td>Inner Peace</td>
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<td>.59 (.67)</td>
<td>.78 (.38)</td>
<td>1.66 (.14)</td>
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<td>Healing &amp; Enabling Growth</td>
<td></td>
<td>3.30* (.02)</td>
<td>.41 (.52)</td>
<td>1.58 (.16)</td>
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<td><strong>CGI^b - Client</strong></td>
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<tr>
<td>Improvement</td>
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<td>2.08 (.09)</td>
<td>.00 (.95)</td>
<td>1.71 (.13)</td>
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<td>Severity</td>
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<td>2.86* (.03)</td>
<td>5.90* (.02)</td>
<td>1.05 (.40)</td>
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<td><strong>CGI^b - Clinician</strong></td>
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</tr>
<tr>
<td>Improvement</td>
<td></td>
<td>2.45* (.05)</td>
<td>1.41 (.24)</td>
<td>.42 (.87)</td>
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<tr>
<td>Severity</td>
<td></td>
<td>25.41*** (.00)</td>
<td>.03 (.86)</td>
<td>.97 (.45)</td>
</tr>
</tbody>
</table>

*Note.* ^a GEM = Growth and Empowerment Measure  
^b CGI = Clinical Global Impressions  
* p < .05. *** p < .001.
Appendix Q

Participant Information Sheets and Consent Forms

Study 1

University of Wollongong
Client Participant Information Sheet
Oolong House Program
Evaluation of a residential program for people with psychiatric and substance use disorders

Who is doing the study?
Dr Trevor Crowe is the chief investigator on the project, which is based at the Illawarra Institute for Mental Health at the University of Wollongong.

What is the study about?
The purpose of this research is to evaluate the effectiveness of the Oolong House health program. We are interested in exploring the range of activities provided by the service and how these might assist individuals to meet their recovery goals. The research project’s findings will be used to improve the treatment services provided by Oolong House and in the alcohol and other drug treatment field in general.

What do I need to do?
1. Give permission. Before we can collect any information we firstly need to obtain your permission to be involved in the study. It is important that you carefully read this ‘information sheet’ and ‘consent form’ to ensure that you understand what is involved in the research. If you would like further information on the study you can also contact Dr. Crowe at the University of Wollongong by calling 02 4221 3147.

2. To be able to evaluate the Oolong House health program we need to measure how individuals may change whilst they are attending the program. We will measure this in several ways. The first is to ask your case manager how they think you are doing and how well treatment is progressing. We will collect this information by asking your case manager to complete a brief questionnaire at regular intervals. We will also review your case record to obtain your mental health history, involvement in the treatment program and reason for discharge.

3. We will also ask you to complete a questionnaire to measure how you are feeling. This questionnaire will involve questions on your physical, mental health, and drug and/or alcohol use. The questionnaire will be completed when you first enter the service with the support of the Oolong House health program staff. It is anticipated that completion of the initial questionnaire will take approximately 45 to 60 minutes.

Once a resident of Oolong House you will be asked to complete a briefer version of the questionnaire. This will take approximately 20 to 30 minutes. You will be asked to complete the questionnaire after you have been in the program for 8 weeks, and then at 16 weeks during your stay. You will also be asked to complete the questionnaire and answer some brief interview questions over the phone 3 months after you leave the program.
4. To develop an understanding of the most important components of the treatment program we will also be conducting brief interviews with you at weeks 8 and upon discharge form the programme. In these interviews you will be asked to describe the factors you find ‘helpful’ or ‘unhelpful’ in the program. These interviews will be conducted by a researcher from the University of Wollongong by telephone or at Oolong House. The interviews will take approximately 15 minutes to complete. In order to capture your descriptions we will audiotape these interviews. The audiotapes will be stored in a locked filing cabinet at the University of Wollongong and will remain strictly confidential. After the audiotapes have been typed as text (any personally identifying information will not be used in this text, but rather replaced with a code) the audiotapes will be erased.

5. To understand the effects of the program we will also be contacting you by telephone once you leave the Oolong House programme. The interview will occur 3-months after you have left the service. The questionnaire will include questions on your physical, mental health, and drug and/or alcohol use. The telephone interviews will take approximately 30-45 minutes to complete. If you agree to complete the 3-month follow up interview you will receive a $20 gift voucher as compensation for your time.

Is there any risk or burden if I decide to participate?
The main burden will be related to the time it takes to complete the assessment. There is a very small risk that you might think some of the questions in the questionnaires appear too personal. However, you have the right to refuse to answer any specific questions. It is not the aim of this research to examine your involvement in any serious criminal activities. If you choose to discuss any serious criminal activity you should avoid identifying any specific individuals who may have committed crimes in any way. Serious criminal activity covers offences such as drug trafficking, serious assaults, sexual assaults, child abuse or neglect, murder and manslaughter. For example, if you say that you have trafficable quantities of drugs we are obligated to inform the Police. As this research is concerned with substance use the researchers will not report your personal drug use to the Oolong House staff or the Police. Even if you agree to participate in the study, you can choose to withdraw from the study at a later date. If you choose not to participate in the study, this will in no way affect your relationship with Oolong House or the University of Wollongong. Participation is entirely voluntary.

Are there any benefits expected?
People often find that when they complete the questionnaires and interview it helps them reflect on their progress and clarify what it is about treatment that is helping them. All clients who complete the 3-month interview after they are discharged will receive a $20 gift certificate.

The study will also help provide suggestions to improve the drug and alcohol services provided by Oolong House. In this way you are making a contribution to improving services for other people who use Oolong House services in the future.

How will my information be collected and used?
When you first enter the program Oolong House staff will assist you to complete the initial questionnaire. This will involve answering a series of questions and completing
a written survey. Information from this initial assessment may be used by your case
manager to support your treatment. All other information collected in the study will be
kept strictly confidential. This means it will not be viewed by Oolong House staff.

You will be required to complete questionnaires at 8 and 16 weeks while you are in the
program. Oolong House staff will provide you with copies of the questionnaires.
Arrangements can also be made to complete the questionnaires directly with a researcher
from the University of Wollongong if desired. This will ensure that your information is kept
confidential. The interviews examining the ‘helpful’ and ‘unhelpful’ aspects of treatment will
be conducted by a researcher from the University of Wollongong via telephone or face-to-
face at Oolong House. Information obtained in these interviews will also be kept strictly
confidential.

To assist with locating you for a follow-up telephone interview when you are discharged
from Oolong House, we will ask for your current contact details. As it is common for people
to move or change telephone numbers following attendance at the program we would also
like to get alternate numbers and addresses to contact you on. With your permission, this may
include contact details for relatives, friends or other service providers. Family, friends or
service providers will only be contacted if the research team is unable to locate you first on
the phone numbers you have provided. Personal information will not be provided to relatives,
friends or other service providers. They will only be informed that you have agreed to
participate in a research project conducted by the University of Wollongong and that we are
attempting to contact you for a brief telephone interview. Details about the research project
will not be disclosed.

We will keep your information confidential by using a code number instead of your name
when we transfer your information into a database. All questionnaires and interview material
will be stored securely at the University of Wollongong. The information may be used for
publication in scholarly research journals, reports to the Oolong House, student theses, and
conference presentations. You will not be identifiable in any publications.

What if I have more questions?
You may have additional questions that you wish to ask about the research before you decide
whether to participate. You can contact Dr. Crowe at the University of Wollongong by
calling 02 4221 3147. If you have any concerns or complaints regarding the way in which the
research is or has been conducted, you can contact the Secretary of the University of
Wollongong Human Research Ethics Committee on Phone: (02) 4221 4457, Fax: (02) 4221
4338 email: research_services@uow.edu.au.
I have been given information about the study ‘Evaluation of a residential program for people with psychiatric and substance use disorders’. I have discussed the project with Oolong House staff and have been offered the opportunity to discuss the research project with Dr Crowe who is conducting this research from the Illawarra Institute for Mental Health at the University of Wollongong.

I understand that, if I consent to participate in this project I will be asked to:

- Give permission for the researchers to access information from my case file.
- Complete questionnaires at regular intervals during my stay at Oolong House
- To be interviewed by staff from the University of Wollongong regarding aspects of the program I have found ‘helpful’ and ‘unhelpful’. I understand this interview will be audio taped.
- Be contacted by researcher from the University of Wollongong 3-months after I leave Oolong House to complete a telephone interview. A researcher may use the contact details of family, friends or other services that I have provided to help locate me.

I have been advised of the potential risks and burdens associated with this research, which include completion of questionnaires that may contain personal questions, and have been given an opportunity to contact the researchers and ask any questions I may have about the research and my participation.

I understand that my participation in this research is voluntary, I am free to refuse to participate and I am free to withdraw from the research at any time. My refusal to participate or withdrawal of consent will not affect my relationship with Oolong House or the University of Wollongong.

If I have any enquiries about the research, I can contact Dr Crowe at the University of Wollongong by calling 02 4221 3147, or if I have any concerns or complaints regarding the way the research is or has been conducted, I can contact the Secretary of the University of Wollongong Human Research Ethics Committee on Phone: (02) 4221 4457, Fax: (02) 4221 4338 email: research_services@uow.edu.au.

By signing below I am indicating my consent to participate in the research titled ‘Evaluation of a residential program for people with psychiatric and substance use disorders’ conducted by Dr Crowe as it has been described to me in the information sheet and discussed with Oolong House staff. I understand that the data collected from my participation may be used for journal publications, organisational reports, research theses, and conference presentations, and I consent for it to be used in that manner.

Sign: ____________________________________________

Name (please print): ______________________________ Date: __________
PARTICIPATION INFORMATION SHEET – INTERVIEW WITH SERVICE PROVIDER

TITLE: Culture in treatment for Aboriginal Australians in NSW substance abuse and health services

PURPOSE OF THE RESEARCH

This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The purpose of the research is to investigate the relationship between cultural involvement (i.e. engagement in traditional and/or contemporary Aboriginal cultural activities) and empowerment/improvement of Aboriginal Australians in the context of drug and alcohol abuse treatment. More specifically the research will examine the degree to which involvement in cultural activities as part of drug and alcohol abuse treatment, and the associated empowerment and clinical outcomes for participants, is affected by the participants’ level of identification with Aboriginal culture.

INVESTIGATORS

Stacey Berry
Doctoral student, Illawarra Institute for Mental Health
02-4221 4207
slb775@uow.edu.au

Dr Trevor Crowe
Mental Health
02-4221 3147
tcrowe@uow.edu.au

Prof Frank Deane
Mental Health
02-4221 4523
fdeane@uow.edu.au

METHOD AND DEMANDS ON PARTICIPANTS

If you choose to be included you will be asked to participate in a short (10-15 minute) telephone interview regarding the cultural activities that are currently offered by the service at which you are employed. The interview will involve questions about the cultural activities offered as a part of the treatment program, your opinion on the helpfulness of these activities, and any suggestions you may have for further cultural activities that may be incorporated into the treatment program in the future.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS

We can foresee no risks for you, as the nature of the interview is not personal and you will be asked to simply comment on the cultural aspects of the treatment program at your place of employment. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time, and ask to withdraw any information that you have provided to that point. Refusal to participate in the study will not affect your relationship with the University of Wollongong or any other service with which you are associated. Participants’ personal information will be kept confidential, and you will not be identified in any part of the research.

BENEFITS OF THE RESEARCH

The findings will support the development of guidelines for the integration of cultural activities and cultural connectedness in the treatment of substance abuse problems in Aboriginal populations. It is hoped that the research will contribute to the establishment of future interventions that better meet the health and cultural needs of clients and improve clinical outcomes and empowerment of Aboriginal Australians. Findings from the study will be published in Aboriginal research journals and drug and alcohol research journals.

ETHICS REVIEW AND COMPLAINTS

This study has been approved by the Human Research Ethics Committee of the University of Wollongong, and the Aboriginal Health and Medical Research Council of NSW. If you have any problems regarding the way this research has been conducted, you can contact the UoW Ethics Officer on (02) 4221 4457, or the Aboriginal Health and Medical Research Council on (02) 9212 4777.

Verbal Consent Process

Interview with service provider (Study 2)

Initial Interview
“The purpose of the research project is to investigate the relationship between cultural involvement and empowerment/improvement of Aboriginal Australians in the context of drug and alcohol abuse treatment. I am conducting the first stage of the study, which involves short over-the-phone interviews with service providers. The interview will include questions about the treatment program provided by the service at which you are employed, including questions regarding the components of treatment that you view as culturally relevant for Aboriginal Australians, and the cultural activities that you see as most helpful for Aboriginal clients. Your participation will involve answering questions in a short over-the-phone interview of about 10 minutes. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time, and ask to withdraw any data that you have provided to that point. Refusal to participate in the study will not affect your relationship with the University of Wollongong or with any services with which you are associated.

Do you consent to participate in this interview?”
Verbal Consent Process

Interview with service provider (Study 2)

Follow-up Interview

“The purpose of this interview is to seek feedback regarding the research team’s collation and interpretation of responses made by yourself and other participants in an earlier interview. In the earlier interview you were asked to share your thoughts on the cultural activities offered for Aboriginal clients in your treatment program, and the therapeutic benefits you believe to be associated with these activities. The purpose of the second interview is to bring these responses back to you, the original respondents, to ensure that an accurate and thorough understanding of these issues has been achieved.

Your involvement in this research is voluntary, and you may withdraw your consent at any time. Refusal to be involved in the research will not affect your relationship with the University of Wollongong or with any service involved in the research.

I am seeking your consent to audio-tape the interview to ensure an accurate record is obtained.

Do you consent to be involved in the research?

Do you consent to have the interview audio-taped?”
PARTICIPATION INFORMATION SHEET – REFERENCE GROUP

TITLE: Culture in treatment for Aboriginal Australians in NSW substance abuse and health services

PURPOSE OF THE RESEARCH
This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The purpose of the research is to investigate the relationship between cultural involvement (i.e. engagement in traditional and/or contemporary Aboriginal cultural activities) and empowerment/improvement of Aboriginal Australians in the context of drug and alcohol abuse treatment. More specifically the research will examine the degree to which involvement in cultural activities as part of drug and alcohol abuse treatment, and the associated empowerment and clinical outcomes for participants, is affected by the participants’ level of identification with Aboriginal culture.

INVESTIGATORS
Stacey Berry  Dr Trevor Crowe  Prof Frank Deane
Doctoral student, Illawarra Institute for Mental Health
doctoral student, Illawarra Institute for Mental Health
02-4221 4207 02-4221 3147 02-4221 4523
slb775@uow.edu.au  tcrowe@uow.edu.au  fdeane@uow.edu.au

METHOD AND DEMANDS ON PARTICIPANTS
If you choose to be included you will be asked to participate in a reference group including approximately 5-10 Aboriginal individuals. You will be asked to complete a questionnaire and to rate the relevance of each questionnaire item to Aboriginal cultural involvement on a 4-point scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant). You will also be asked to participate in a group discussion about the questionnaire, and to suggest any activities or aspects of Aboriginal cultural involvement that have not been captured by the items in the questionnaire. The reference group will run for approximately 1-2 hours, and participants will be provided with refreshments and $50 to cover your costs and contribution to the group. With the permission of all participants the reference group will be audio-taped so that the research team may have access to an accurate record of the group discussion.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS
Apart from the hour or so of your time for the interview we can foresee no risks for you. Should any difficulties or issues arise for you as a result of the material discussed during the reference group, you will be offered support by the researchers and options will be made available to you if further support is required. Your involvement in the study is voluntary and you may withdraw your participation from the study at any time, and ask to withdraw any data that you have provided to that point. Refusal to participate in the study will not affect your relationship with the University of Wollongong or with any services with which you are associated. Participants’ personal information will be kept confidential, and you will not be identified in any part of the research.

BENEFITS OF THE RESEARCH
The findings will support the development of guidelines for the integration of cultural activities and cultural connectedness in the treatment of substance abuse problems in Aboriginal populations. It is hoped that the research will contribute to the establishment of future interventions that better meet the health and cultural needs of clients and improve clinical outcomes and empowerment of Aboriginal Australians. Findings from the study will be published in Aboriginal research journals and drug and alcohol research journals.
ETHICS REVIEW AND COMPLAINTS
This study has been approved by the Human Research Ethics Committee of the University of Wollongong, and the Aboriginal Health and Medical Research Council of NSW. If you have any problems regarding the way this research has been conducted, you can contact the UoW Ethics Officer on (02) 4221 4457, or the Aboriginal Health and Medical Research Council on (02) 9212 4777.
CONSENT FORM – Reference Group (Study 2)

TITLE: Culture in treatment for Aboriginal Australians in substance abuse and health services

I, ........................................, consent to be involved in the above-named research project. I understand that the purpose of the research is to investigate the relationship between cultural involvement (i.e. engagement in traditional and/or contemporary Aboriginal cultural activities) and empowerment/improvement of Aboriginal Australians in the context of drug and alcohol abuse treatment.

I consent to participate in a reference group which will contribute to the development of a measure of Aboriginal cultural involvement. I understand that I will be asked to complete a questionnaire and to rate the relevance of each questionnaire item to Aboriginal cultural involvement on a 4-point scale (1 = not relevant, 2 = somewhat relevant, 3 = quite relevant, 4 = highly relevant). I also consent to participate in a group discussion about the questionnaire, and to suggest any activities or aspects of Aboriginal cultural involvement that have not been captured by the items in the questionnaire.

I understand that, should any difficulties or issues arise as a result of the material discussed during the reference group, support will be offered by the researchers and options will be made available to me if further support is required.

I understand that if I make disclosures that indicate I am at risk of harming myself, the ambulance will be called and I will be taken to hospital for a psychiatric assessment to ensure my safety. I understand that if I disclose information that indicates others are at risk of harm, the authorities will be notified. (In the case of a disclosure indicating children at risk of harm, a report will be made to Community Services. In the case of a disclosure indicating an adult at risk of harm, the police will be notified).

I understand that my involvement in the study is voluntary and I may withdraw my participation from the study at any time, and ask to withdraw any data that I have provided to that point. I also understand that refusal to participate in the study will not affect my relationship with the University of Wollongong or with any service with which I am associated.

I do / do not consent to having the reference group audio-taped so that the research team may have access to an accurate record of the group discussion.

Name: ...........................................................................................................
Signature: ........................................................................................................
Witness Name: ...............................................................................................
Witness Signature: ...........................................................................................
PARTICIPATION INFORMATION SHEET – CLIENT INTERVIEW

TITLE: Culture in treatment for Aboriginal Australians in NSW substance abuse and health services

PURPOSE OF THE RESEARCH

This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The research will check whether you improve during your treatment program, and whether your improvement is connected with any cultural activities you participate in during treatment. The research will also consider whether your cultural involvement and improvement during treatment is affected by how much you identify with Aboriginal culture.

INVESTIGATORS

Stacey Berry
Doctoral student, Illawarra Institute for Psychology
02-4221 4207
slb775@uow.edu.au

Dr Trevor Crowe
Mental Health
02-4221 3147
tcrowe@uow.edu.au

Prof Frank Deane
Mental Health
02-4221 4523
fdeane@uow.edu.au

METHOD AND DEMANDS ON PARTICIPANTS

If you choose to be included you will be asked to participate in a 60-90 minute one-on-one interview with an Aboriginal member of the research team. The confidential interview will involve answering questions about your experience of Aboriginal culture in your everyday life, your experience of the cultural aspects of your current treatment program, and how much you feel you have improved during treatment. One staff member will also be asked to comment on how much you have been involved in the cultural aspects of the treatment program and how much you have improved during treatment.

With your permission we will audio-tape your interview so that the research team have an accurate record of your responses.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS

Apart from the 60-90 minutes of your time for the interview and asking a staff member to comment on your progress, we do not see any potential risks for you. If any problems arise for you as a result of the interview, a member of staff of your current treatment service will be available for support.

It is not the aim of this research to find out about your involvement in any serious criminal activities. If you choose to discuss any serious criminal activity you should avoid identifying any people by name who may have committed crimes. Serious criminal activity includes offences such as drug trafficking, serious assaults, sexual assaults, child abuse or neglect, murder and manslaughter. For example, if you say that you have trafficable quantities of drugs, then by law we have to tell the Police. Personal drug use does not normally involve having trafficable quantities of drugs, and as this research is concerned with drug and alcohol abuse, the researchers will not report your personal drug use to the treatment service staff or the Police.

Your involvement in the study is voluntary and you may decide not to participate at any time, and ask to take back any information that you have given up to that point. If you choose not to participate in the study your relationship with the University of Wollongong and with your current treatment service will not be affected. Participants’ personal information will be kept confidential, and you will not be identified in any part of the research.

BENEFITS OF THE RESEARCH

The research will help to develop guidelines on how to better use cultural activities in treatment of drug and alcohol abuse problems for Aboriginal clients. It is hoped that the research will help to improve treatment programs so that they better meet the cultural needs of clients and improve outcomes for Aboriginal Australians. Findings from the study will be published in Aboriginal research journals and drug and alcohol research journals.

ETHICS REVIEW AND COMPLAINTS

This study has been approved by the Human Research Ethics Committee of the University of Wollongong, and the Aboriginal Health and Medical Research Council of NSW. If you have any problems regarding the way this research has been conducted, you can contact the UoW Ethics
Officer on (02) 4221 4457, or the Aboriginal Health and Medical Research Council on (02) 9212 4777.
PARTICIPANT CONSENT FORM – Client Interview (Study 3)

TITLE: Culture in treatment for Aboriginal Australians in substance abuse and health services

I, ................................., consent to be involved in this research project. I understand that the purpose of the research is to check whether I improve during my treatment program, and whether my improvement is connected with any cultural activities I participate in during treatment. The research will also consider whether my cultural involvement and improvement during treatment is affected by how much I identify with Aboriginal culture. I also understand that this will involve a 60-90 minute interview conducted by an Aboriginal member of the research team, and that the interview will include completing questionnaires and answering questions about the following: my experience of Aboriginal culture in my everyday life, my experience of the cultural aspects of my treatment program, and how much I feel I have improved during treatment.

In addition, I understand that a member of staff will be asked to comment on how much I have been involved in the cultural aspects of the treatment program, as well as how much I have improved during treatment.

I also understand that if any difficulties or issues arise as a result of the material discussed during the interviews, a member of staff will be available for debriefing and support. I understand that if I make disclosures that indicate I am at risk of harming myself, the ambulance will be called and I will be taken to hospital for a psychiatric assessment to ensure my safety. I understand that if I disclose information that indicates others are at risk of harm, the authorities will be notified. (In the case of a disclosure indicating children at risk of harm, a report will be made to Community Services. In the case of a disclosure indicating an adult at risk of harm, the police will be notified).

I understand that my involvement in the study is voluntary and I may withdraw my participation from the study at any time, and ask to withdraw any data that I have provided to that point. I also understand that refusal to participate in the study will not affect my relationship with the University of Wollongong or with the service in which I am engaged.

I do / do not give permission for my interview to be audio-taped so that the research team may have access to an accurate record of my responses and comments.

Name: ...........................................................................................................
Signature: .......................................................................................................
Witness Name: ...............................................................................................
Witness Signature: ............................................................................................
Appendix R

Ethics Approvals from the Aboriginal Health and Medical Research Council (AHRMC) and
the University of Wollongong
16 September 2010

Ms Stacey Berry
645 Bourke Street
Wollongong North NSW 2500

Dear Ms Berry

Culture in the treatment of Aboriginal Australians in New South Wales substance abuse and health services (712/10)

The Aboriginal Health and Medical Research Council (AH&MRC) Ethics Committee has considered your original application received on 25 January 2010 and amended application received on 6 April 2010 (in response to issues raised by the Ethics Committee) for ethics approval for the above project. Your email of 29 July 2010 (and attachment) containing additional information are considered to form part of the application.

The Committee agreed to approve the application, subject to the conditions below.

Standard Conditions of Approval (where applicable to the project)

1. The approval is for the period from 16 September 2010 until 30 September 2011, with extension subject to providing a report on the research by 30 September 2011.
2. All research participants are to be provided with a relevant Participant Information Statement and Consent Form in the format provided with your application.
3. Copies of all signed consent forms must be retained and made available to the Ethics Committee on request. A request will only be made if there is a dispute or complaint in relation to a participant.
4. Any changes to the staffing, methodology, timeframe, or any other aspect of the research relevant to continued ethical acceptability of the project must have the prior written approval of the Ethics Committee.
5. The research must comply with:
   - the AH&MRC Guidelines for Research in Aboriginal Health – Key Principles;
   - the National Statement on Ethical Conduct in Research Involving Humans (April 2007); and
   - the NSW Aboriginal Health Information Guidelines.
6. A final draft report must be provided to the AH&MRC Ethics Committee to be vetted for compliance with ethical and cultural criteria prior to:
   - any submission for publication; and/or
   - any dissemination of the report.

Funded by NSW Health Department
7. A copy of the final published version of any publication is to be provided to the AH&MRC Ethics Committee.

Special Conditions

Nil.

Please acknowledge receipt of this letter and your acceptance of the above conditions within fourteen (14 days).

We would also appreciate your agreement that the AH&MRC may, on request, obtain access to the data obtained from the research in order to assist the future development of policy and programs in Aboriginal health.

We take this opportunity to wish you well in your research.

On behalf of the AH&MRC Ethics Committee,

Yours sincerely,

Val Keed
Chairperson
AH&MRC Ethics Committee
INITIAL APPLICATION APPROVAL

In reply please quote: HE10/009
Further Enquiries Phone: 4221 4457

26 March 2010

Ms Stacey Berry
6/45 Bourke Street
Wollongong North NSW 2500

Dear Ms Berry,

Thank you for your response to the HREC review of the application detailed below. I am pleased to advise that the application has been approved.

Ethics Number: HE10/009
Project Title: Culture in treatment for Aboriginal Australians in substance abuse and health services

Researchers: Ms Stacey Berry, Dr Trevor Crowe, Professor Frank Deane

Approval Date: 25 March 2010

Expiration Date: 24 March 2011

The University of Wollongong/SESIAHS Humanities, Social Science and Behavioural HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research. The HREC has reviewed the research proposal for compliance with the National Statement and approval of this project is conditional upon your continuing compliance with this document. As evidence of continuing compliance, the Human Research Ethics Committee requires that researchers immediately report:

- proposed changes to the protocol including changes to investigators involved
- serious or unexpected adverse effects on participants
- unforeseen events that might affect continued ethical acceptability of the project.

You are also required to complete monitoring reports annually and at the end of your project. These reports are sent out approximately 6 weeks prior to the date your ethics approval expires. The reports must be completed, signed by the appropriate Head of School, and returned to the Research Services Office prior to the expiry date.

Yours sincerely

A/Professor Steven Rodenrys
Chair, Human Research Ethics Committee

Cc. Dr T Crowe, Illawarra Institute for Mental Health
RENEWAL APPROVED

In reply please quote: HE10/009
Further Enquiries Phone: 4221 4457
G116H

24 May 2011

Ms Stacey Berry
6/45 Bourke Street
NORTH WOLLONGONG NSW 2500

Dear Ms Berry,

I am pleased to advise that renewal of the following Human Research Ethics application has been approved.

Ethics Number: HE10/009
Project Title: Culture in treatment for Aboriginal Australians in substance abuse and health services
Researchers: Ms Stacey Berry, Dr Trevor Crowe, Professor Frank Deane
Approval Date: 19 May 2011
Expiry Date: 24 March 2012

This certificate relates to the research protocol submitted in your original application and all approved amendments to date. Please remember that in addition to completing an annual report the Human Research Ethics Committee requires that researchers immediately report:

- proposed changes to the protocol including changes to investigators involved
- serious or unexpected adverse effects on participants
- unforeseen events that might affect continued ethical acceptability of the project.

You are also required to complete a monitoring report at the end of your project. This report will be sent out approximately 6 weeks prior to the date your ethics approval expires. The report must be completed, signed by the appropriate Head of School, and returned to the Research Services Office.

Yours sincerely

A/Professor Garry J Roban
Chair, Social Sciences
Human Research Ethics Committee

cc: Dr T Crowe, Illawarra Institute for Mental Health, Bld 22
AMENDMENT APPROVAL
In reply please quote: HE10/009
Further Enquiries Phone: 4221 3386
GHC/CJ

1 February 2012

Ms Stacey Berry
6/45 Bourke Street
NORTH WOLLONGONG NSW 2500

Dear Ms Berry,

I am pleased to advise that the amendment request dated 18 January 2012 to the following Human Research Ethics application has been approved. The University of Wollongong/ Illawarra and Shoalhaven Local Health Network District (ISLHD) Social Science HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research:

Ethics Number: HE10/009

Project Title: Culture in treatment for Aboriginal Australians in substance abuse and health services

Name of Researchers: Ms Stacey Berry, Dr Trevor Crowe, Professor Frank Deane

Amendment(s): Follow-up telephone interviews.

Amendment Approval Date: 23 January 2012

Expiry Date: 24 March 2012

Please remember that in addition to reporting proposed changes to your research protocol the HREC requires that researchers immediately report:

- serious or unexpected adverse effects on participants
- unforeseen events that might affect continued ethical acceptability of the project.

The University of Wollongong/ ISLHD Social Sciences HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research.
A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. (Please note that if you require a renewal you should submit a Progress Report within the next 2 weeks.) The progress report template is available at http://www.uow.edu.au/research/core/ethics/UCW009385.html. This report must be completed, signed by the appropriate Head of School and returned to the Research Services Office prior to the expiry date.

If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email res-ethics@uow.edu.au.

Yours sincerely,

[Signature]

A/Professor Garry Hoban
Chair, Social Sciences
Human Research Ethics Committee
Appendix S


Abstract
Substance misuse is a significant issue in Australia, and a large proportion of individuals with substance misuse disorders have coexisting mental health disorders. There is evidence that Indigenous Australians are more likely than non-Indigenous Australians to experience the adverse effects of alcohol consumption, and that mental health disorders are more prevalent in Indigenous communities than non-Indigenous communities. Indigenous Australians currently do not access mental health and substance abuse services at a level which is consistent with their level of need, and this is largely due to the inconsistent or insufficient culturally respectful mental health services. This paper provides a review of relevant literature, which indicates an increasing need for mental health and substance abuse services that are sensitive to the needs of Indigenous Australians, and discusses engagement challenges and what is needed to increase engagement and improve outcomes for these clients. Future research should aim to identify which approaches of mental health and substance abuse service provision are associated with better outcomes for Indigenous clients, and ways of increasing the cultural respectfulness of these services.

Key words: Indigenous, Aboriginal, mental health, substance abuse, dual diagnosis, engagement.
The state of Indigenous health

Since colonisation Indigenous Australians have experienced extreme levels of loss, grief, disempowerment, cultural alienation, and loss of identity (Australian Institute of Health and Welfare, 2002, 2003; Hunter, 1993). This is considered to be the result of the three layers of colonisation: the physical violence of the frontier; the structural institutional violence perpetrated by the state; and the psychosocial dominance of another culture (Atkinson, 2006). The associated decline in physical health (e.g. dietary changes and exposure to foreign diseases) and mental health (e.g. exposure to psychoactive substances, social trauma) identifies the health status of Indigenous Australians as being far below the Australian average. This is evident through significantly poorer physical health profiles, as well as higher prevalence rates of suicide, domestic violence, substance abuse, and unemployment (Cleworth, Smith, & Sealey, 2006). Indigenous people are also disadvantaged when compared with the general Australian population on other social indicators such as poverty, mortality rates, average rates of pay, standards of housing, and educational outcomes (Roxbee & Wallace, 2003; Swan & Raphael, 1995). Violence in Indigenous communities is increasing, and Swan and Raphael (1995) report that much of this violence is directed towards women. Atkinson (2006) states that a primary contributing factor to inter-generational abuse is unhealed trauma reaching across generations, resulting from the psychological and physical suffering experienced by Indigenous Australians in the colonising process. It is suggested that because Indigenous people have needed to suppress their feelings of distress to survive over the years, their pain has become internalised within the family, and is associated with domestic violence (Atkinson, 1994). The Department of Health and Ageing (2007) reports a high correlation between domestic violence and alcohol use in Indigenous communities, with 70 to 90 per cent of incidents being committed when under the influence of alcohol and/or other substances. Due to factors such as violence and substance misuse, Indigenous people have been found to be over-represented in prisons by a factor of 14, and over-represented in police custody by a factor of 26 (Kosky & Goldney, 1994). In addition, Dodson (1991) found that in Western Australia, 44% of children in foster care were Indigenous, despite the fact that Indigenous people only make up 2.5% of the population. These statistics all indicate the vast disparity between the health and wellbeing of Indigenous and non-Indigenous Australians.

Alcohol and substance use in the Indigenous population
Concern over the use of alcohol and other drugs by Indigenous people is expressed by Indigenous and non-Indigenous people alike (Langton, 1991). Research has shown that although there are proportionately more Indigenous people than non-Indigenous people who refrain from drinking (Perkins et al., 1994), Indigenous people who do drink are more likely to do so at high-risk levels (Brady, 2004; Department of Health and Ageing, 2007). High-risk alcohol consumption was reported in 15% of Indigenous people over 15 years of age in 2002 (Australian Bureau of Statistics, 2002). It has also been found that binge drinking and episodic heavy drinking are common among Indigenous drinkers (Lake, 1989; Perkins et al., 1994). The Department of Health and Ageing (2007) reports that between 2000 and 2004 Indigenous men and Indigenous women died from alcohol-related causes at a rate seven times higher and ten times higher than their non-Indigenous counterparts respectively. This illustrates the reality that Indigenous Australians are more likely than non-Indigenous Australians to experience the adverse effects of alcohol consumption (Department of Health and Ageing, 2007).

Alcohol is not the only substance which is being misused in Indigenous communities. Sheldon (2001) highlights the devastating effects of petrol-sniffing among adolescent males in the remote areas of Central Australia being a significant source of shame and distress for many Indigenous communities. Although the roll-out of non-sniffable Opal fuel to 74 communities has been associated with a dramatic decrease in petrol sniffing in those communities, it has not addressed the reasons this behaviour exists, nor the fact that poly-substance abuse is commonplace within this group (Nicholas, 2007). Brady (2002) discusses the changing face of substance use within the Indigenous population, stating that over the last ten years alcohol use has been declining, with the use of other substances on the increase. These substances include opiates (found by the 2001 census to be the second most highly used drug among Indigenous people seeking treatment), cannabis, amphetamines, injecting drugs, and polydrug use (Brady, 2002). Therefore, there is an increasing trend for drug and alcohol services to provide intervention for Indigenous drug users rather than Indigenous drinkers alone.

The rise of cannabis use is especially troubling considering the link between the catechol-O-methyltransferase (COMT) gene and a higher risk of psychosis resulting from adolescent cannabis use. Caspi and colleagues (2005) found that a genetic variation in the COMT gene moderated the influence of adolescent cannabis use on the development of psychosis in adulthood. This provides evidence of a distinct process by which early substance
use may lead to mental illness later in life. Cohen, Solowij, and Carr (2008) state that the association between cannabis use and the risk of developing schizophrenia is found consistently across studies, and that this risk increases with higher doses and earlier onset of cannabis use.

**Mental health issues in Indigenous communities**

Rickwood (2004) states that “the social and emotional wellbeing of Aboriginal and Torres Strait Islanders remains a source of national shame” (p. 2). The available evidence, although limited, suggests that mental health disorders are more prevalent in Indigenous communities than non-Indigenous communities, and that Indigenous people are over-represented in inpatient mental health care (Roxbee & Wallace, 2003). Nagel (2006) reports that, in the Top End during 2002-2003, eighty-four percent of Indigenous mental health admissions indicated psychosis, depression, and substance-related disorders. She suggests that Indigenous people are vulnerable to poor mental health treatment outcomes due to poor physical health, social disadvantage, co-morbid substance misuse, and a burden of grief through suicide, homicide and incarceration. There is also evidence that substance use and self harm behaviour are rising in the Indigenous community (Clough et al., 2004; ShuQin, Measey, & Parker, 2004). Hunter (1993) and O’Shane (1995) suggest that the factors which contribute to increasing rates of psychiatric morbidity in Indigenous communities include destruction of social infrastructure, rapid urbanisation and poverty, cultural alienation, loss of identity, family dislocation, and increased drug and alcohol consumption.

The trauma suffered by the stolen generations as a result of the assimilation policies of the Australian government has direct relevance to the psychological adjustment of Indigenous Australians when considered within the framework of attachment theory. Attachment theory posits that the quality of early parent-child bonding, as well as the infant’s actual experience of the relationship with their parents, has important implications for psychological and emotional adjustment later in life (Strahan, 1995). Many studies have found evidence of a direct link between the quality of early relationships and the development of depression in adulthood (Armsden, McCauley, Greenburg, & Burke, 1990; Parker, 1983; Parker & Barnett, 1988), and there is evidence that individuals who report that they had conflictual or rejecting parents in childhood have difficulties forming healthy interpersonal relationships in adulthood (Hazan & Shaver, 1987; Strahan, 1991). Thus, it has been shown that poor attachment during childhood can have long lasting and detrimental effects on the
psychological and emotional adjustment of individuals. A high level of stress during infancy, such as resulting from forcible and permanent removal of a child from their parents, cannot be ignored when considering the aetiology of mental health issues in Australian Indigenous populations.

Coexisting substance misuse and mental health disorders
A large proportion of individuals, both Indigenous and non-Indigenous, who have substance misuse disorders have coexisting mental health disorders (Blankertz & Cnaan, 1994), also known as co-morbidity (Drake, Mueser, Brunette, & McHugo, 2004) or dual diagnosis (NSW Office of Drug and Alcohol Policy, 2006). It has been estimated that in Australia the proportion of people engaged by mental health services who experience concurrent substance abuse issues ranges from 30-90% (Davis 2003). Along with other accumulating data from the 1980s and 1990s (Kessler et al., 1996; Regier et al., 1990), this indicates that coexisting disorders are so common that it might be considered the expectation rather than the exception (Minkoff, 2001). Roxbee and Wallace (2003) report that there are high rates of co-morbidity, as well as complex patterns in causality and treatment, which are unique to Australian Indigenous populations. Thus service providers not only need to be sensitive and responsive to cultural and identity trauma and disempowerment, particularly for Indigenous clients, but also to needs, stigmas and engagement issues associated with each of the co-existing disorders.

The treatment of people with coexisting disorders is more complex than treating people with a single diagnosis. Clients with coexisting disorders tend to have significantly poorer social functioning, more severe psychiatric symptoms, higher levels of need (Weaver, Stimson, Tyrer, Barnes, & Renton, 2004), higher severity of substance misuse (Brooner, King, Kidorf, Schmidt, & Bigelow, 1997; Driessen, et al.1998), less compliance with treatment, poorer treatment outcomes (Chen et al., 2003; Hunter et al., 2005), higher rates of suicide and self-harm (Chen et al., 2003; Drake et al., 2004), and higher treatment costs, including criminal justice involvement and hospitalisation (Brunette, Mueser, & Drake, 2004; Chen et al., 2003; Szirom, King, & Desmond, 2004; Teeson, 2001). Research has also shown that individuals with coexisting disorders who are in substance abuse programs have lower rates of program completion, shorter stays in treatment, and higher rates of relapse and rehospitalisation following treatment (Compton, Cottler, Jacobs, Ben-Abdallah, & Spitznagel, 2003; Weisner, Matzger, & Kaskutas, 2003).
Coexisting substance misuse and mental health disorders represent significant challenges in terms of engagement, resources and skills to meet complex needs, and treatment retention. Drake, O’Neal and Wallach (2008) state that historically, even in cases where clients have received simultaneous treatments for both mental illness and substance abuse from different services (commonly referred to as parallel treatment approaches) the interventions were often inconsistent or incompatible. Treatment in parallel mental health and substance abuse treatment programs has been shown to be largely ineffective (Brunette et al., 2004), often due to non-adherence to interventions, drop-out, and inability of the client to make sense of the disparate messages they receive from the two services (Ridgely, Goldman, & Willenbring, 1990). Sequentially treating one disorder before another, usually in different services, has also been found to be ineffective for similar reasons (Ridgely et al., 1990; Donald, Dower, & Kavanagh, 2005). Thus it has been increasingly recognised that an integrated service is necessary for people with coexisting disorders (Minkoff, 2001).

Residential treatment versus outpatient treatment programs

Residential treatment programs have some advantages for clients with substance misuse disorders, as well as clients with co-morbid substance misuse and mental health disorders. Such programs provide intensive therapeutic services as well as offering safe housing, assistance with daily living (Brunette, Drake, Woods, & Hartnett, 2001), and the opportunity to develop the skills necessary for recovery (Brunette et al., 2004). Therapeutic communities have been the standard therapeutic approach for many years for clients with primary substance misuse disorders. Many residential programs today are combining the therapeutic community model, traditionally used solely to treat substance misuse disorders, with mental health interventions (Brunette et al., 2004).

It has been found that there is little difference in outcome between inpatient or outpatient treatment programs for clients who are eligible for either service (Finney & Moos, 2002; Drake et al., 2008). However, not all clients will be eligible for either service, as outpatient programs are not well suited for clients with more severe drug and alcohol history (Finney & Moos, 2002; Prendergast, Podus, Chang, & Urada, 2002), or significant detoxification needs (Brady, 2002).

There are many advantages of residential treatment programs over outpatient treatment programs, and these are applicable to all clients regardless of the severity and duration of their dependence. One of these advantages is the capacity of residential programs to buffer
clients from their substance-abusing environments (Brunette et al., 2004). A strong relationship has been found between the presence of coexisting disorders and homelessness (Caton et al., 1995; Leal, Galanter, Dermatis, & Westreich, 1998), and clients who are not homeless are likely to live in marginal situations in which they have limited control over their environment, or in neighbourhoods that are pervasively affected by substance abuse (Quimby, 1995). Therefore a residential program that offers relatively safer and supportive housing will increase the likelihood of positive outcomes for these clients. Additional difficulties for clients, especially those with coexisting disorders, can include unavailability of a positive peer support, lack of internal controls and refusal skills (particularly in the early stages of recovery), as well as problems with maintaining a connection to treatment (Brunette et al., 2004). Residential programs have the potential to assist with these difficulties by offering an alternative to high relapse-risk environments and placing clients within a relatively supportive network where their connection to treatment is consistently maintained.

It has been found that longer stays in residential treatment, as well as participation in aftercare programs and outpatient mental health treatment, are associated with better post-treatment outcomes for clients with coexisting disorders for up to five years following treatment (Ray, Weisner, & Mertens, 2005; Ritsher, Moos, & Finney, 2002). It may be the case, therefore, that both residential treatment and outpatient care is needed for clients with coexisting disorders at different stages of the recovery process, with residential treatment comprising the initial stage of rehabilitation.

Given the high rates of poverty, unemployment, and low socio-economic status within the Indigenous population, residential programs are likely to be especially advantageous for Indigenous clients. However, these services need to be appropriately managed and staffed to ensure maximum engagement, cultural safety and appropriate responsiveness to the complexity of needs of disempowered people.

**Issues in treatment for Indigenous clients**

A literature review was conducted using the following databases and consultation with Indigenous research colleagues: PsycInfo, PsycArticles, Cochrane, Sociological Abstracts, Indigenous Australia, Indigenous Studies Bibliography, Aboriginal and Torres Strait Islander Health Bibliography, and Health and Society Database. The search terms used include Indigenous, services, treatment outcomes, residential programs, outpatient programs,
recovery, dual diagnosis, alcoholism, substance abuse, and substance misuse. No other limits were placed on the database search.

**Challenges in engaging and retaining Indigenous clients**

Australian Indigenous people are not accessing mental health services at a level consistent with their level of need (Garvey, 2000; Westerman, 2004). It is often challenging to engage clients in mental health services and substance abuse services, especially clients with coexisting disorders. In addition, it is often more difficult to engage Indigenous clients than non-Indigenous clients due to limited access to services and a lack of cultural respectfulness (cultural safety) of those services, evident in such things as preparedness to engage family and Indigenous workers beyond tokenism (e.g. three-way talking, as explained later) (Department of Health and Ageing, 2007). Further, research has shown a failure of mental health services to embrace an understanding of Indigenous conceptualisations of mental health (Dudgeon, 2000; Garvey, 2000; Mehl-Madrona, 2009). Westerman (2004) suggests that this lack of cultural respectfulness may include such things as: introductions between clinicians and clients which do not incorporate understandings of the land and familial relationships; the assessment of Indigenous clients outside of their own cultural context; a failure to acknowledge Indigenous concepts of mental health as holistic; the failure to use cultural consultants as a first step in engaging Indigenous clients; and a communication style which tends to put pressure on people by demanding a direct answer.

The psychotherapy process has been found to be problematic when working in Indigenous communities due to the high level of self-disclosure required, and the intrusive nature of the therapeutic experience (Krawitz & Watson, 1997; Vargas & Koss-Chioino, 1992). Vicary and Westerman (2004) found that participants communicated a preference for a therapist to develop a broader relationship with them, rather than the traditional separation of the professional and personal domains. It has also been recognised that a person’s gender can influence the exchange of sensitive information, with Indigenous clients commonly feeling offended at being asked questions of a sensitive nature by a clinician of the opposite sex (Department of Health and Ageing, 2007). Additionally, Dudgeon and Pickett (2000) suggest that the individualistic focus of psychotherapy conflicts with systems of social support and cohesion which are important for Indigenous Australians.

**Improving mental health and substance abuse services for Indigenous clients**

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There is great disparity between Indigenous and non-Indigenous conceptions of mental health, and this must be considered by clinicians when working with Indigenous clients. Within the numerous attempts to define Indigenous mental health concepts, the common theme has consistently been the holistic nature of health and wellbeing (Roxbee & Wallace, 2003; Swan & Raphael, 1995; Vicary & Westerman, 2004; Ypinazar, Margolis, Haswell-Elkins, & Tsey, 2007). The word *punyu*, from the language of the Ngaringman of the Northern Territory, explains that health encompasses both *person* and *country* (Atkinson, Graham, Pettit, & Lewis, 2002). *Punyu* is associated with being strong, happy, knowledgeable, beautiful, clean, socially responsible and safe (i.e. being within the law and also being cared for by others) (Mobbs, 1991). In fact caring for country has been associated with improvements in wellbeing (Kingsley, Townsend, Phillips, & Aldous, 2009; Burgess, Berry, Gunthorpe, & Bailie, 2008), with Anderson (1995) suggesting that for Indigenous people "our identity as human beings remains tied to our land, to our cultural practices, our systems of authority and social control, our intellectual traditions, our concepts of spirituality, and to our systems of resource ownership and exchange. Destroy this relationship and you damage – sometimes irrevocably – individual human beings and their health" (Cited in Burgess et al., 2008, p. 2)

The National Aboriginal Community Controlled Health Organisation (NACCHO, 1993) states that mental health must be considered in a social and emotional context that encompasses oppression, racism, environment, economical factors, stress, trauma, grief, cultural genocide, psychological processes and ill health. Much of this has been linked to the effects of colonisation and points to the failure of the assimilation policies of the late 19th and early 20th centuries (Department of Health and Ageing, 2007). Slattery (1994) states that the health of Indigenous people may not be considered in terms of a mind/body dichotomy, as it is generally viewed in a western model of health and illness. A possibility for future research is the collaboration of Indigenous mental health workers and Indigenous community members to develop a model of Indigenous mental health that may be understood by clinicians and clients alike. Such a model may help to operationalise Indigenous understanding of mental health and guide clinicians in their approach. For example, Mehl-Madrona (2009) progressed this type of work in North America by recording discussions with traditional healers to develop a set of twelve “guideposts” to direct training of mental health workers wishing to work with aboriginal people. These guideposts include adopting
beliefs that healing “solutions must be internally derived,” requires a “relational model of self,” and that “empowerment is different from treatment,” to name a few.

It is considered important to assess Indigenous clients within the context of their own culture (and even further in terms of family/community), which may include investigating how an individual’s behaviour is viewed by members of their cultural group, and questioning whether a client’s symptoms result in an impairment in their usual environment (Westerman, 2004). This process of culturally sensitive assessment is important, as Hunter (1988) found that Indigenous people who were assessed in a foreign environment often presented as significantly more distressed than usual.

It has been argued that the use of cultural consultants should become standard practice for clinicians working with Indigenous populations. Broadly defined, a cultural consultant is an Indigenous person who is willing to vouch for the non-Indigenous practitioner, and to act as the first point of contact between the clinician and the client (Westerman, 2004). Westerman (2004) states that cultural consultants should be of the same gender and from the same language group or tribal group as the client. Vicary and Westerman (2004) found that Indigenous clients communicated a preference to engage in services provided by Indigenous practitioners. Clients articulated that, considering the small number of such professionals, services for Indigenous clients could be improved through the use of cultural consultants as co-therapists.

Communication style has been found to be very important when engaging Indigenous clients. Direct questioning is considered by many Indigenous people to be an ill-mannered and inappropriate way to begin a relationship, and the older and more respected the person is, the more inappropriate direct questioning may be (Department of Health and Ageing, 2007). For this reason a method of three-way talking may often be used, in which a client uses a third person (such as a family member) as a mediator to exchange information with the service provider (Department of Health and Ageing, 2007). This form of communication can be very valuable as it allows for effective exchange of information with minimal embarrassment for the client.

With regards to therapy, it has been consistently cited that the best approach involves a narrative style of communication, including open-ended questions which are positively-phrased (Harris, 1977; Malin, 1997; Vicary & Westerman, 2004). Vicary and Westerman (2004) refer to this as ‘yarning about my problem’ (p. 8). Chenhall (2006) conducted a study of the treatment at Benelong’s Haven, the first Indigenous-run Australian residential alcohol
and drug treatment centre, established in 1974. Benelong’s Haven combines a number of therapeutic approaches, including group psychotherapy, which is said to be related to the Indigenous tradition of sharing stories (Chenhall, 2006). Termed “psych groups,” these facilitated psychotherapy groups are intended to provide a culturally appropriate forum in which clients may explore their negative and destructive thoughts, while also receiving a non-intrusive element of psychoeducation. This study provides an example of how traditional psychotherapy can be adapted and modified to be more culturally appropriate to Indigenous clients.

To increase engagement with Indigenous clients in mental health and substance abuse services, it is necessary for practitioners to have both cultural competencies and clinical competencies (Westerman, 2004). Cultural competencies, or the provision of culturally respectful services, involve the ability to identify and treat mental health issues in a way that accepts culture as having a central role in mental illness (Cross, 1995; Dana, 2000). It involves an integration of the practitioner’s cultural awareness and knowledge into the clinical context, so that better health outcomes might be achieved for their clients (Department of Health and Ageing, 2007). Cross, Bazron, Dennis, and Isaacs (1989) have suggested that the elements of cultural competence may be organised under the concepts of cultural awareness, cultural knowledge, and flexibility. The Royal Australian College of Physicians (2004) has outlined five guiding principles for cultural competence: value diversity, maintain capacity for cultural self-assessment, remain aware of the dynamics which are inherent in the interaction of cultures, institutionalise cultural knowledge, and adapt service delivery to reflect an understanding of the diversity of cultures. These aspects of cultural competence could be increased in practicing clinicians by a period of immersion within the Indigenous culture. By living and operating daily within an Indigenous community clinicians may gain a greater knowledge of the language and customs of the people with whom they are working, leading ultimately to greater cultural knowledge and competence.

There is evidence that increasing the cultural competence of clinicians results in increases in the utilization of services, and the positive outcomes for Indigenous clients (Vicary, 2002). Clinical competence involves the use of certain therapeutic techniques which are shown to be useful treatments for particular disorders (National Aboriginal and Torres Strait Islander Health Council, 2003). For example, it is important that clinicians working with people with coexisting disorders show clinical knowledge and capabilities relating to the treatment of both substance misuse disorders and mental health disorders. In short, clinicians must be
competent to effectively treat given disorders, and competent to relate in a culturally respectful way to Indigenous clients, if mental health and substance abuse services are to achieve the aim of improving engagement and outcome for Indigenous clients.

With particular regard to residential treatment programs for Indigenous clients, Brady (2002) states that the programs must be flexible, so that they may cater for clients from a wide variety of backgrounds. She suggests the structure of the program should incorporate rigorous initial assessment, planning around discharge, and a wide range of treatment and counselling styles, rather than using AA meetings as their sole treatment. She further proposes that there are numerous substance misuse and behaviour change models that could be used and adapted for Indigenous-specific residential programs, such as social learning, motivational interviewing, cognitive behavioural interventions and family therapy. Brady, Dawe, and Richmond (1998) reiterate the lack of organised counselling in existing residential rehabilitation services for Indigenous clients. They state that the term ‘alcohol counsellor’ is often used with no real understanding of its meaning, and that these counsellors are often ex-drinkers who have undertaken a short training course. It is becoming increasingly inappropriate for residential services to employ ex-drinkers for the purposes of counselling, as the complexities of clients’ presenting problems are increasing due to polydrug use and co-morbidity (Brady et al., 1998). Therefore residential treatment programs should employ professional counselling staff trained in a diverse range of therapeutic approaches.

More generally, Indigenous clients have identified that the core components necessary in non-Indigenous service providers are a non-racist attitude and a sound knowledge of Aboriginality (Vicary & Westerman, 2004). Vicary and Westerman (2004) found that “non-Indigenous people who were cognizant of the issues confronting Indigenous people, who were willing to listen and learn, and who were willing to apply a blend of western and Indigenous psychology using Indigenous advisors were more likely to be successful in their work with Indigenous clients” (p. 9). However, to date there is little empirical research that identifies the effectiveness of such approaches, nor what is the optimal ‘blend’ of western and Indigenous psychological, interpersonal, and communal recovery supports.

Summary/Conclusion
There is great disparity between the health of Indigenous and non-Indigenous Australians. Colonisation has been associated with a devastating impact on the health and wellbeing of Indigenous Australians, with persistent effects evidenced in elevated rates of suicide,
unemployment, imprisonment, and drug and alcohol abuse. Indigenous people have been disempowered by decades of racism, social disablement, rapid urbanisation, poverty, cultural alienation, and loss of identity. The Indigenous people of Australia represent a high need population, and the current system is not providing them with the level of service they require. The low level of engagement in treatment by Indigenous clients is likely to be related to the poor cultural respectfulness of many mental health and substance abuse services.

Despite a widely held belief that Indigenous clients are not receiving the mental health services they require, there is only a meagre body of published works that examine therapeutic interventions for Indigenous people (Westerman, 2004). Westerman (2004) states that although examples of good practice do exist, knowledge is not being shared between psychologists within the profession, and as a result practicing clinicians do not know what works and what does not work for Indigenous clients. Brady (2002) argues that “effective programs need to engage in an open-minded search for intervention and counselling strategies that meet the needs of [Indigenous] clients” (p. 5). The present paper is an attempt to begin such an open-minded search for effective interventions, and a communication of knowledge between researchers and practitioners. The paper presents the difficulties inherent in treating mental health and substance abuse within Indigenous populations, and draws together recommendations for how these difficulties may be approached.

Atkinson and colleagues (2002) state that for research to be of benefit, it is necessary to find out whether existing interventions are working, and determine which factors are contributing to positive outcomes. Clearly more empirical research is needed to examine which approaches of mental health and substance abuse services are related to the best outcomes for Indigenous clients. Further empirical research should ultimately aim to increase the cultural respectfulness of mental health and substance abuse services, and to improve engagement, retention and outcomes for Indigenous clients.
REFERENCES

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Appendix T


Abstract

*Objectives:* Aboriginal people form one of the populations most in need of mental health and substance abuse services within Australia, although many services are not adequately sensitive to, or inclusive of, relevant aspects of Aboriginal culture in their programs. The Aboriginal Cultural Engagement Survey (ACES) was developed with the objective of assessing the level of cultural engagement of Aboriginal clients. A measure of cultural engagement is an important step in establishing an association between culture and health benefits, so that future interventions may be designed which better meet the cultural needs of Aboriginal Australians within health services.

*Design:* The process of development of the ACES involved four stages of scale development utilising a series of group discussions and reviews with Aboriginal consultants. Assessment of content validity is conducted using the Content Validity Index (CVI).

*Results:* The ACES was found to have excellent content validity with CVIs over .80 for all items in the final version.

*Conclusion:* The ACES shows promise for being a useful tool in assessing the cultural engagement of Australian Aboriginal clients. There is a need for further psychometric assessment and field trials to assess its utility.

Keywords: Aboriginal; Australian; culture; engagement; health outcomes; content validity
Title: Preliminary Development and Content Validity of a measure of Australian Aboriginal Cultural Engagement

Introduction

Theoretical background and population

Since the colonisation of Australia, Aboriginal Australians have experienced extreme levels of disempowerment, loss of identity, grief, and cultural alienation (Hunter 1993), resulting from many years of systematic assault on their traditional practices, languages and cultures (Leenaars et al. 1999). This has had a devastating impact on the physical and mental health of Aboriginal Australians (Cleworth et al. 2006), and as a result there is significant need for health services within this population. Despite this, there is evidence that Aboriginal Australians do not access health services at a level consistent with their level of need (Westerman 2004), and it has been suggested that a major factor contributing to this is the lack of culturally appropriate services available for Aboriginal individuals (Berry and Crowe 2009).

Many Aboriginal Australians report a strong connection to their culture. A significant part of this culture, and an important factor in Aboriginal conceptualisations of mental health, is the holistic nature of health and wellbeing (Ypinazar et al. 2007). Anderson (1995, cited in Burgess et al. 2008) states that for Aboriginal people, “our identity as human beings remains tied to our land, to our cultural practices…. our intellectual traditions, our concepts of spirituality… Destroy this relationship and you damage – sometimes irrevocably – individual human beings and their health” (p. 2). Furthermore, it is believed that the degree to which an individual is embedded in his/her cultural traditions plays a vital protective function in mental health and substance abuse (Torres Stone et al. 2006).

Cultural engagement refers to the degree to which an individual is embedded within his/her cultural traditions. When referring to Aboriginal Australians, cultural engagement includes a wide variety of activities, some examples of which are traditional cooking practices, use and protection of land and Country, traditional artwork, music and dance, and participation in community practices (e.g. ceremony, meetings). Cultural engagement also involves an attitude of respect for others and community belonging, which although difficult to define and capture, was noted by many participants involved in the present research as being a significant component of Aboriginal culture.

There is a commonly held belief that engagement in cultural activities is beneficial for Aboriginal Australians (Burgess et al. 2008, McDermott et al. 1998, Morice 1976, O’Dea
1984, Rowley et al. 2008), particularly so for those individuals who highly value their cultural traditions. Caring for Country refers to caring for one’s homeland and comprises one aspect of cultural engagement for Aboriginal Australians. Caring for Country has been defined as having the knowledge and responsibility to manage traditional lands, and the participation of Aboriginal Australians in ‘interrelated activities with the objective of promoting ecological and human health’ (Burgess et al. 2008, p. 1). There is preliminary evidence that cultural engagement can lead to positive health benefits for Aboriginal Australians. Caring for Country has been associated with health benefits for Aboriginal Australians such as building self-esteem, fostering self-identity, and enabling relaxation through contact with the natural environment (Kingsley et al. 2009). Research has also found that Aboriginal people living in homelands, where traditional practices of Caring for Country are common, have better health outcomes than those in centralised populations (Burgess et al. 2008, McDermott et al. 1998, Morice 1976, O’Dea 1984, Rowley et al. 2008). Rowley and colleagues (2008) investigated health outcomes in the Utopia community, a decentralised community in Australia’s Northern Territory, over a 10-year period. They measured mortality from all causes as well as mortality and hospitalisations associated with cardiovascular disease, and found rates to be 40-50% lower within the Utopia community than within the general Northern Territory Aboriginal population. It was argued that the positive health outcomes in this community were likely to be related to the connectedness to culture, family, and land. Similarly, Aboriginal people living on homelands in Central Australia had significantly better health outcomes with regard to mortality, hospitalisation, hypertension, diabetes, and injury than those living in centralised areas (McDermott et al. 1998). O’Dea (1984) found marked health improvements in Australian Aboriginal people with diabetes after a temporary reversion to traditional lifestyle. However, it should be noted that based on the results of these previous studies, it is unclear whether the reason for the health gains evidenced is cultural engagement itself, or perhaps the effects of being with family, living an active lifestyle, or any number of other variables which may affect health in a positive way. Although the relationship between cultural engagement and positive health outcomes is often implied, there is a need to more directly measure engagement in cultural activities and its subsequent impact on health outcomes.

Torres-Stone and colleagues (2006) developed a measure of cultural engagement to evaluate the relationship between alcohol cessation and engagement in traditional activities amongst American Indians. They found that participation in traditional activities and
traditional spirituality had significant positive effects on alcohol cessation. Such a comprehensive measure of cultural engagement does not yet exist for Aboriginal Australians. The Caring for Country Questionnaire (Burgess et al. 2008), measures some activities which are related to Aboriginal cultural engagement (e.g., spending time on Country, protecting Country, ceremony), however it does not adequately capture the wider variety of activities which represent cultural engagement for Aboriginal Australians. A more comprehensive measure of cultural engagement is needed to clarify whether there is an association between cultural engagement and health benefits for Aboriginal Australians.

It should be noted that much care has been taken in the development of this survey to avoid subscribing to the cultural deficit model with regard to Aboriginal health. The cultural deficit model is concerned with explaining why a minority group may not have adopted the behaviours and values of the majority group (Kirk and Goon 1975), and cultural deficit thinking can often be used to hold minority groups responsible for their own disadvantage, whether it is in terms of education, poverty, or health. For example, Johnson and Bowman (2003) explain that African-American people have been judged as holding themselves in a cycle of poverty because they have a poverty of culture, including poor values, attitudes and motivation. In contrast the current study aims to explore the premise that engagement in cultural activities for Aboriginal people will vary in terms of diversity and complexity, and may or may not be associated with health outcomes. It is not expected that the entirety of Aboriginal culture will be embodied in this survey, and it is in no way suggested that a low level of engagement as measured by this survey equates to a deficit of culture. The Commonwealth Commission on Respect and Understanding (2007) states that groups may have difficulty understanding each other when a single component of cultural identity is prioritised, and individuals no longer have the option to choose which elements of their identity they emphasise. It is expected that there are many diverse possibilities for expression of Aboriginal cultural identity, and individuals are likely to express their Aboriginality in unique ways. Including a variety of types of activities, both concrete and abstract/ideological components of culture, and seeking information during scale development from individuals from a variety of tribal and language groups, this survey is designed to capture a varied expression of cultural identity. However, it is expected that there will be individuals for whom this survey does not fully represent the ways they engage with their culture. A caveat must be made that while this survey measures aspects of Aboriginal cultural activity, it does not measure ‘Aboriginality’ or ‘cultural goodness’.
**Need for the instrument**

Anecdotal reports from young Aboriginal Australians indicate they have difficulty in articulating a sense of cultural connection. This has been attributed to a lack of open cultural practice and systemic cultural transmission by older Aboriginal people. Enhancing connection with a traditional culture which is diminishing and often inaccessible presents a difficult task. However, culture is not a static thing but one which changes over time, and as such there are likely benefits of redefining cultural engagement for Aboriginal Australians as it is today. There is a need for a measure of cultural engagement for Aboriginal Australians which is relevant to the lifestyle, traditional knowledge, and challenges of today’s Aboriginal people. A reliable and valid measure of cultural engagement will allow future research to establish whether there is a clear association between cultural engagement and health benefits. Establishing a link between cultural engagement and positive health outcomes will then provide a theoretical basis for the inclusion of culture in treatment planning and program development. Such an inclusion of culture in assessment, treatment, and program development is hoped to foster significant health benefits for Aboriginal clients within Australian health services.

**Aims**

The present research aims to develop a comprehensive and psychometrically sound measure of cultural engagement for Aboriginal Australians, and to determine preliminary content validity of the new measure.

**Methods**

**Development of the instrument**

Figure 1 outlines the stages of development. All stages of validation of this instrument occurred within a semi-urban population in the Illawarra and South Coast regions of New South Wales, Australia.

Stage one involved development of the first version of the survey based on items from the Caring for Country Questionnaire (Burgess et al. 2008), Multigroup Ethnic Identity Measure (MEIM: Phinney 1992), and the Sense of Culture Yarn (Westerman 2008). This process was also informed by discussions with four Aboriginal individuals employed with Aboriginal substance abuse services, the Aboriginal Health and Medical Research Council, the Aboriginal Medical Service, and the University of Wollongong, Department of Indigenous Studies. As a preliminary step prior to disseminating a draft survey to consultants in stage two, the four discussants provided a varied base of opinion, reviewed the items and
made suggestions for changes in wording and additional items. These consultants were approached over a period of three weeks and were chosen based on their expertise in Aboriginal cultural issues evident in their professional work. They were presented with a draft of questions derived from the measures listed above, and were asked to comment generally on the appropriateness and relevance of the questions to Aboriginal cultural engagement. Responses were collected in an informal interview with the primary researcher, and the consultants’ suggestions were used to amend existing questions and form additional questions, resulting in version one of the survey. Version one comprised 18 items answered on the same four-point Likert scale used on the Caring for Country Questionnaire; not at all (none), a little (a few days in the year), a fair bit (a few weeks in the year), and a lot (a few months in the year) (Burgess et al. 2008).

Stage two involved providing a copy of the 18-item version one measure to five consultants who were then interviewed by telephone. The consultants comprised four males and one female, including three managers of remote Aboriginal substance abuse services, one Aboriginal drug and alcohol worker, and one member of staff from the Aboriginal Health and Medical Research Council (the latter consultant was also involved in the discussions in stage one). Five consultants were chosen for stage two to expand on the participant numbers in stage one, and to provide an intermediate step between the initial discussions and the reference group in stage three. Consultants were again selected based on their expertise in Aboriginal cultural issues demonstrated in their professional work. The telephone interview required consultants to respond to the items in version one of the survey and to rate each item on a Content Validity Index (CVI; see measures section below), that involved rating each item in terms of its relevance to Aboriginal cultural engagement. Consultants were asked to comment on the appropriateness of the items, suggest any changes they thought necessary, and suggest any additional items they believed should be included. This process resulted in some minor changes in wording of the existing items, and the addition of eight new items. Consequently version two included a total of 26 items, rated on the same Likert scale, which is included in the left side of Table 1.

Stage three. Thirteen Aboriginal consultants attended a reference group. Potential consultants were informed of the reference group via advertisements distributed through local services, and consultants with specific cultural expertise (e.g. community Elders, Aboriginal cultural workers) were contacted by telephone and email. Potential consultants included Aboriginal staff members of substance abuse services, staff members of Aboriginal health
services, community Elders accessed through local services, and community members accessed through local services and word-of-mouth. Eighteen consultants were invited to attend the reference group with the expectation that not all who were invited would be available to attend, and with the hope that 10 to 15 consultants would provide a robust yet manageable selection of consultants. The resulting reference group included thirteen consultants (11 females and two males), comprising one staff member of an Aboriginal substance abuse service, three staff members of the Aboriginal Medical Service, four local community Elders, and five community members. One member of the reference group was also involved in the discussion in stage one. All consultants responded to the 26 items in version two of the survey, as well as rating each item on a CVI. A group discussion was held in which consultants commented and made suggestions regarding the items. An item level CVI (I-CVI; see measures section below) was calculated for each item based on the ratings from the telephone interviews and the reference group. Review of the I-CVI along with suggestions from the reference group resulted in several items being revised, deleted, or added. A third and final version of the survey resulted from this process, and this is included in the right side of table 1.

Stage four. Five expert consultants (three females and two males) were asked to complete a CVI for each item on the final version of the survey. Five experts were sought following recommendations of Polit and colleagues (2007), who suggest that three to five experts should provide ratings for the second round of CVI calculations. Three of the five experts were selected from the consultants in Stage three, the fourth expert was involved in stage one and stage two, and the fifth expert was a consultant in stage two. They were identified as experts based on their engagement with the community at different levels (e.g. as Elders, community representatives), and were seen to demonstrate a high level of expertise with regard to cultural engagement based on their contributions to the reference group and discussions. The experts included two community Elders, one staff member from the Aboriginal Medical Service, one staff member from the Aboriginal Health and Medical Research Council, and one Aboriginal drug and alcohol worker. An I-CVI and scale level CVI (S-CVI; see measures section below) was calculated for the final revision based on the ratings of these five expert consultants.
Figure 1. Stages of development of the Aboriginal Cultural Engagement Survey (ACES).

**Measures**

**Content Validity Index**

Evaluating a scale’s content validity is critical in establishing the construct validity of a new instrument (Haynes et al. 1995). Content validity refers to the extent to which an instrument has an appropriate sample of items to be representative of the phenomena of interest (Waltz et al. 1991). One of the most widely used methods of quantifying content validity is the content validity index (CVI), a proportion agreement procedure based on expert ratings of relevance (Polit et al. 2007). The CVI can be calculated for each individual item on a scale (referred to as the I-CVI) and for the overall scale (the S-CVI). To calculate the I-CVI experts are asked to rate the relevance of each item to Aboriginal cultural engagement on a 4-point Likert scale (1-not relevant, 2-somewhat relevant, 3-quite relevant, 4-highly relevant). The I-CVI is the proportion of experts who assign a rating of quite relevant or highly relevant to the item (i.e. the number of experts rating the item as 3 or 4
divided by the number of experts) (Davis 1992, Polit et al. 2007). Polit and colleagues (2007) recommend that for an instrument to be judged as having excellent content validity, all items should have an I-CVI of .78 or higher. During a scale’s development, it is recommended that items with an I-CVI of .78 should be considered relevant and be kept in the survey, while items just below this cut-off point should be considered for revision and items well below should be considered for deletion. It is also recommended that if a scale requires significant changes following one round of I-CVI calculations, a second round of expert ratings should be conducted with between three and five expert raters (Polit et al. 2007).

To compute the content validity index for the overall scale (S-CVI), there are two common approaches. One is the universal agreement method, defined as the proportion of items on a scale that achieved a rating of 3 or 4 by all experts. The other is the average method, which involves computing the I-CVI for all items on the scale and then calculating the average across the items (Polit et al. 2007). These two methods can yield different values for the S-CVI. The average method, requiring an index of .90 or higher for excellent content validity, is recommended because the universal agreement approach is considered overly stringent and ignores the risk of chance agreement (Polit et al. 2007).

Results

Content validity of Version Two

Table 1 provides the I-CVI for each item in version two of the survey. Items with an I-CVI of .78 were kept in the survey, while items just below this cut-off point were considered for revision and items well below were deleted. A total of 18 respondents rated items 1 through 18 (13 consultants in the reference group and five consultants in telephone interviews prior to the reference group). Only 13 consultants rated items 19 to 26 since these items were new additions suggested by consultants in the stage two telephone interviews. The I-CVI for each item is included in Table 1, along with the amendments suggested by the reference group.

Content validity of the Aboriginal Cultural Engagement Survey (ACES)

Five consultants completed a CVI for each item in the final revision (version three) of the ACES. These I-CVI ratings are included in Table 1. The S-CVI was calculated using the S-CVI (average) method, and resulted in a value of 0.98.
<table>
<thead>
<tr>
<th>Item</th>
<th>Items in Version Two</th>
<th>CVI</th>
<th>New Item</th>
<th>Amendments made (Version 3- Aboriginal Cultural Engagement Survey)</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I spend time trying to learn about my Aboriginal culture, such as its history, traditions and customs</td>
<td>.94</td>
<td>1 I spend time trying to learn about my Aboriginal culture, such as its history, traditions and customs</td>
<td>Unchanged</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I speak my traditional Aboriginal language (including pidgin, creole, and Aboriginal terms)</td>
<td>.67</td>
<td>Removed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I make traditional artworks (e.g. painting, weaving, carving)</td>
<td>.78</td>
<td>2 I make Aboriginal artworks (e.g. painting, weaving, carving)</td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I participate in Aboriginal cultural practices of food preparation (e.g. bush meats, dampers, Johnny cakes)</td>
<td>.78</td>
<td>3 I participate in traditional Aboriginal practices of food preparation (e.g. bush meats, dampers, Johnny cakes)</td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I eat Aboriginal foods prepared the traditional way</td>
<td>.59</td>
<td>Removed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I participate in Aboriginal cultural practices involving music/dance</td>
<td>.83</td>
<td>4 I participate in Aboriginal cultural practices involving music/dance (either traditional or modern)</td>
<td>Removed</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I participate in Aboriginal sports, or play in an Aboriginal sports team</td>
<td>.50</td>
<td>Removed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I actively follow Aboriginal sports, or follow Aboriginal sports team/s</td>
<td>.61</td>
<td>Removed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Value</td>
<td>Weight</td>
<td>Description</td>
<td>Value</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>9</td>
<td>I have received traditional Aboriginal healing methods (e.g. traditional healers, bush medicine)</td>
<td>.78</td>
<td>5</td>
<td>Unchanged- I have received traditional Aboriginal healing methods (e.g. traditional healers, bush medicine)</td>
<td>.80</td>
</tr>
<tr>
<td>10</td>
<td>I spend time on Country (e.g. living in homeland, travelling through Country)</td>
<td>.89</td>
<td>6</td>
<td>Unchanged- I spend time on Country (e.g. living in homeland, travelling through Country)</td>
<td>1.00</td>
</tr>
<tr>
<td>11</td>
<td>I care for Country (e.g. burning grass, cleaning up Country, fire work)</td>
<td>.89</td>
<td>7</td>
<td>I care for Country (e.g. burning grass, cleaning up Country, fire work, conservation, regeneration)</td>
<td>1.00</td>
</tr>
<tr>
<td>12</td>
<td>I use Country and land (e.g. for bush tucker, bush medicine, hunting, fishing)</td>
<td>.94</td>
<td>8</td>
<td>Unchanged- I use Country and land (e.g. for bush tucker, bush medicine, hunting, fishing)</td>
<td>1.00</td>
</tr>
<tr>
<td>13</td>
<td>I protect Country (e.g. sacred sites, animals, totems)</td>
<td>1.00</td>
<td>9</td>
<td>Unchanged- I protect Country (e.g. sacred sites, animals, totems)</td>
<td>1.00</td>
</tr>
<tr>
<td>14</td>
<td>I participate in ceremony (e.g. smoking ceremony, cleansing, Corroboree)</td>
<td>.78</td>
<td>10</td>
<td>Unchanged- I participate in ceremony (e.g. smoking ceremony, cleansing, Corroboree)</td>
<td>.80</td>
</tr>
<tr>
<td>15</td>
<td>I attend Aboriginal community meetings</td>
<td>.83</td>
<td>11</td>
<td>I attend/participate in Aboriginal community meetings</td>
<td>1.00</td>
</tr>
<tr>
<td>16</td>
<td>I participate in social engagements that include mostly Aboriginal people</td>
<td>.83</td>
<td>12</td>
<td>I participate in social engagements that are related to Aboriginal people (e.g. NAIDOC Week, Sorry Day events, Knockout)</td>
<td>1.00</td>
</tr>
<tr>
<td>17</td>
<td>I participate in traditional Aboriginal cultural activities (e.g. Law time, NAIDOC Week, Sorry Day events)</td>
<td>.94</td>
<td></td>
<td>Removed (incorporated into new item 12)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>I practice traditional and/or contemporary Aboriginal cultural relationships (e.g. respect for</td>
<td>.94</td>
<td></td>
<td>Removed (incorporated into new item 18)</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
<td>Weight</td>
<td>New Item Description</td>
<td>Weight</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I respect the Elders’ teaching of traditional Law</td>
<td>1.00</td>
<td>I respect the traditional teachings of Elders</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I spend time learning about contemporary issues facing Aboriginal people</td>
<td>1.00</td>
<td>I spend time learning about issues facing Aboriginal people today</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I make contemporary Aboriginal artworks</td>
<td>.62</td>
<td>Removed (incorporated into new item 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>I am aware of what Country I belong to</td>
<td>1.00</td>
<td>I am aware of what Country I belong to and I acknowledge where I am from</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>I feel I belong to land in a specific area associated with my people</td>
<td>1.00</td>
<td>Unchanged- I feel I belong to land in a specific area associated with my people</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>I have strong kinship links / family links</td>
<td>1.00</td>
<td>Unchanged- I have strong kinship links / family links</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>I participate in traditional Aboriginal cultural activities (e.g. Law time, Men’s and Women’s business, initiations, burials)</td>
<td>.85</td>
<td>I participate in traditional Aboriginal cultural activities (e.g. Men’s and Women’s business, burials)</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>I participate in Aboriginal community events (e.g. NAIDOC Week, Sorry Day Events, Knockout)</td>
<td>.93</td>
<td>Removed (incorporated into new item 12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>275</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note. Items in italics form the final Aboriginal Cultural Engagement Survey
Discussion

The final 21 item version of the Aboriginal Cultural Engagement Survey (ACES) had all I-CVI values above .78 and the S-CVI above .90, suggesting excellent content validity. Aboriginal consultants were involved from the first to the last stage of the survey’s development. This process was essential, and community involvement critical to both the inception and refinement of the survey items.

Development of items was a challenge even for members of the Aboriginal community. This was expressed and reflected in discussions in many ways, for example, a young female consultant within the reference group (Stage three) expressed some difficulty in defining what Aboriginal culture was for her. This young woman explained that she lacked a culture which she could see, describe, and practice, but that to her culture was evident in her own behaviour and the spirit with which she was accepted within her community. Many members of the reference group discussed this loss of a definable culture within the younger generations, and stated this to be in part due to the older generations’ loss of knowledge, shame in their own Aboriginal culture, and unwillingness to practice traditional culture for the fear that it may be ‘sold-out’ by non-Aboriginal Australians. Items 19, 20, and 21 were suggested by this young woman and others in the reference group in an attempt to capture the more difficult to define ‘culture’ for younger generations.

Australian Aboriginal culture is known to be extremely diverse, and at many times throughout the development process the researchers were advised by Aboriginal individuals of the significant difficulty in developing a measure relevant to all Aboriginal Australians. It is acknowledged by the researchers that this survey may have limits with some Aboriginal cultures far removed from the semi-urban population with whom this survey was validated. However, it is hoped that by including Aboriginal individuals and community members from many different regions and backgrounds in this process, the ACES is sufficiently general to be of use in most contexts. It should be reiterated that the ACES is not expected to capture cultural engagement for every Aboriginal individual. Those who do not endorse items on the ACES are in no way considered to be un-Aboriginal or to have a deficit of culture, and those administering the survey should remain aware of the complexity and diversity of cultural identity and its expression when considering an individual’s responses on the ACES. In stages two and three there was an imbalance.
between male and female consultants. Although efforts were made by researchers to minimise this imbalance, the final group of consultants in stage two included four males and one female, and the consultants in stage three included 11 females and two males. This may affect the generalisability of the items to both genders. However, the overall number of individual consultants across all four stages included nine males and 13 females (with consultants who participated in more than one stage only counted as one consultant). Therefore it is hoped that any gender bias has been minimised by the overall number of participants in each gender differing only slightly.

The ACES is a new scale which takes an important step in capturing and measuring cultural engagement for Aboriginal Australians, with the hope of providing more culturally appropriate health services in the future. However, this hope is based on the premise that enhancing cultural engagement for Aboriginal Australians will actually bring about positive change. While this assertion may make sense in theory, there is currently very little evidence to support this. There is a need to more directly measure the relationship between engagement in cultural activities and health outcomes. By using the ACES to establish the level of cultural engagement of individuals over time, researchers may compare this engagement with outcomes within health services to determine the effects of cultural engagement. Establishing a link between cultural engagement and positive health outcomes may provide a theoretical basis for the inclusion of culture in treatment planning and program development. Future research may indicate whether health benefits are seen within specific areas of Australian health services, such as substance abuse services. In addition, further research may investigate whether engagement in specific types of cultural activities is especially beneficial for Aboriginal clients of health services, and whether engagement in such activities may lead to specific health and psychological benefits.

Future studies now need to assess other elements of reliability and validity of the ACES. For example, predictive validity may be especially important to investigate within Australian Aboriginal health services. The extent to which engagement and involvement in cultural activities predicts better health outcomes for Aboriginal clients is important for service development.

Key messages
The ACES is a new measure for use with Australian Aboriginal populations. This scale has been found to have excellent content validity. The ACES shows promise for being a useful tool in assessing the cultural engagement of Aboriginal clients, which may then be used to measure the association between cultural engagement and health outcomes. The establishment of a clear relationship between cultural engagement and positive health benefits will assist in designing future interventions which better meet the cultural needs of Aboriginal Australians within health services.
REFERENCES


Appendix U


Abstract
This paper describes psychosocial outcomes of an Indigenous residential substance abuse rehabilitation centre in Australia, examines the sensitivity to change of the new Growth and Empowerment Measure (GEM), and explores the degree to which service users value cultural components of the treatment program. Participants were 57 Indigenous and 46 non-Indigenous male clients from Oolong House. Intake, 8-weeks, and 16-weeks (program completion) measures of Kessler 10 Psychological Distress Scale (K10), Drug Taking Confidence Questionnaire (DTCQ-8), and GEM were completed. The Treatment Component Evaluation (TCE) was completed at 16-weeks. There were significant improvements for participants, with a decrease in psychological distress and increases in refusal self-efficacy and empowerment. Effect sizes for GEM were medium to large across the time-points (r = .61 to .70 for all four subscales from baseline to 8-weeks; r = .44 to .70 for three subscales from 8-weeks to 16-weeks), indicating sensitivity to change. Indigenous participants rated cultural components of treatment significantly more helpful than did non-Indigenous participants. Implications for future research and substance abuse interventions for Indigenous Australians are discussed.
1. Introduction

Since colonisation Indigenous Australians have experienced extreme levels of loss, grief, disempowerment, cultural alienation, and loss of identity (Hunter, 1993). This has been the consequence of many years of systematic assault on their traditional practices, families, languages and cultures (Leenaars, Anawak, Brown, Hill-Keddie, & Taparti, 1999). Significant damage was caused during colonisation when governmental policies were implemented to displace Indigenous communities from their land and remove Indigenous children from their families (Dudgeon et al., 2010). These policies affected a disruption to the traditional way of life which has spanned more than two centuries so far, and the result has been a widespread severing of cultural and spiritual lines. Many Indigenous people’s sense of identity, spiritual and physical wellbeing, and general psychological adjustment has been negatively impacted (The Human Rights and Equal Opportunity Commission, 1997). This is evident through extremely poor physical health profiles, as well as prevalence rates higher than the Australian average for suicide, domestic violence, substance abuse, and unemployment (Cleworth, Smith, & Sealey, 2006). Please note that throughout this paper the term Indigenous Australians refers to both Aboriginal Australians and Torres Strait Islanders.

Although many Indigenous Australians refrain from drinking alcohol (Perkins et al., 1994), Indigenous people who do drink are more likely to do so at high-risk levels (Department of Health and Ageing, 2007). The use of other substances such as opiates, cannabis, amphetamines, and injecting drugs is increasing in Indigenous populations (Australian Institute of Health and Welfare, 2005, 2006; Brady, 2002). Cultural alienation and loss of identity have consistently been stated to contribute to the relatively high prevalence of mental health disorders in Indigenous communities when compared with non-Indigenous communities (Australian Institute of Health and Welfare, 2002, 2003; Human Rights and Equal Opportunity Commission, 1997; O’Shane, 1995; Parker, 2010; Roxbee & Wallace, 2003; Swan & Raphael, 1995).

There is evidence that Indigenous Australians do not access mental health and substance abuse services at a level consistent with their level of need (Westerman, 2004). Although many factors likely contribute to the relatively low levels of service utilisation, a major factor that has been proposed is the failure of health services to embrace an understanding of Indigenous conceptualisations of mental health (Berry...
& Crowe, 2009), including the holistic nature of health and wellbeing (Ypinazar, Margolis, Haswell-Elkins, & Tsey, 2007). The word punyu, from the language of the Ngaringman of the Northern Territory, explains that health encompasses both person and Country (Atkinson, Graham, Pettit, & Lewis, 2002). Punyu is associated with being strong, happy, knowledgeable, beautiful, clean, socially responsible and safe (i.e. being within the law and also being cared for by others) (Mobbs, 1991). The health of Indigenous Australians may not be considered in terms of a mind/body dichotomy, as it is generally viewed in a western model of health and illness (Slattery, 1994). There are current attempts to define a therapeutic approach that accounts for the realities of Indigenous culture (Chenhall, 2006).

Culture has been successfully incorporated into interventions for Native American populations (Edwards, 2003; Gone, 2011; Janelle, Laliberte, & Ottawa, 2009; Kirmayer, Simpson, & Cargo, 2003; Moran & Bussey, 2007; Wendt & Gone, 2012; Wright et al., 2011). The degree to which an individual is embedded in his/her cultural traditions (enculturation) is believed to serve an important protective function in relation to alcohol cessation and abstinence with Native American populations (Torres Stone, Whitbeck, Chen, Johnson, & Olson, 2006). Enculturation is evidenced by use of traditional language, practices, spirituality, and cultural identity (Whitbeck, Chen, Hoyt, & Adams, 2004; Zimmerman, Ramirez-Valles, Washienko, Walter, & Dyer, 1994). Torres Stone and colleagues (2006) found that participation in traditional activities and traditional spirituality were associated with alcohol cessation. They also suggested that spirituality and participation in traditional practices may be better indicators of enculturation than cultural identity.

Many Indigenous Australians report a significant connection to their culture. Anderson (1996) suggests that for Indigenous people, "our identity as human beings remains tied to our land, to our cultural practices ... our intellectual traditions, our concepts of spirituality... Destroy this relationship and you damage – sometimes irrevocably – individual human beings and their health" (p. 15). Caring for Country, defined as having the knowledge and responsibility to manage traditional lands, has been found to foster self identity and build self esteem for Indigenous Australians (Kingsley, Townsend, Phillips, & Aldous, 2009). Also, reinvigoration of traditional lifestyle has been associated with significant health benefits for Indigenous Australians (Burgess, Berry, Gunthorpe, & Bailie, 2008; O’Dea, 1984), and an
association has been found between cultural attachment and positive outcomes in health, psychological wellbeing, substance abuse, and employment (Dockery 2009, 2011). It is important to identify what works in recovery from substance abuse for Indigenous Australians, including identifying cultural drivers of resilience and health gains (National Health and Medical Research Council, 2002).

Empowerment-based approaches are recognised as important for assisting individuals and communities to become active agents in reducing health inequities (Laliberte, Haswell-Elkins, & Reilly, 2009). A reference group of Indigenous Australians described empowerment as “a healing journey through which individuals come to terms with their past, learn better ways to deal with their present situation, gain control, become strong, and find their voice to participate in change for a strong community” (Laliberte et al., 2009, p. 66). Laliberte and colleagues state that in the context of the Australian historical policies on forced displacement and relocation empowerment becomes an important tool to assist individuals and communities regain a sense of belonging and group identity. An intervention which aimed to enhance empowerment for members of the Yarrabah Men’s Health Group found that the intervention led to significant changes in the men’s personal development, growth, and response to family responsibilities (Tsey et al., 2003, 2004).

The Growth and Empowerment Measure (GEM: Haswell et al., 2010) is a tool developed by Indigenous Australians for Indigenous Australians. The GEM was developed to evaluate programs that aim to enhance empowerment, and it measures both the process and outcomes of empowerment. The GEM is relatively unique in its attempt to measure the process of empowerment (Haswell et al., 2010), as other measures of empowerment-like constructs have focused on measuring outcomes or indicators of change rather than processes (e.g. the sense of coherence scale; Antonovsky, 1993). Contemporary views of recovery focus on aspects of well-being rather than exclusively on reduction in symptoms, and it has been argued that recovery from substance abuse must extend beyond the substance abuse behaviour to encompass a process of self-improvement and renewed life (Laudet, 2007). In line with these views, the GEM seeks to measure individuals’ own perspectives of their psychosocial wellbeing and empowerment at a personal, family, and organisational level. Unlike previous measures of empowerment, the GEM is intended to be used in a variety of settings rather than being tailored to a specific context (Haswell et al.,
The GEM has not previously been used within a substance abuse treatment setting, and no data on its sensitivity to change has previously been reported. The current study aimed to, firstly, examine changes in psychosocial wellbeing among clients of an Indigenous residential substance abuse rehabilitation centre in Australia, and secondly, examine the sensitivity of the Growth and Empowerment Measure for detecting psychosocial changes in Indigenous Australians. This research also explored the degree to which service users valued the cultural components of the treatment program relative to other treatment components. To date there has been limited research investigating what works in substance abuse treatment for Indigenous Australians. Furthermore, there has been no research measuring emotional empowerment associated with treatment, and cultural components of treatment have rarely been examined in relation to psychosocial outcomes for Indigenous clients.

It was expected that there would be a negative association between symptom distress and empowerment, and between symptom distress and relapse self-efficacy at each of the measurement time points, and that there would be statistically significant positive change on all measures for clients receiving the treatment. This was based on the expectation that there would be an overall improvement of clients’ health and wellbeing during the treatment program. It was also expected that Indigenous clients would rate the cultural components of treatment as more helpful than would non-Indigenous clients.

2. Methods
2.1. Ethics
Ethics approval was obtained and procedures were followed in accordance with the standards of the Human Research Ethics Committee of the University of Wollongong.

2.2. Setting and treatment program
Oolong House is an Indigenous residential substance abuse treatment centre on the South Coast of New South Wales, Australia. It is a modified therapeutic community providing evidence-based treatments (e.g. cognitive behaviour therapy) and group-based interventions, including Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). As well as these interventions, which provide the basis of the treatment program, Oolong House also uses a traditional holistic community-healing
model, incorporating the Indigenous community in the healing process. The program involves participation in cultural activities as well as cultural education in the areas of ancestry, cultural respect, land and humanity, hunting and gathering, language, storytelling, cultural identity, traditional artwork, construction of traditional musical instruments and weapons, traditional music, cultural dance, and visiting culturally significant sites. Oolong House provides a 16-week treatment program for male clients of Indigenous and non-Indigenous backgrounds. All clients participate in all components (i.e. cultural and non-cultural) of the treatment program.

2.3. Participants

Participants were recruited via convenience sampling from clients engaged in residential substance abuse treatment at Oolong House. Participation was on a voluntary basis with informed consent provided. Participants included 57 Indigenous and 46 non-Indigenous males over 18 years of age. Data were collected at intake, 8-weeks, and 16-weeks (program completion). Attrition resulted in sample sizes of 50 (25 Indigenous, 25 non-Indigenous) and 34 (20 Indigenous, 14 non-Indigenous) at the time points 8-weeks and 16-weeks respectively. Attrition was due to clients choosing to leave the program (e.g. due to family responsibilities or unwillingness to adhere to the program structure) and eviction (e.g. for violations of the program rules, including drug use or violence). No clients refused to participate in the study. Follow up data for clients that did not complete the program was not available, and therefore results do not reflect the self-perceived health of the treatment non-completers.

2.4. Measures

2.4.1. Psychological distress - Kessler 10 Scale (K10)

The K10 (Kessler et al., 2002) is a brief 10-item self-report questionnaire designed to measure the level of distress and severity of psychological symptoms. The K10 is used widely, including in the World Health Organization World Mental Health Survey, and commonly used as a clinical outcome measure (Brooks, Beard, & Steel, 2006). The K10 has been found to have high internal consistency reliability (Cronbach’s alpha = 0.93), good precision in the 90th-99th percentile range of the population distribution (standard errors of standardised scores in the range 0.20-0.25), as well as an ability to discriminate DSM-IV cases from non-cases (areas under the Receiver Operating Characteristic curve of 0.87 to 0.96) (Kessler et al.,
2002). The *yarning about mental health* version of the K10 (Nagel & Thompson, 2007), developed for use with Aboriginal Australians, was used in this research. This version contains the same wording as the original, with additional graphics to promote comprehension of the response scale. Participants respond on a 5-point Likert scale from *none of the time* to *all of the time.*

2.4.2. *Drug taking refusal self-efficacy - Drug Taking Confidence Questionnaire, eight-item version (DTCQ-8)*

The DTCQ-8 (Sklar & Turner, 1999) is an 8-item self-report measure adapted from the original 50-item questionnaire (DTCQ-50; Annis, Sklar, & Turner, 1997) which measures a person’s self-efficacy in not drinking or taking drugs in specific high relapse-risk situations. Analyses have demonstrated that the DTCQ-50 has a stable factor structure and is a reliable measure of coping self-efficacy for use across a wide range of addictions (Annis et al., 1997; Sklar, Annis, & Turner, 1998). The DCTQ-8 has been shown to correlate at .97 with the total DTCQ-50 score and to account for 95% of the variance in total DCTQ-50 scores (Sklar & Turner, 1999). Therefore the DTCQ-8 has been assessed to be a reliable and valid indicator of drug taking refusal self-efficacy (Sklar & Turner, 1999). Participants respond on a 6-point scale from 0 to 100, where 0 = *Not confident at all* and 100 = *Very confident.*

2.4.3. *Empowerment - Growth and Empowerment Measure (GEM)*

Empowerment was measured using the GEM (Haswell et al., 2010). The GEM is a self-report measure comprised of a 13-item Emotional Empowerment Scale (EES14) and 12 Empowerment Scenarios (12S). This tool was designed as a part of the Empowerment Research Program (a collaboration of the University of Queensland and James Cook University) to provide a measure of dimensions of empowerment that are important to Indigenous Australians, and was developed using in-depth interview data from 50 participants of the Family Wellbeing Empowerment Program who described their experience of empowering change (see Tsey et al., 2005). The instrument was examined and improved through workshops in Alice Springs, Yarrabah and Cairns, with the help of Indigenous consultants as well as researchers experienced in the measurement of complex psychological concepts (Haswell et al., 2010). This scale has been purposely designed to be visually attractive, interesting, and simple to complete. The GEM has been shown to have robust internal reliability for the EES14 ($\alpha = .89$) and the 12S ($\alpha = .86$), and the individual components and
summary scores of this tool measure inter-related but distinct aspects of empowerment and wellbeing. The GEM comprises four subscales, two within each of the EES14 and the 12S. Firstly the EES14 comprises the “Inner Peace” subscale (IP: items 2, 3, 4, 10, 11, 12, 13, and 14) and the “Self-Capacity” subscale (SC: items 5, 6, 7, and 9). The 12S comprises the “Healing and Enabling Growth” subscale (HG: scenarios 1, 2, 3, 5, 8, 10, and 11) and the “Connection and Purpose” subscale (CP: scenarios 4, 6, 7, 9, and 12). All items on the EES14 are rated on a 5-point scale falling between two extremes. For example, for item 13 the first point on the scale is *I live in fear of what’s ahead*, while the last point on the scale is *I feel safe and secure, I can face whatever is ahead*. All scenarios on the 12S are rated on a 7-point scale falling between two extremes. For example, for item 4 the first point on the scale is *There are things I should change in my life to be healthier and happier, but it seems all too hard. I don’t think I can change anything at this time*, and the last point on the scale is *I have gained skills and confidence and have succeeded in making many important changes in my life. I feel fully confident about my ability to make changes.*

2.4.4. Helpfulness of treatment components - Treatment Component Evaluation (TCE)

This measure was developed for this study and aims to evaluate different aspects of the program from the clients’ perspective. Participants complete the TCE at the completion of the 16 week program, and responses are rated on a 5-point Likert scale regarding the extent to which participants believe that different aspects of the treatment program were helpful (1 = *unhelpful* to 5 = *extremely helpful*). A total of 16 aspects of treatment are rated in the TCE, including the cultural components of the program, i.e. “how helpful did you find the cultural program (e.g. artwork, weaving, dance) in assisting you reach your recovery goals?”

2.5. Statistical Analyses

Due to a high attrition rate, independent samples t-tests were conducted to determine whether non-completion (i.e. leaving the program before the 8-week and 16-week time-points) was associated with baseline scores on the K10, the DTCQ-8, or the GEM. To investigate the association between symptom distress measures and empowerment and refusal self-efficacy measures at baseline, correlational analysis was conducted. Where assumptions for parametric analysis were violated a Kendall’s
tau-b correlation was used. Kendall’s tau-b has been found to have several advantages over Spearman’s r when applied to data from psychiatric treatment settings (Arndt, Turvey, & Andreason, 1999). Repeated measures analysis of variance (ANOVA) as well as a series of paired t-tests were conducted to analyse changes over the three time-points for the K10, DTCQ-8, and GEM. Where assumptions for parametric analyses were violated, nonparametric Friedman Two-Way ANOVA and Wilcoxon Signed Ranks tests were used respectively. Effect sizes were calculated to indicate the sensitivity to change of the GEM (Haswell et al., 2010). Effect sizes were calculated as recommended by Clark-Carter (2004) by converting \( z \) into \( r \) using the formula \( r = \frac{z}{\sqrt{N - \text{Ties}}} \). Effect size has been used as an indicator of sensitivity to change in previous studies regarding substance abuse treatment (e.g. Butler et al., 2006), and a high effect size is indicative of high sensitivity to change and utility of the tool. Cohen (1988) suggests that \( r \) values greater than .5 may be considered large, greater than .3 may be considered medium, and greater than .1 may be considered small. Finally, exploratory analysis was conducted to examine client responses on the TCE. Independent samples t-tests were conducted to investigate whether there was a significant difference between Indigenous and non-Indigenous clients’ ratings of the helpfulness of various components of treatment, particularly cultural components of treatment.

3. Results

3.1. Attrition

A high attrition rate was found, with 103 participants at baseline, 50 participants at 8-weeks, and 34 participants at 16-weeks. Independent samples t-tests were conducted to investigate whether there was a significant difference on the baseline scores for clients who left the program before the 8-week and 16 week-time points when compared with clients who remained in the program. For the 8-week time point the assumptions of scale of measurement, independence, and homogeneity of variance were met. Results indicate that there was no significant difference for any of the baseline measures for clients who left the program before the 8-week time point when compared with clients who remained in the program (all \( p \) values > .27). For the 16-week time point the assumptions of scale of measurement, independence, and homogeneity of variance were met. Results once again indicate no significant
difference on any of the baseline measures for clients who left the program before the 16 week time point when compared with clients who remained in the program (all \( p \) values > .27), although the result approached significance for the Empowerment Scenarios (S12) of the GEM (\( p = .06 \)). Clients who completed the program had higher baseline scores for the S12 than clients who left the program before 16-weeks, indicating that baseline empowerment levels may have been a factor in determining whether or not clients remained in the treatment program.

3.2 Psychosocial outcomes

Correlational analysis was conducted to investigate the association between symptom distress measures, empowerment and refusal self-efficacy measures at baseline. The assumption of normality was violated, therefore a Kendall’s tau-b correlation was used. Higher scores on the K10 indicate higher levels of psychological distress, whereas higher scores on the DTCQ-8 and the GEM indicate higher levels of refusal self-efficacy and empowerment respectively. Results are summarised in Table 1. As expected, a significant negative correlation was found between the K10 and the DTCQ-8, and between the K10 and all four subscales of the GEM. Significant positive correlations were found between the DTCQ-8 and all four subscales of the GEM. This indicates that more psychological distress is associated with less empowerment and less confidence to resist the urge to use drugs, and conversely that more empowerment is associated with more confidence to resist relapse.

A repeated measures ANOVA was conducted to analyse changes over time for the K10, the DTCQ-8, and the GEM subscales over three times points: baseline, 8-weeks and 16-weeks. Several variables did not meet the assumptions for parametric analysis, therefore the nonparametric Friedman Two-Way ANOVA was used. The assumptions of independence and scale of measurement were met. Results indicate a significant difference between scores at baseline, 8-weeks and 16-weeks on the K10 (\( \chi^2_F = 27.74 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .000 \)), the DTCQ-8 (\( \chi^2_F = 36.02 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .000 \)), and all four subscales of the GEM including IP (\( \chi^2_F = 26.34 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .000 \)), SC (\( \chi^2_F = 22.42 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .000 \)), HG (\( \chi^2_F = 32.67 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .000 \)), and CP (\( \chi^2_F = 14.80 \) (corrected for ties), \( df = 2, N – \text{ties} = 34, p = .001 \)). Follow-up pairwise comparisons using the Wilcoxon Signed Ranks test were conducted and results are
summarised in Table 2. There was a significant difference between baseline and 8-weeks on all measures. This indicates that from baseline to 8-weeks participants’ psychological distress significantly decreased, while their confidence in resisting relapse and their empowerment significantly increased. For 8-weeks to 16-weeks, the assumptions of independence and scale of measurement were met and results are summarised in Table 3. There was a significant improvement in scores for the K10, DTCQ-8, and the GEM subscales IP and HG. This indicates that from 8-weeks to 16-weeks participants’ psychological distress significantly decreased, while their confidence in resisting relapse significantly increased along with two aspects of their empowerment (i.e. Inner Peace and Healing and Enabling Growth). There was an increase for the subscale SC that approached significance and a non-significant increase for the subscale CP.

3.3. Sensitivity to change of K10, DTCQ-8, and GEM

Effect sizes between baseline and 8-weeks were large for the K10 ($r = .67$), the DTCQ-8 ($r = .73$), and all four subscales of the GEM (IP = .62; SC = .70; HG = .69; CP = .61). Effect sizes between 8-weeks and 16-weeks were large for the subscales IP ($r = .70$) and HG ($r = .53$), medium for the K10 ($r = .41$), the DTCQ-8 ($r = .44$) and the subscale SC ($r = .44$), and small for the subscale CP ($r = .20$). The effect sizes for the GEM subscales indicate that the GEM was highly sensitive to change in the current substance abuse treatment population, particularly during the earlier half of the treatment program.

3.4. Clients’ perspectives on the value of cultural components

Exploratory analysis was conducted to examine clients’ responses on the TCE. Independent sample t-tests were conducted to investigate whether there was a significant difference between Indigenous and non-Indigenous clients’ ratings of the helpfulness of cultural components of treatment. The assumption of normality was violated, and therefore the Mann-Whitney $U$ test was used. As expected, results indicate that Indigenous clients ($Mean \ Rank = 19.78, n = 20$) rate the cultural components as significantly more helpful than non-Indigenous clients ($Mean \ Rank = 14.25, n = 14$) $U = 94.50, z = -1.68$ (corrected for ties), $p = .05$, one-tailed. On a 5-point Likert scale (1 = unhelpful, 5 = extremely helpful) Indigenous clients’ mean rating for the helpfulness of cultural components was 4.25, while non-Indigenous clients’ mean rating was 3.57.
Further exploratory analysis was conducted by calculating the mean of clients’ TCE scores across all treatment components and investigating whether this varied significantly between Indigenous and non-Indigenous clients. Using the Mann-Whitney U test no significant difference was found between Indigenous and non-Indigenous clients on their mean TCE score ($p = .12$). Further exploratory analysis was conducted using the Mann-Whitney U test to investigate whether Indigenous and non-Indigenous clients differed in their response regarding the helpfulness of the other 15 components of treatment measured on the TCE. Item 15, “advice about money or employment”, was the only other component of treatment on which Indigenous and non-Indigenous clients differed significantly in their ratings of helpfulness. This item was rated as significantly more helpful by Indigenous clients ($Mean\text{ score} = 3.70, Mean\text{ Rank} = 20.50, n = 20$) than non-Indigenous clients ($Mean\text{ score} = 2.79, Mean\text{ Rank} = 13.21, n = 14$) $U = 80.00, z = -2.18$ (corrected for ties), $p = .03$, two-tailed.

4. Discussion

This study examined psychosocial outcomes for Indigenous and non-Indigenous clients within a residential substance abuse treatment program. For clients who completed the 16-week treatment program there were statistically significant improvements, including a reduction in psychological distress, and enhancements in refusal self-efficacy and feelings of empowerment. Correlational analysis of baseline scores indicated that higher psychological distress was associated with lower refusal self-efficacy and lower empowerment, suggesting that as psychological distress decreases, refusal self-efficacy and empowerment may be expected to increase. As expected, there were improvements on all outcome measures over the course of treatment.

The research findings indicate that the GEM was highly sensitive to change in the current substance abuse population, supporting utility of the GEM as a tool for use in substance abuse treatment. Effect sizes for the GEM subscales were of similar magnitude to the K10 and the DTCQ-8, two widely used and well-established measures, indicating that the GEM’s sensitivity to change is comparable with these tools. These findings contribute to previous psychometric research examining the validity of the GEM (Haswell et al., 2010), although the results are preliminary and should be interpreted cautiously.
Results indicate that the GEM subscales are effectively measuring inter-related but distinct aspects of empowerment. Effect sizes for the four subscales vary during the second half of the treatment program, and as such the results may suggest that the subscales are measuring different processes of empowerment with varying trajectories. Results indicate that Inner Peace continues to improve at an increasing rate throughout treatment, with a higher effect size from 8-weeks to 16-weeks than from baseline to 8-weeks. Healing and Enabling Growth, Self-Capacity, and Connection and Purpose also continue to increase throughout treatment, although the extent of this increase plateaus somewhat after the first half of treatment. Different effects between the first 8 weeks and the second 8 weeks of treatment may also be a function of variations in sample sizes.

The results indicate that Inner Peace may be an aspect of empowerment that can continue to grow relatively independent of other aspects of empowerment. The items included on the Inner Peace subscale include “dealing with anger”, “feeling calm and relaxed”, “feeling safe and secure”, “feeling centred and focused”, “confident”, “happy with self and life”, “feeling strong and full of energy”, and “feeling skilful” (Haswell et al., 2010). The Inner Peace subscale captures more well-being versus ill health or symptom distress. It is possible that Inner Peace continued to grow within the current research population in part due to the physical circumstances of the participants (i.e. living within a residential treatment program). Residential treatment settings entail limited contact with everyday stressors, and provide a relatively safe and structured environment, scheduled activities to promote participation, as well as educational activities and skills enhancement (Brunett, Drake, Woods, & Hartnett, 2001; Brunette, Mueser, & Drake, 2004). Many of the items on the Inner Peace subscale may have been responded to positively by participants due to the physical and practical confines of their environment. The other subscales include items such as “satisfaction with opportunity” (subscale SC), “feeling valued” (SC), “having a voice” (HG), “improving relationships” (HG), “being able to change” (CP), and “respected in my workplace” (CP) (Haswell et al., 2010). It is possible that these items evidenced less change than the Inner Peace items (during the second 8 weeks of treatment) because participants had less opportunity to address these issues due to the restrictive nature of the treatment program and setting.
The effect size for Inner Peace from 8-weeks to 16-weeks was large, while the effect sizes for the K10 and the DTCQ-8 were medium. This suggests that sensitivity to change on the Inner Peace subscale is good compared to other measures. It is also possible that the treatment program better targets the well-being outcomes than symptom distress outcomes. Either way, the results suggest that the Inner Peace subscale assesses outcome domains not captured by more traditional outcome measures. The GEM measures individuals’ own perspectives of their psychosocial wellbeing and empowerment, and the Inner Peace subscale explained most of the variance in overall scores on the GEM in a previous study by Haswell and colleagues (2010). Measures of psychological distress (e.g. K10) tend to capture more transient or subjective experiences that may be more readily affected by external stressors or cues, whereas psychosocial well-being may be a more stable process. The effect sizes on the Inner Peace scale were maintained over time whereas they tended to decrease on the K10 and DTCQ-8. As noted, this may reflect different change trajectories in different outcome domains.

Indigenous clients indicated that they found the cultural components of treatment significantly more helpful than did non-Indigenous clients, although this difference was small in magnitude. There is now a need to look more systematically at the relationship between cultural activities and treatment outcomes. The culture as treatment hypothesis (Brady, 1995) suggests that a return to traditional Aboriginal cultural practices is sufficient for effecting recovery from substance abuse for many Aboriginal individuals. There has been limited empirical research to support this hypothesis to date (Gone & Calf Looking, 2011). More detailed data regarding participation in therapeutic cultural activities and clearer descriptions of the mechanisms of these cultural components in relation to specific treatment goals is needed. This will allow a better understanding of the types of cultural activities that are most beneficial for Indigenous clients.

It should also be noted that non-Indigenous clients reported the cultural components of treatment as helpful. This suggests that whether or not an individual client identifies as being Indigenous they may gain significant therapeutic benefits from engaging in cultural activities. Cultural activities, similarly to general non-cultural activities, are helpful in providing distraction from cravings (Beck, Wright, Newman, & Liese, 1993). It is possible that cultural activities can provide further benefits over
and above general non-cultural activities. In other samples receiving substance abuse treatment it has been found that the two things they most wanted to gain from treatment were “strengthening of self-esteem” and “tranquillity” (Schneider, Kroemer-Olbrisch, Wedegartner, Cimander, & Wetterling, 2004). Previous research has linked engagement in cultural activities with enhanced self-esteem and feeling “grounded” (Kingsley et al., 2009), which can be conceptually related to tranquillity. Cultural activities which are aimed at enhancing self-esteem and tranquillity are likely to benefit Indigenous and non-Indigenous clients alike. Future research may examine the factors which impact on the degree to which individual clients benefit from cultural components of treatment, and in doing so assist treatment programs to identify clients who will benefit most from involvement in cultural aspects of treatment. Examination of the effects of cultural activities should not be restricted to Indigenous clients. However, we may expect that the benefits of cultural engagement may be greater for Indigenous clients due to the historical context of displacement and disempowerment which exists within Australia. For example, Indigenous individuals engaging in caring for Country activities have expressed feeling a sense of belonging enhanced via an inherent sense of obligation to their Country, as well as a reconnection with their ancestors (Kingsley et al., 2009).

There are some notable limitations to this research. Firstly, outcomes were only measured for clients who remained in treatment. Although there were no major differences between completers and non-completers on baseline measures, it is likely that the results will be biased towards a more positive outcome picture for completers. Secondly, participants were recruited from only one substance abuse service, therefore limiting the generalisability of the findings. A related issue is the relatively small sample size, which when combined with the need to use nonparametric analyses, reduces the overall power of the study. Finally, the measurement of the helpfulness of culturally relevant treatment components was limited to a single item. There is a need to develop more detailed multi-item measures of treatment components that capture both cultural and other (non-cultural) aspects of treatment. The Aboriginal Cultural Engagement Survey (ACES; Berry, Crowe, & Deane, 2012) may be used in future research to more directly measure engagement in cultural activities.
Despite these limitations, as far as we are aware this is the first study of psychosocial outcomes in an Indigenous specific substance abuse treatment program in Australia. The aim was to establish the capacity to conduct such research and explore some of the measurement issues in such research. An important finding was that the GEM appeared to be sensitive to change amongst those who remained in treatment. Further, preliminary data suggest there were indications that culturally relevant therapeutic activities were perceived as more helpful amongst those who identified themselves as Indigenous. This offers promise for future outcome research using these measures and which aims to better understand the role of culturally specific treatment components. The GEM shows promise as a measure that expands on empowerment constructs in Indigenous people, but there is a need to further assess its psychometric properties and utility in different contexts.

Acknowledgements

(1) This research was supported by a grant from the New South Wales Health Department and the Network of Alcohol and other Drug Agencies - Non government organisation mental health and drug and alcohol research grants program 2007.

(2) The authors acknowledge the hard work and contributions of the staff at Oolong House, as well as those who developed the GEM and shared their knowledge with us so generously, in particular Melissa Haswell.
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### Table 1

Kendall’s tau-b correlations between scores at baseline (N=103) on outcome measures

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<thead>
<tr>
<th>Measure</th>
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<td>1. Psychological Distress (K10)</td>
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<td>-.34**</td>
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<td>-.37**</td>
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<td>2. Refusal self-efficacy (DTCQ-8)</td>
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<td>.30**</td>
</tr>
<tr>
<td>3. Inner Peace (GEM)</td>
<td>-</td>
<td>-</td>
<td>.54**</td>
<td>.48**</td>
<td>.38**</td>
</tr>
<tr>
<td>4. Self-Capacity (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.43**</td>
<td>.40**</td>
</tr>
<tr>
<td>5. Healing &amp; Enabling Growth (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.49**</td>
</tr>
<tr>
<td>6. Connection and Purpose (GEM)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

** Correlation is significant at the p < .01 level
Table 2

Summary of results from Wilcoxon Signed Ranks tests comparing outcome scores at baseline and 8-weeks

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline</th>
<th>8-weeks</th>
<th>N</th>
<th>-Ties</th>
<th>Rank&lt;sup&gt;a&lt;/sup&gt;</th>
<th>T</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>K10&lt;sup&gt;b&lt;/sup&gt;</td>
<td>25.60</td>
<td>9.41</td>
<td>17.08</td>
<td>7.12</td>
<td>48</td>
<td>26.05</td>
<td>134</td>
<td>-4.66</td>
</tr>
<tr>
<td>DTCQ-8&lt;sup&gt;c&lt;/sup&gt;</td>
<td>62.20</td>
<td>30.63</td>
<td>85.74</td>
<td>21.54</td>
<td>41</td>
<td>21.92</td>
<td>72</td>
<td>-4.65</td>
</tr>
<tr>
<td>IP&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3.48</td>
<td>.92</td>
<td>4.29</td>
<td>.75</td>
<td>46</td>
<td>24.29</td>
<td>158</td>
<td>-4.18</td>
</tr>
<tr>
<td>SC&lt;sup&gt;e&lt;/sup&gt;</td>
<td>3.93</td>
<td>.79</td>
<td>4.53</td>
<td>.66</td>
<td>41</td>
<td>22.09</td>
<td>88</td>
<td>-4.46</td>
</tr>
<tr>
<td>HG&lt;sup&gt;f&lt;/sup&gt;</td>
<td>4.14</td>
<td>1.18</td>
<td>5.30</td>
<td>1.01</td>
<td>47</td>
<td>25.97</td>
<td>115</td>
<td>-4.75</td>
</tr>
<tr>
<td>CP&lt;sup&gt;g&lt;/sup&gt;</td>
<td>4.74</td>
<td>1.26</td>
<td>5.47</td>
<td>1.03</td>
<td>43</td>
<td>23.72</td>
<td>139.5</td>
<td>-4.03</td>
</tr>
</tbody>
</table>

Note. <sup>a</sup> = positive ranks where 8-weeks > baseline for DTCQ-8, IP, SC, HG, and CP
<sup>b</sup> = negative ranks where baseline > 8-weeks for K10
<sup>b</sup> K10 = Kessler 10-item Psychological Distress Scale
<sup>c</sup> DTCQ-8 = Drug Taking Confidence Questionnaire, eight-item version
<sup>d</sup> IP = Inner Peace
<sup>e</sup> SC = Self-Capacity
<sup>f</sup> HG = Healing and Enabling Growth
<sup>g</sup> CP = Connection and Purpose
Table 3
Summary of results from Wilcoxon Signed Ranks tests comparing outcome scores at 8-weeks and 16-weeks

<table>
<thead>
<tr>
<th>Measure</th>
<th>8-weeks</th>
<th>16-weeks</th>
<th>N - Ties</th>
<th>Mean</th>
<th>T</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Rank^a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K10^b</td>
<td>17.08</td>
<td>7.12</td>
<td>14.71</td>
<td>4.84</td>
<td>30</td>
<td>17.10</td>
<td>123</td>
</tr>
<tr>
<td>DTCQ-8^c</td>
<td>85.74</td>
<td>21.54</td>
<td>93.07</td>
<td>9.81</td>
<td>22</td>
<td>12.67</td>
<td>63</td>
</tr>
<tr>
<td>IP^d</td>
<td>4.29</td>
<td>.75</td>
<td>4.65</td>
<td>.41</td>
<td>24</td>
<td>13.53</td>
<td>29.50</td>
</tr>
<tr>
<td>SC^e</td>
<td>4.53</td>
<td>.66</td>
<td>4.71</td>
<td>.43</td>
<td>18</td>
<td>10.63</td>
<td>43.50</td>
</tr>
<tr>
<td>HG^f</td>
<td>5.30</td>
<td>1.01</td>
<td>5.69</td>
<td>.85</td>
<td>32</td>
<td>19.23</td>
<td>105</td>
</tr>
<tr>
<td>CP^g</td>
<td>5.47</td>
<td>1.03</td>
<td>5.63</td>
<td>.93</td>
<td>29</td>
<td>15.74</td>
<td>167.5</td>
</tr>
</tbody>
</table>

Note. ^a = positive ranks where 16-weeks > 8-weeks for DTCQ-8, IP, SC, HG, and CP

^a = negative ranks where 8-weeks > 16-weeks for K10

^b K10 = Kessler 10-item Psychological Distress Scale

^c DTCQ-8 = Drug Taking Confidence Questionnaire, eight-item version

^d IP = Inner Peace

^e SC = Self-Capacity

^f HG = Healing and Enabling Growth

^g CP = Connection and Purpose