MAORI IDENTIFICATION AND ALCOHOL BEHAVIOUR

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ABSTRACT

The impact of Maori identification on mental health and alcohol behaviour has been neglected in the psychological literature. This research attempted to investigate potential relationships between these variables and to examine drinking motivations and alcohol related opinion amongst Maori. It was initially hypothesised that strength of Maori identification would be associated with better mental health and well-being. Stronger Maori identification and better mental health were also expected to relate to lower average alcohol consumption and less frequent drinking. It was hypothesised that better mental health would be associated with greater social motivation, greater positive affect, and less negative affect after drinking. Heavier drinking was predicted to be directly related to coping and conformity motivations and inversely related to positive affect. In addition, it was anticipated that frequent drinkers would be internally motivated.

This sample contained 447 Maori aged 18 years and over. Participants were found by e-mailing Massey University students registered as Maori and by utilising a snowball technique. Respondents were required to complete demographic, Maori identification, mental health, alcohol behaviour, reasons for drinking and opinion measures either online or by mail. Non parametric methods were then used to analyse all data.

Results showed no significant relationships between Maori identification and mental health. Stronger Maori identification was significantly related to drinking less frequently but not with lower average consumption. Better mental health was found to be significantly related to lower consumption of alcohol, but not to drinking less frequently. Better mental health was also related to drinking for socially motivated reasons, increased positive emotions, and decreased negative emotions after drinking. Average consumption was not significantly related to coping and conformity motivations. Heavier consumption was related to less positive affect after drinking and more frequent drinking was related to internal motivation.

Limitations of this study included difficulties measuring these variables, a lack of comparative studies to provide reference, and a non representative Maori sample.

Recommendations for future research include studying an adolescent population, measuring smoking behaviour, and conducting a qualitative analysis. Further interventions and policies targeting cultural and societal norms will be needed for these patterns of drinking to change. These results suggest that relationships between Maori identification, mental health and alcohol behaviour are complex and worthy of further analysis.

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CHAPTER ONE

INTRODUCTION

Culture has always been difficult to define but is an important concept in the psychological field because it influences human behaviour (Carlson & Buskist, 1997). In essence, it helps to define one's place in the world. High rates of intermarriage, globalisation and international travel have meant once isolated cultures have been exposed to external influences that have altered long held traditions. Cultures are arguably more blended than they have ever been before and many individuals will identify with more than one culture.

One way of measuring cultural identification requires establishing the beliefs, knowledge and set of behaviours that are important within a culture and measuring the degree to which someone has those cultural values. The fluidity of culture has meant that cultural norms have been adapted to meet the unique aspects of a changing world. For Maori, the indigenous people of New Zealand, important cultural values may include connection with whanau (extended family), access to customary land, Maori language and tribal resources (Durie, 2001). Personal commitment and a desire to affiliate with Maori are also important. Durie (2001) believes that personal commitment alone is not sufficient if the Maori world is not easily accessible. In New Zealand today, the effects of urbanisation mean that access may indeed be difficult for many Maori.

It is probable that Maori who identify entirely with their Maori culture will differ to those who identify less strongly. A strong sense of cultural identification could be expected to offer strength, pride, support, and a sense of belonging. These qualities may protect against the development of mental health disorders. Research by Te Hoe Nuku Roa (1996) found that Maori who identified more strongly with their culture had better general health than those who did not. Durie (2001) asserts that cultural identification is an important factor in the mental health arena that helps promote good health and also aids in treatment and therapy.

A strong sense of identification may also have important impacts on alcohol behaviour. International studies on the impact of cultural identification on alcohol behaviour have had mixed results. Some have found cultural identification increasing the likelihood of abuse (James, Kim & Armijo, 2000). Others have found strong cultural identification reduces the risk of alcohol abuse (Whitbeck, Chen, Hoyt & Adams, 2004) whilst some have failed to find a significant relationship (Spicer, Novins, Mitchell & Beals, 2003). Closer to home, studies are limited, and have primarily looked at the benefits of strengthening cultural identification when treating alcohol abuse (Huriwai, Sellman, Sullivan & Potiki, 2000; Sellman, Huriwai, Ram, & Deering, 1997).

Relationships between mental health and alcohol behaviour are more decisive. Clear links between poor mental health and alcohol problems have been established (Baron, Silberman & D'Alonzo, 1998; Farrell et al., 2001; Gilman & Abraham, 2001; Graham & Schmidt, 1999; Grant et al., 2004; Koopman, Wanat, Whitsell, Westrup & Matano, 2003; Swendsen & Merikangas, 2000). Links between psychological well-being and lower levels of alcohol consumption have also been found (Epstein, Griffin & Botvin, 2002; Griffin, Botvin, & Scheier, 2002). This suggests that people who are heavier drinkers are more likely to have poor mental health.

Another important factor to consider, when addressing links between alcohol behaviour and mental health, are motivations. Drinking motivations are thought to determine when and where an individual drinks, how much they consume, and the consequences or affect of their drinking (Cooper, 1994). Understanding these motives will therefore provide a more thorough understanding of individual drinking behaviour. Similarly, people's attitude toward alcohol policy and other alcohol related matters may determine whether alcohol is viewed positively or negatively. These views would then influence drinking patterns.

This research attempts to examine the beneficial impacts that strong Maori identification could have on mental health and alcohol behaviour. In order to evaluate the inter-relationships between Maori identity, mental health and alcohol behaviour, it is necessary to consider the history of alcohol use in New Zealand, the prevalent drinking patterns in New Zealand today and differences between Maori and non-

Maori drinking patterns. The reasons why people choose to drink alcohol, the negative and beneficial consequences of drinking, and opinions on alcohol policy will be examined. An analysis of how demographic characteristics interact with Maori identification, mental health, alcohol behaviour, reasons for drinking and opinion will also be conducted.

CHAPTER TWO

LITERATURE REVIEW

2.1 History of Alcohol Use amongst Maori

Maori were initially introduced to alcohol in the early 1800s by European settlers, whalers and other immigrants (Stewart, 1997). Unlike most other nations, Maori did not have experience with any form of alcohol before this time (Hutt, 1999; Mancall, Robertson & Huriwai, 2000; Park, 1995). Some ethnographers have suggested the tutu berry may have been used by Maori for its intoxicating qualities, but this has largely been discounted (Mancall et al., 2000). Maori primarily used native plants for medicinal purposes and their beverage of choice was water (Hutt, 1999). One possible reason for this may have been that Maori used gourds to store water, which did not allow fermentation (Gluckman, 1976). Also, drinking vessels were not used by Maori, and water was consumed from their cupped hands which was not conducive to the consumption of alcohol (Hutt, 1999). Kava, commonly used in other Pacific Islands, could not be grown in New Zealand because the temperature was too low (Hutt, 1999).

The first registered brewery was opened in the Bay of Islands in 1831 (Gluckman, 1976). Frontier towns were first formed here and alcohol was brought by the whalers and landed to supply the settlers (Awatere, Casswell, Cullen, Gilmore, & Kupenga, 1984). Settlers had brought bottles and barrels with them and began developing alcoholic beverages from native plants (Hutt, 1999). The reactions of Maori to the introduction of alcohol were diverse. Numerous reports suggest that exposure was not welcomed, with Maori having an antipathy for alcohol, often referring to it as waipiro or stinking water and choosing not to consume it (Hutt, 1999; Mancall et al., 2000; Robertson, Huriwai, Potiki, Friend, & Durie, 2002). However, there was a lot of profit to be made from the liquor industry and settlers were no doubt happy to both introduce, and encourage its use, amongst Maori. Alcohol was used by settlers to purchase supplies from Maori traders and also as payment for Maori manual labour, which led to increased demand for alcohol amongst some Maori (Hutt, 1999; Saggers & Gray, 1998). Many Maori began to associate alcohol with European material

culture and position (Hutt, 1999). This phenomenon is similar to what occurred in the United States where alcohol came to be seen by the indigenous people as a sign of status, representing skills in trading and economic success (Frank, Moore, and Ames, 2000).

This pattern of exposure in the Bay of Islands soon spread to other regions, and alcohol use gradually increased in many Maori communities nationwide. By the mid 1800s alcohol use had become problematic in many areas, (Robertson et al., 2002; Te Puni Kokiri, 1995), with reports of public drunkenness, disorder, theft, and prostitution (Gluckman, 1976; Park, 1995). The first temperance society, which was also formed in the Bay of Islands in 1836, (Park, 1995) suggests some saw a need to reduce alcohol consumption as soon as it was introduced. However, the founding president of the temperance society reportedly had his own vineyard and made wine (Mancall et al., 2000), which brings into question the integrity of this society.

2.11 Legislation

In the late 1840s, social dislocation was beginning to have an effect on Maori as many left their villages to participate in the frontier economy, provide labour and take part in the lucrative export trade (Ward, 1974). Maori leaders began to demand greater control over law making and governance of their own people and Maori elders were expressing concern about the use of alcohol by Maori (Ward, 1974). They were rightfully concerned about the welfare of their people and wanted to have a say in how alcohol was sold and consumed. Governor Grey supported assimilation policies and would not grant Maori the right to self government (Mancall et al., 2000). Fearing an uprising, he passed an Arms Ordinance in 1845, preventing Maori from buying muskets (Hutt, 1999). This was soon followed by the Sale of Spirits Ordinance of 1847, which restricted Maori from purchasing, producing, or selling alcohol (Robertson et al., 2002; Te Puni Kokiri, 1995). Although Maori leaders had called for policing of alcohol, and did not necessarily object to its abolition, they did not support the ordinance, which clearly discriminated against them (Mancall et al., 2000; Te Puni Kokiri, 1995). The liquor act was widely defied and "grog" sellers continued to supply Maori (Ward, 1974). It could not be policed because New Zealand's terrain made many areas inaccessible and because local authorities were often heavily involved in the liquor trade (Ward, 1974). A loophole also existed

because Maori were permitted to drink alcohol for medicinal purposes (Gluckman, 1976).

European settlers were consuming vast amounts of alcohol, with early records from missionaries, historians and settlers revealing more problematic drinking amongst the colonists than amongst Maori. However, no such laws were passed restricting their use, and this discrimination was viewed by Maori as a direct affront to the Treaty of Waitangi (Mancall et al., 2000), which had been signed in 1842. Hutt (1999) emphasises the importance of viewing these laws from within the paternalistic environment in which they occurred. Maori were thought to be a dying race, and the contribution of alcohol to Maori mortality statistics, although comparatively small, was something colonists felt morally obliged to address (Mancall et al., 2000). They may have felt they were helping Maori by preventing them from purchasing alcohol, as it was widely assumed that Maori had a lessened ability to cope with this intoxicating substance (Mancall et al., 2000).

It is important to remember that, around this time, many Europeans were convinced of their superiority to Maori. William Fox provides a good example of this patronising attitude.

> He (the Maori) soon sees his inferiority....what to the colonists are the merest articles of everyday use – his watch, his plough, his axe, his pocket knife – all declare in a language he (Maori) can understand that it is a superior race which has come to share his country. (cited in Miller, 1958, p. 103)

The restriction of alcohol to indigenous people was not used solely with Maori, as similar laws had been enacted by colonialists amongst Native American Indians in the 18th century (Frank et al., 2000). This occurred despite the fact that Native Americans had simply modelled their drinking behaviour off cowboys and fur traders (Frank et al., 2000). It is probable that Maori also modelled their drinking behaviour off European settlers, who tended to drink frequently and heavily to ease boredom and depression (Mancall et al., 2000).

This inequitable legislation was partially repealed in 1910. The Licensing Amendment Act allowed Maori men in the South Island and Maori women married to

Pakeha men, the right to consume alcohol on licensed premises (Fleras, 1981). Laws restricting the drinking behaviour of North Island Maori and Maori women were not lifted until 1948 (Bramley, Broad, Harris, Reid & Jackson, 2003). Robertson et al., (2002) assert that laws passed by the Crown prohibiting Maori from drinking alcohol may have prevented Maori from developing constructive methods of dealing with alcohol and its negative consequences.

2.12 Alcohol and the Loss of Maori Land

Alcohol also played a role in the loss of Maori land. Te Puni Kokiri (1995), argue that alcohol was deliberately used as a tool to take possession of Maori land and to disrupt the fundamental social and cultural mores that underpinned Maori life. The Native Lands Acts passed in New Zealand in 1862 and 1865 meant communally owned land could be sold and owned by individuals (Cullen, 1984). European purchasers found individuals who wanted alcohol or goods, and would supply them on credit to create debt. Land would then be confiscated to pay for it (Sorrenson, 1956). According to Sorrenson (1956), Maori unwilling to sell would have to travel many miles to attend hearings at the Native Land Court, which largely served the interests of the colonists. The court was disorganised and claimants often had to wait for weeks to hear their case, which they typically lost. Separating Maori from their land disturbed long held traditions and caused enormous disruptions to all aspects of life, thus contributing to the over consumption of alcohol by some (Te Puni Kokiri, 1995).

2.2 Alcohol Behaviour

The most prevalent drug used in New Zealand is alcohol (Field & Caswell, 1999; Saggers & Gray, 1998). Studies suggest that approximately 85 to 90 percent of New Zealanders drink alcohol (Habgood, Casswell, Pledger, & Bhatta, 2001; Moewaka Barnes, McPherson and Bhatta, 2000). However, defining the drinking patterns of an entire nation is difficult. Drinking patterns vary enormously, both within cultures, and between individuals. Individual drinking behaviour is modelled by family, friends, culture, and the media and is also dependent on what patterns of drinking are reinforced (Heath, 1995). The physiological effects of alcohol also vary between individuals, and are affected by gender, weight, individual health, social surroundings,

attitude and personal expectations (Zinberg, 1984). The type of beverage consumed is also important as the volume of alcohol contained in each drink differs, with beer containing the lowest volume of alcohol, and spirits the highest.

Drinking behaviour is typically measured using self report questionnaires. This is not an ideal method of measurement because it lacks objectivity, and past research suggests people frequently underreport their own drinking (Zinberg, 1984). A survey by Fryer, Kalafatelis, McMillen & Palmer (2004) established that New Zealanders who reported drinking six drinks on their last drinking occasion actually consumed more like 10.1 standard drinks. Some survey respondents may deliberately under report the amount of alcohol they consume (Casswell, Huckle, & Pledger, 2002). Conversely, respondents may not remember how much alcohol they last consumed, or their idea of a standard measure may differ from that used by the researcher (Fryer et al., 2004).

When measuring alcohol behaviour, the initial factors considered are the amount of alcohol consumed and the frequency with which this consumption occurs. The different drinking behaviours these constructs measure (Casswell, Pledger, & Pratap, 2002) enable researchers to gauge which factor is more strongly related to problem drinking. This is useful and necessary when it comes to designing treatment and prevention programmes. The quantity of alcohol consumed on a typical occasion appears to be more problematic than the frequency with which one drinks (Alcohol Advisory Council [ALAC], 2004), as large volumes of alcohol ingested at once, place a great strain on the human body (Rehm et al., 1996). In other words, drinking seven glasses of alcohol in one sitting, once a week, is more harmful than drinking one glass every day. This style of drinking is known as binge drinking, which Raloff (2003) defines as consuming five or more glasses of alcohol in one day. The terms binge drinking, problem drinking, heavy drinking and hazardous drinking are often used interchangeably, as this type of drinking has been associated with numerous health and social problems (Miller et al., 2004).

2.21 Drinking Patterns in New Zealand

New Zealanders reportedly have a lenient or less conservative attitude to alcohol use than many other nations. Dr MacAvoy believes New Zealanders have an acceptance

of drunkenness and over consumption that is viewed as a normal part of the drinking culture (De Bonnaire, McMillen & Kalafatelis, 2004). Moewaka Barnes et al. (2003) and Habgood et al. (2001) both report liberal attitudes to intoxication in their national surveys, with half their respondents reporting that occasional drunkenness was acceptable practice. These liberal attitudes may be related to liberal practices, with fifty percent of New Zealanders being classified as binge drinkers in De Bonnaire et al.'s (2004) survey. This finding applied to both males and females. Park (1995) suggests that the prevalence of binge drinking in New Zealand may have been influenced by the six o'clock swill, which was supposed to be a temporary war measure but lasted from 1912 till 1967. This was aptly named, as during this time pubs and taverns closed at six each night, causing a rush to consume as much alcohol as possible between the time work finished and six o'clock closing.

2.22 Maori Drinking Patterns

It is frequently reported that Maori suffer enormously from many of the adverse effects of alcohol, including alcohol abuse, family and societal disruption, and physical and mental health effects (Durie, 1999; Hutt, 1999; Saggers & Gray 1998; Te Puni Kokiri, 1995). Research also suggests that binge drinking appears to be more common amongst Maori than non-Maori, with Maori drinking less frequently than non-Maori but consuming greater amounts when they do drink (De Bonnaire et al. 2004; Dacey, 1997). Moewaka Barnes et al. (2003) conducted a nationwide study of Maori drinking habits, surveying Maori aged between 13 and 65 years. Although 20 percent of Maori described themselves as non-drinkers (had not consumed alcohol in the past 12 months), those who did drink consumed most of their alcohol in heavier drinking occasions (eight plus drinks for men, six plus drinks for women). Bramley et al. (2003) examined five studies on New Zealand drinking patterns conducted since 1988. They found that, on average, non-Maori consumed around 40 percent less alcohol on a typical occasion than Maori. However, non-Maori drank approximately twice as frequently as Maori so the averaged daily amount of alcohol consumed by Maori and non-Maori was similar. Further studies report that regardless of age or gender, Maori are more likely than non-Maori to abstain from drinking alcohol altogether (Bramley et al., 2003; Durie, 1994).

2.3 Reasons for Drinking

It makes sense that people who consume alcohol on a regular basis do so because they enjoy it, but this explanation is too simplistic. In order to gain a more thorough understanding of drinking behaviour, it is necessary to consider the reasons why people choose to drink. Along with physiological aspects, there are psychological, motivational, personal and social factors that need to be considered. These factors all contribute to the cause and maintenance of individual drinking patterns.

2.31 Physiological Effects

Alcohol contains ethanol, a psychoactive agent that has various effects on the mind and body. Moderate to heavy consumption is known to suppress neuron activity in the brain, reducing inhibitions, inducing euphoria, and affecting motor co-ordination, and judgement (Carlson & Buskist, 1997). Alcohol acts as a depressant on the central nervous system and consumption affects psychomotor skills and complex co-ordination (Wilmore & Costill, 1994). It also incites feelings of relaxation and can increase sociability (Carlson & Buskist, 1997). However, long term, heavy alcohol use has been linked with many health disorders including, cirrhosis, pancreatitis, hypertension and stroke (Scuffham and Devlin, 1997). Increased risk of injury, cancer, and liver disease are also known to be detrimental effects (Pearson, 2004).

Perhaps the main reason that alcohol is regularly consumed by many people is because, the well known problems associated with alcohol use, do not affect the majority of the population. According to Heath (1995), only 10 percent of the drinking population experience alcohol related problems from their own drinking, which means 90 percent experience no such difficulties. However, this does not take into account the possibility that many people may be directly affected by others drinking (Moewaka Barnes et al, 2003). Although psychological literature tends to be weighted toward research that focuses on the negative health and social impacts of drinking, many people drink because of the beneficial impacts they get from alcohol. Demers (1996) research showed people are well informed about the negative effects of alcohol, but they usually have more positive thoughts in relation to their own drinking. Nystrom (1992), found 75-80 percent of Finnish tertiary students sampled had more positive than negative experiences from alcohol, and chose to drink because

of these positive experiences. In addition, the positive psychological and physiological impacts of alcohol are immediate, whereas many of the negative effects of alcohol on health are delayed. This may go some way in explaining why the health messages aimed at reducing consumption may be ineffectual (White & Moesenberg, 1989).

There is evidence to suggest that problems related to drinking alcohol are primarily experienced by heavy drinkers and not those who drink in moderation (Peele and Brodsky, 2000). Many drinkers may be classified as light to moderate drinkers. However, it is difficult to say how much alcohol can be consumed to belong to this category, and recommended levels will be dependent on age, gender, overall health and other factors. Recommended "safe limits" also differ between nations and in different studies. Some researchers have set moderate guidelines as one drink weekly, whilst others consider four drinks a day to be moderate consumption (Pearson, 2004). To remain within safe limits of drinking in New Zealand, ALAC (2004) stipulate no more than 14 standard drinks per week for women and no more than four drinks in one sitting. For men these levels are 21 standard drinks per week and no more than six on a single occasion. A standard drink is classified as 10 grams of alcohol and there are individual exceptions to these limits, such as drinking whilst pregnant. These guidelines are not provided to promote the beneficial effects of alcohol, but to promote safe limits and encourage people not to consume more than the amounts stipulated.

Drinking in moderation is not only viewed as pleasurable, but many consumers also believe it can have beneficial impacts on health. An Australian study examined public perception of perceived health benefits from moderate alcohol use (Hall, 1996). Nearly half of all respondents believed there were health benefits, namely cardiovascular and increased relaxation. Over 50 percent of Canadian respondents felt moderate drinking was beneficial to their health (Ogborne & Smart, 2001). Poikolainen and Vartiainen (1999) also found a positive correlation between moderate wine drinking and good self-rated health in their study. Habgood et al. (2001) found approximately one third of their New Zealand sample thought alcohol was good for their health.

Medical research has supported the relationship between moderate drinking and beneficial health. Essig (2002) reports that alcohol helps prevent the development of diabetes when used moderately and also reduces the risk of mortality. Klatsky (2003) found moderate alcohol use helps prevent ischemic strokes. The prognosis for people suffering from coronary heart disease is also said to improve if patients drink 1-2 glasses of alcohol a day (Sternberg, 2002; Wilson, 2003). Wine, in particular, appears to be beneficial when it comes to reducing the risk of heart attacks (Idoki, 2003).

Raloff (2003) agrees that moderate drinking appears to slow the progression of heart disease and some other chronic illnesses, but stipulates that these diseases affect middle aged people and therefore, the beneficial consequences of moderate drinking cannot be applied to those under 40. Chick (1999) states that whilst there may be possible health benefits from drinking in moderation, personality, socialisation and the inclusion of previous problem drinkers in the abstainer's category may be confounding results. Roberts, Brunner, and Marmot (1995), explored these confounds in an attempt to understand why moderate drinkers have lower rates of coronary heart disease (CHD). They found only weak evidence of confounding that did not explain the relationship between alcohol and CHD mortality.

2.32 Psychological Effects

Research has also indicated that there may be some psychological benefits from moderate drinking. Peele and Brodsky (2000) conducted an extensive literature review on moderate alcohol use and its beneficial psychological consequences for individuals and groups. Benefits associated with alcohol use included improved mood, reduced stress, and improved social functioning. These benefits were also found by Baum-Baicker (1985). In comparison to both heavy drinkers and abstainers, moderate drinkers showed increased expression of happiness, reduced tension and depression, and improvement in some areas of cognitive performance. Krause (1995) studied the relationship between alcohol, stress and depression in elderly subjects. He found that alcohol can help alleviate the impact of minor stress on depression, but may worsen the situation when the stressor is extreme.

2.33 Drinking Motivations

Much literature has attempted to understand the role of drinking motivations and how they affect alcohol behaviour. An examination of the literature uncovers two major themes; drinking for social purposes and drinking for emotional escape or relief from negative emotions (Baer, 2002; Cooper, 1994; Kairouz, Gliksman, Demers, & Adlaf, 2002; Labouvie & Bates, 2002). Cox and Klinger (1990) believe the key to understanding someone's motivation to drink lies in understanding their past experiences with alcohol. These experiences help each individual decide whether the positive consequences of drinking outweigh the benefits of not drinking, and therefore impact on individual consumption. Cooper (1994) believes psychological motives for drinking not only play a role in understanding why people drink but also affect which situations an individual may drink in, how much they consume, and the effect alcohol has on them. Marin, Posner, and Kinyon (1993) found abstainers expected negative results from the consumption of alcohol, whereas drinkers had positive expectations.

A study by Brown, Goldman, Inn, and Anderson (1980) identified six alcohol expectancies. They found respondents believed alcohol would enhance social and physical pleasure, improve sexual functioning and social skills, help with stress reduction and increase aggression. Brown, Goldman, and Christiansen (1985) also found people expected alcohol to alter feelings of power, tension levels, social and interpersonal skills. It is worth noting that, although an individual's initial expectations may be positive, negative affect such as feelings of depression and anxiety may still ensue (Carey & Correia, 1997).

Cooper (1994), replicated a study by Cox and Klinger (1988), and divided individual drinking motivations into positively and negatively reinforced categories that could be either externally or internally motivated (Figure 1). Negative reinforcement occurs when a response increases because it is followed by the extinction or reduction of a negative stimulus (Carlson & Buskist, 1997). Positive reinforcement occurs when a response increases because it is followed by a pleasant or positive stimulus (Carlson & Buskist, 1997). Internal motivation involves the direct chemical effects that alcohol has on emotion, whereas external factors are indirect effects, such as peer pressure and socialisation (Cox & Klinger, 1990).

	INTERNAL MOTIVATION	EXTERNAL MOTIVATION
POSITIVE REINFORCEMENT	Enhance mood or well-being	Obtain positive social rewards
NEGATIVE REINFORCEMENT	Reduce negative emotions, aid coping	Avoid social censure, to conform

Figure 1. *Drinking Motivation and Reinforcement Categories*
Note: Adapted from Cooper, 1994, Table 2., p. 5.

Cooper (1994) found that negatively reinforced motives (coping and conformity) were least likely to be endorsed by participants, perhaps because difficulty coping and peer pressure are not socially acceptable reasons for drinking and people are reluctant to admit them. These motives were also positively related to drinking problems. Positively reinforced motives (drinking to enhance positive affect or to gain social rewards) were not associated with problem drinking. External factors (conformity and social rewards) were less strongly related to frequency and heavy drinking than internal factors (tension reduction and mood enhancement). These findings applied to all participants, regardless of their demographic characteristics.

Cooper (1994) suggests that those who drink to cope with negative experiences or emotions may be more prone, comparatively, to developing drinking problems. Several researchers agree with this finding. For example, Brown (1985) and Cox and Klinger (1988) concluded that problem drinkers were more likely to expect tension reduction from alcohol, compared with non-problematic drinkers who expected social enhancement. Smith, Abbey, and Scott (1993) also found a correlation between drinking for coping reasons and frequent, heavy alcohol consumption. Carey and Correia (1997) found both negative and positive reinforcement contributed to the prediction and magnitude of drinking problems, but that negative reinforcement had a stronger relationship. Grossarth-Maticek, Eysenck, and Boyle (1995) studied the effects of drinking on health. Their findings suggest that death rates are higher amongst people who drink to cope with negative emotions, and experience major

stress, than people who drink for pleasure and are relatively stress free. These effects were found regardless of the amount of alcohol consumed.

In contrast, a positive correlation between drinking to cope and problem drinking was not established by Wild, Hinson, Cunningham and Bacchiochi (2001), in their study of young adults. They found that people, who could see the benefits of reducing alcohol consumption, were more likely to see the risks associated with drinking and to perceive themselves as potentially at risk. Young men who believed they would be giving up significant benefits by reducing their alcohol use were more likely to be heavy drinkers than those who typically drank in order to avoid social rejection. Among female participants, using alcohol to enhance mood or self-esteem was found to be positively related to problem drinking.

Hesselbrock, O'Brien, Weinstein, & Carter-Menendez (1987) found that heavier drinkers placed more importance on both social enhancement and relief of unpleasant feelings as reasons to drink. They were more likely to say they enjoyed the taste and less likely to consider price to be an obstacle to their drinking. Conversely, people who drank less were more likely to dislike both the taste and the effect of alcohol. Heavy drinkers were also found to have more favourable attitudes toward drinking. They rated their drinking episodes as significantly more satisfying, comforting and exciting than other drinkers and were more likely to drink in order to get drunk and to relax (O'Callaghan & Callan, 1992). Crundall (1995) and Turrisi (1999) found binge drinking was common behaviour amongst students, who believed it enhanced both socialisation and relaxation. Brown et al. (1985) found excessive drinkers had greater expectancies of social and physical pleasure, and tension reduction than non-problem drinkers, regardless of whether or not they had negative experiences in the past. Heavy drinkers expected their sexual behaviour to improve and were more likely to expect aggression to increase (Brown et al., 1980). They were also more likely to believe that moderate drinking had health benefits (Hall, 1996; Ogborne & Smart, 2001).

2.34 Social Modelling

Cronin (1997) contends that social environment is a better predictor of frequent and excessive alcohol use than personal expectations. Alcohol behaviour is learnt in the

same way opinions on other societal norms are learnt, through modelling, reinforcement, punishment and reward (Peele & Brodsky, 1996). Alcohol is commonly used in social and celebratory situations, both internationally and in New Zealand. Heath (1995) believes alcohol is utilised at social gatherings by many cultures, although the acceptable frequency and amount of alcohol consumed tends to vary within each culture. Alcohol is often consumed on special occasions and the quantity consumed may also be dictated by the occasion. For example, it is common practice to consume large quantities of alcohol on your 21st birthday in New Zealand. In countries like Spain and France, alcohol is considered part of a meal, and is commonly consumed with lunch. Abstinence is also usual practice in certain countries, amongst many religious groups, and for some individuals. Thus, alcohol is modelled and reinforced in different ways, depending on the cultural, religious, demographic and societal norms that are applicable to both individuals and groups.

Maori views on alcohol consumption are as broad as any other society or culture. Some Maori may argue that their people should abstain from alcohol because it was a destructive tool used in colonisation and has no traditional value (Te Puni Kokiri, 1995). Some believe alcohol leads to the destruction of indigenous cultures and contributes to social problems (Saggers & Gray, 1998). Others may see the problematic use of alcohol as an individual dilemma that should not be dealt with from within a cultural framework (Te Puni Kokiri, 1995). From this perspective, alcohol can be used and enjoyed by those who have not experienced alcohol related difficulties. In Australia, many Aborigines regard the consumption of alcohol as positive and refer to light hearted accounts of alcohol consumption in Aboriginal tales (Saggers & Gray, 1998). This is despite the fact that many Aborigines experience substance abuse problems. Thus, there is not one cultural view or motivation when it comes to understanding alcohol behaviour, and personal motivations are equally diverse.

2.35 Solitary Consumption

Although the consumption of alcohol is encouraged in social situations, drinking alone is often seen in a different light. For Maori, drinking in groups involves social contact and allows for the sharing of collective experience (Durie, 2001). Drinking alone does not offer the same experience. A survey of Pacific Island communities in

New Zealand found respondents viewed drinking alone as problematic. A person could drink as much as they liked as long as they behaved appropriately and drank in a group (ALAC, 1997). Negative opinion toward solitary drinking is commonly found, perhaps because people believe it is unsociable, and think drinking should be a social activity. Cooper (1994) found drinking alone was associated with drinking to deal with negative affect and problem drinking. Cooper, Russell, Skinner, and Windle (1992) found that those who drink for enhancement and social motives are more likely to drink in convivial social settings, while those who drink to cope are more likely to drink alone and less likely to affiliate with others. Mohr et al. (2001) found participants were more likely to drink alone on days when they had experienced personal difficulties, and were more likely to drink in groups or social situations on days when they had more positive interpersonal experiences.

2.4 Alcohol Policy

Governments are responsible for educating the public about the health hazards associated with alcohol and for passing laws that control availability, price and access (Evans and Roche, 2001). This includes control over alcohol tax, licensed premises opening hours, legal age limits for purchase and consumption, alcohol sales in grocery stores, alcohol advertising, health promotion and education and many other issues. Governments are obliged to encourage sensible and safe drinking practices amongst the public, and government policy tends to focus on problems associated with binge drinking and intoxication, such as drinking and driving (Rehm & Gmel, 1999).

Alcohol policy is complex because of the many pleasurable effects alcohol can incite and because harmful consequences are primarily confined to over consumption (Stewart, 1997). Policy is also fiercely debated because of the widespread effects it has on public drinking practices. Any debate inevitably involves the hospitality industry and others with a financial interest in the sale and promotion of alcohol (Casswell, 1997). The alcohol industry want moderate drinking to be promoted as safe and beneficial, and to limit policy initiatives to targeting problem drinkers, rather than all drinkers (Casswell, 1994).

Health advocates, including the Alcohol Advisory Council of New Zealand [ALAC], want to encourage moderation and reduce alcohol related harm amongst all drinkers. ALAC is a government agency that was formed in 1976, and has been charged with the task of promoting responsible alcohol use (ALAC, 2004). According to Hutt and Howden-Chapman (1998), New Zealand has adopted a basic stance of harm minimisation rather than prevention, believing alcohol related problems only affect a small part of the population.

2.41 How Policy Affects Drinking Practices

National consumption levels are affected by political and economic policies (Durie, 2001). Tax policy has contributed to a decline in overall drinking in New Zealand in the past two decades (Alcohol and Public Health Research Unit, 2002), although alcohol is arguably more accessible than it has ever been. In 1999, the minimum legal age for buying alcohol changed from 20 to 18, pubs and off-licences were permitted to trade on Sundays, and supermarkets began to sell beer as well as wine (Hill, 2000). Before this law was passed, the sale of wine in grocery stores had been trialled. Nationwide wine sales increased dramatically and were still elevated several months after the legislation had been enacted, whilst beer sales remained the same, and a large decrease in the sale of spirits occurred (Zhang & Casswell, 1999). This provides an indication of the impact alcohol policy can have. Initiatives such as compulsory breath testing have also influenced alcohol behaviour in New Zealand. When the government decided to crack down on drunk driving, increasing numbers of people decided to drink at home, rather than on licensed premises (Te Puni Kokiri, 1995).

2.42 Attitudes Toward Alcohol Related Policy

Hemstrom (2002) conducted a study in six European countries and found that high consumers of alcohol did not support government control over the amount of alcohol people drink, whilst low consumers were supportive. In comparative studies conducted in Canada and the United States, support for policy measures was found to be weakest for policy that restricted physical (opening hours), demographic (age constraints), or economic (taxes, price increases) access (Giesbrecht & Greenfield, 1999). Support was highest for policy that provided education, health promotion, and intervention. These findings were not affected by individual consumption levels. However, policies focused on restricting access were supported most by abstainers

and least by frequent drinkers. Women were generally more supportive of policy interventions than men, and older adults were more supportive than younger adults.

2.43 Teenage Drinking

New Zealanders' reported liberal attitudes to intoxication do not seem to extend to teenage drinking, and policy tends to reflect this. Young people are often the focus of government attention, perhaps because they are considered more vulnerable to the negative affects of alcohol or because they are more open to alcohol education (ALAC, 2002). Much public debate surrounds underage drinking, particularly in relation to the legal age of purchase. Whilst it is common for New Zealand teenagers to drink alcohol, teenage drunkenness and the associated effects such as physical and sexual assault, crime, and drunk driving are common areas of public concern (ALAC, 2002). To reduce these problems, there has been some emphasis on promoting controlled drinking environments (Stewart, 1997). The belief that 18 year olds would be safer drinking on licensed premises, despite evidence to the contrary, may have led to lowering the legal drinking age from 20 to 18 years in New Zealand (Hill, 2000).

2.44 Advertising

Alcohol advertising standards come under a voluntary code of practice established by the Advertising Standards Authority. According to Stewart (1997), although alcohol advertising is still allowed on television, albeit with specific time slot restrictions, it is an issue that is frequently debated in New Zealand society. Since 1992, alcohol brand advertising is permitted on television after nine at night and free broadcasting time is allocated to health promotion messages (Alcohol and Public Health Research Unit, 2002).

The relationship between alcohol advertising and alcohol consumption is a highly contentious issue (Casswell & Zhang, 1998). Unger, Schuster, Zogg, Dent, and Stacy (2003), found an association between liking alcohol advertisements and a greater risk of susceptibility to lifetime alcohol use and lifetime drunkenness. Casswell, Pledger, and Pratap (2002), found people who responded most positively to alcohol advertising at age 18, were more likely to be heavier drinkers at age 21. This finding was supported by Casswell and Zhang (1998) who found males in particular were more likely to enjoy the advertisements and to consume large amounts of alcohol. Perhaps

this is because many of the images used to sell alcohol, particularly beer, are male oriented, focusing on the hard working, hard playing, hard drinking man (Park, 1995).

Conversely, a study by ALAC (1998) on changing alcohol behaviour amongst Maori through advertising, found advertisements had little perceived impact on behaviour. Respondents rated whanau, peer pressure, upbringing, social circle, brand preference, availability, price and possible penalties for drunk driving as being more important influences on drinking behaviour. This study included health promotion ads, such as those deterring drink driving or promoting reasons for abstaining. This suggests that alcohol consumption is not easily modified by using educational campaigns (Casswell & Zhang, 1998).

2.5 Demographics

Casswell, Zhang and Wyllie (1993) stress that alcohol related problems are primarily contributed to by the amount of alcohol consumed, rather than the socio-demographic variables measured. However, Muthen and Muthen's (2000) analysis of longitudinal data in the United States found gender, ethnicity, and education had different effects at different ages on the development of heavy drinking and alcohol-related problems. This suggests demographics do impact on alcohol consumption in significant ways and are an important factor in understanding alcohol behaviour.

2.51 Age

Baer (2002) argues that heavy drinking is common behaviour in adolescents but tends to dissipate as adolescents approach young adulthood. Literature tends to suggest that people's drinking behaviour changes in their early to mid 20's, with the majority of people beginning to drink more frequently, but consuming less per occasion. Casswell, Pledger and Pratap (2002) established that individual consumption peaked at age 21 but regularity continued to increase, at least until aged 26. These findings were supported by Muthen and Muthen (2000). Leigh and Stacy (2004) found that expectancies also change as people age and gain more experience with alcohol. They found, participants under 35 years of age tended to monitor their drinking around positive experiences, whereas people over 35 tended to use negative expectancy.

Younger people also face an increased risk of developing alcohol and drug use disorders than older age groups (Teesson, Hall, Lynskey, & Degenhardt, 2000). Older people are more likely to be abstinent than younger people (Habgood et al., 2001).

2.52 Gender

Numerous gender differences have been established in alcohol behaviour studies. Regardless of age, men generally drink more alcohol, more frequently than women (Casswell, Pledger, and Hooper, 2002; Labouvie and Bates, 2002; Moewaka Barnes et al., 2003; Nystrom, 1992). York, Welte & Hirsch (2003) also found that women were likely to start drinking at a later age than men and were more likely to abstain from drinking altogether. Females are less likely to be heavy or pathological drinkers than men (Dawson, Grant, Chou & Pickering, 1995; Teesson et al., 2000). Beverage preferences also seem to differ with women generally drinking more wine, whilst men drink more beer (Park, 1995). Drinking motivations may also vary. Baer (2002) found that drinking to deal with stress and relieve negative affect was more common among females. Kairouz et al. (2002) did not find gender differences in numbers drinking to alleviate negative states, but found more men drink to enhance their mood and to relax.

2.53 Marital Status

Marital status also appears to have an impact on drinking behaviour. Dore (2002) found that young women, women who have never married, and women who are divorced or separated are more likely to drink alcohol and to have drinking problems, than older, married, or widowed women. Women in a de-facto relationship were found to be at particular risk of developing a drinking problem (Dore, 2002). Labouvie and Bates (2002) also found lower alcohol use amongst parents and married couples compared with individuals who were divorced, childless, or in de-facto relationships. According to Camacho, Kaplan and Cohen (1987) abstainers were more likely to be married than low, moderate or heavy drinkers.

2.54 Urbanisation

The urbanisation of Maori has been an important demographic shift in the last century. According to the Ministry of Health (1997), less than 30 percent of Maori lived in urban areas in the years following WWII. However by 1986, over 80 percent of Maori had settled in urban areas. For many this has involved leaving the support of their wider whanau, hapu (subtribe) and iwi (tribe). These form the basis of Maori society, and urbanisation has meant many Maori may now have little involvement with their iwi (Baxter, 1998). Rural life however, does not offer the same economic, educational or employment opportunities found in urban areas. Maani (2004) found income was significantly associated with locality, with Maori living in rural areas having lower income levels than all other ethnic groups. However, urban lifestyles can bring added pressure and financial strain (Clarke & Jensen, 1997) and the lack of whanau living nearby to offer support and assistance, may contribute to these stressors. Moewaka Barnes et al. (2003) found Maori drinkers in small towns and rural areas drank less alcohol on average than drinkers in large cities.

2.55 Socio-Economic Factors

Educational level, income and employment are all measures of socio-economic status. The unemployed are more likely to experience stress, to be less educated, and to smoke and drink, than those with secure jobs (Saggers & Gray, 1998). There is also some indication that larger quantities of alcohol are consumed, and more problems are experienced by those on lower income levels (Heiden, 1996). Lack of educational achievement was also found to be predictive of heavier and more frequent drinking (Casswell, Pledger & Hooper, 2002; Casswell, Pledger & Pratap, 2002; Muthen & Muthen, 2000). Saggers and Gray (1998) state that the excessive use of alcohol in some communities can be attributed to boredom, a lack of recreational facilities, and an attempt to deal with socio-economic factors and the accompanying stressors. These include poor living conditions, crime and trauma. For Maori, the effects of colonisation, unemployment, low paid employment, unsatisfying jobs, poverty, and the experience of racial discrimination, are also contributing factors (Te Puni Kokiri, 1995).

It is commonly assumed that a good education will lead to a skilled occupation and higher income, whilst decreasing the likelihood of being unemployed (Maani, 2004).

Many Maori face socio-economic deprivation, which correlates with hazardous drinking patterns (Howden-Chapman & Tobias, 2000). In general, Maori are also less likely to have formal qualifications, to be in skilled employment, or to earn as much as non-Maori (Maani, 2004). However, many Maori are also highly educated, have skilled careers and earn high incomes. This disparity leads to difficulties defining which aspects of alcohol behaviour are related to culture, and which are related to socio-economic position. Maani (2004) found the income gap within ethnic groups was much greater than the income gap across ethnic groups, when controlling for educational attainment. Baxter (1998) asserts that it is easy to mistake socio-economic differences with cultural factors and vice versa.

Casswell, Pledger and Hooper (2002) found high income earners drank more regularly than those on lower incomes. However, quantity of alcohol consumed was associated with educational achievement, with respondents who were less well educated, regardless of age, drinking significantly more. This suggests the dynamics of quantity and frequency and how they relate to socio-economic status appear to be different. This makes sense when viewed from an economic point of view as people on lower incomes are unlikely to have the financial means to drink regularly, should they choose to do so. Bramley et al. (2003), argue that policy development has not thus far addressed the socio-economic deprivation that marginalises Maori and exposes them to an environment where problem drinking is more prevalent.

2.6 Cultural Identity

In order to establish how culture affects alcohol behaviour, it is necessary to establish what culture is. Race, nationality and ethnicity are not similar constructs, but represent three distinct methods of identifying individuals. According to Stevenson (in press) race refers to a person's physical characteristics, such as skin colour or facial features, and nationality refers to one's place of birth. Ethnicity groups people by nationality, heritage, culture and language. According to Nichter (1998), ethnicity is a term of self-identification that is situational, context dependent and affected by one's lifestyle. Ethnicity is also dependent on political and social surroundings (Zelinsky, 2001). Alternatively, ethnicity can be a label imposed on others (Thomas,

1986). This type of categorisation groups' people without their consent, ignores differences that may exist, and can contribute to ambiguous or unfavourable stereotypes (Nichter, 1998). The importance of allowing people to choose their own identity rather than have it chosen for them is also ignored, for example, colonial constructs used to classify Maori (Robson & Reid, 2001). None of these constructs offer a cultural classification that is useful from a psychological point of view.

2.61 Defining Culture

Culture is described as "....an all encompassing associational field in which ethnicity is experienced" (Nichter, 1998, p. 140). Cultural identity considers the degree to which someone identifies with their culture, and is therefore a more accurate method of classification (Stevenson, in press). It also encompasses the extent to which someone demonstrates the common values of their culture (Matsumoto, 2000). It creates a link between different aspects of culture, such as ways of thinking and behaving, collective knowledge, values and attitudes (Baxter, 1998). Culture describes a large category of differences between human groups and includes behaviour that is both learnt and inherited (Lonner & Malpass, 1994). Culture includes the way people respond to their environment and community (Nichter, 1998). It also entails ideals, values and assumptions about life that are shared, guide specific behaviours, and are maintained between generations with oral and written literature (Brislin, 1993). Cultural identity can be evaluated both externally and internally (Isajiw, 1990). External aspects of identity are the observable aspects, such as language, participation in cultural events and compliance with traditional aspects of that culture. Internal aspects are not observable and may include morals, values, emotional attachment to one's culture, and cultural knowledge of the past.

According to Oetting and Donnermeyer (1998), most definitions of culture concur on three points. Firstly, culture embodies principles, information, and techniques for interacting with the social and physical environment. Secondly, the permanence of cultures exists because aspects of culture are transferred intact, from one generation to the next. Finally, cultures are not static. They continue to progress and adapt to physical, social and spiritual changes in the world. Culture includes familiarity and preference for a particular way of life and involves learnt patterns of behaviour (Thomas, 1986).

However, defining culture is ambiguous and problematic. This is because it is difficult to define the practices, behaviours or material aspects that make up a culture; significant aspects of culture, such as beliefs, customs and language, do not necessarily distinguish between different cultures or groups; and the term culture can not account for cultural change over time, or issues such as biculturalism (Thomas, 1986). It is also worth noting that issues of diversity, as well as commonality, exist within cultures (Baxter, 1998). For these reasons, Thomas (1986) believes it is impossible to create a test that can accurately measure the multiple qualities that demonstrate cultural knowledge and competence, and define cultural identity.

2.62 Maori Identity

Maori identity is likewise, difficult to define. Maori, like other cultures, do not have the same physical or personal characteristics, and the meaning of being Maori has changed with time (Durie, 2001). Many Maori in New Zealand today were not brought up in a traditional environment (Huriwai, Robertson, & Armstrong, 2001), and may not be actively involved with their hapu, iwi, or marae. However, they do not see themselves as less Maori than those who have (ALAC, 1998). Some may acknowledge Maori ancestry but choose not to identify as Maori, whilst others will identify in some situations but not in others (Robson & Reid, 2001). Knowledge of tribal affiliation may not equate with understanding and acceptance of cultural norms, beliefs and practices (Huriwai et al., 2001).

Maori do not all share the same opinions, beliefs, and behaviours. Huriwai et al. (2001) believe it is risky to assume Maori must acquire commonly held cultural values, if they do not already possess them. This is because the unique aspects of the individual are then ignored and cultural stereotyping may ensue. Measuring strength of enculturation can also be problematic (Smith, 1999). Enculturation is described by Zimmerman et al. (1994) as the extent of involvement, understanding and identification an individual has with their culture. Smith (1999) asserts that this can lead to trivialising the identity of Maori who are urban dwelling, do not strongly affiliate with their iwi or hapu, or have less Maori blood (Smith, 1999). However, to understand the important relationships that exist between culture and behaviour (Matsumoto, 2001), it is necessary to try and find a way to measure cultural affiliation.

2.63 Maori Identity and Mental Health

Psychological well-being is found outside the body and mind, as well as within, and is affected by personal encounters, developmental experiences, societal values, stress, genetics, culture, standard of living, physical health, and political influence (Ministry of Health, 1997). Psychological well-being is influenced by families, communities, jobs, decent homes, reliable transport, policies for health, equity and fairness, access to goods and services, safety and security (Durie, 2001). Loss of land and language has contributed to the current disparity in health between Maori and non-Maori (Durie, 1994). Maori believe that land, language and whanau are intimately connected with health and well-being, and from this viewpoint, both urbanisation and colonisation have had enormous impacts on Maori self identity and health (Baxter, 1998). This perspective is commonly found amongst indigenous cultures. Self identity, physical, emotional and spiritual connections with the community, family and land, are believed to be integral to obtaining health and well-being amongst Native American communities (Mohatt et al., 2004).

There has been some argument that bicultural competence leads to better mental health, because of lower rates of stress experienced from assimilation into a social group (Byron, 1996). Bicultural competence is described by LaFromboise (1982) and LaFromboise and Rowe (1983) as feeling relaxed and competent in both the predominant culture in which one lives, and the culture in which one is raised. For Maori, this would entail feeling comfortable and relaxed amongst Maori and non-Maori, in Maori based settings like the marae, and also in mainstream environments. Durie (1999) found Maori at risk for mental disorders did not affiliate with either Maori or mainstream institutions, and were not closely linked to family networks or cultural resources.

Durie (1999) thinks Maori mental health can be improved by developing a secure self identity. He believes accessing the social, cultural and economic resources of the Maori world, will lessen feelings of estrangement, lead to an increased sense of belonging, and ultimately improve mental health. This can be achieved through learning the language, having access to customary land and connecting with whanau. Knowledge of iwi affiliations and ancestry is not thought to be sufficient, as Maori who do not have access to whanau and other important aspects of Maori culture, will

not feel comfortable in a Maori environment (Durie, 2001). In other words, access to culture and heritage and the opportunity for cultural expression are an integral part of cultural identity.

There is some evidence to support the positive relationship between cultural identity and improved health amongst Maori. Thomas (1986) found Maori children with knowledge of Maori culture and language achieved better academically, and had higher self esteem, than Maori children without cultural knowledge. A decade long study of Maori families conducted by Te Hoe Nuku Roa (1996), found health, well-being and education standards were worst where access to land, language and other Maori resources were least available. Health was best and identity most secure where resources were more plentiful, with a supportive extended family considered especially important for mental health. Maori identity was described as secure, positive, notional or compromised, depending on the level of knowledge and access to Maori resources (Durie, 2001).

2.64 Cultural Identity and Alcohol Use

Robertson et al. (2002) believe there may be correlations between an insecure Maori identity and substance abuse. Risk factors for alcohol misuse amongst Maori include deculturation, loss of self determination, socio-economic disadvantage, predisposition, and psychological problems like depression (Durie, 2001). Neff and Hoppe (1993) measured the affects of acculturation (the extent to which someone takes on the values of a new culture) on depression in a Hispanic American sample. They found that both highly acculturated individuals, and those with strong traditional insulation, had lower rates of depression. However, a similar study on alcohol behaviour found both quantity and frequency of alcohol consumption was somewhat higher amongst the least acculturated males and moderately acculturated females (Neff and Hoppe, 1992). Studies trying to establish links between cultural identity and alcohol use amongst Maori are limited. Huriwai et al. (2000) found Maori being treated for alcohol and drug problems identified support from iwi and pride in their cultural heritage and identity as integral to the recovery process. These findings were supported by Sellman et al. (1997). Culturally relevant alcohol services for Native Americans have also been recognised as integral to the recovery process. There is a

recognised need to involve community leaders, utilise public resources, provide empowerment, and get rid of negative stereotypes that exist (May and Moran, 1995).

Numerous studies examining the effects of culture on alcohol behaviour have been conducted with Native American populations, but the results have been contradictory. Spicer et al. (2003), studied alcohol use amongst Native American adolescents. Although some variance in quantity and frequency of alcohol use could be attributed to cultural differences, this finding was not significant. Whitbeck et al. (2004) found that greater cultural identification was negatively related to alcohol abuse. Although this suggests enculturation may act as a preventative against alcohol abuse, the authors found that, people with stronger cultural identification also had higher historical loss, which was positively associated with alcohol abuse. James et al. (2000) found that high levels of cultural identification amongst adolescents, was associated with heavy alcohol and drug use.

Byron (1996) studied the interrelationships of depression, cultural identification and alcohol use in urban dwelling Native Americans. Participants were divided into four categories, bicultural, traditional, assimilated and marginal. The author hypothesised that Native Americans who were bicultural, would have better mental health and fewer alcohol problems than other groups because bicultural experience would lessen the negative effects of acculturation. Those classified as traditional, would have fewer problems than either assimilated or marginal groups. The initial hypothesis about mental health was supported, with respondents classified as bicultural having better mental health than all other groups. However, those classified as assimilated had better mental health than the traditional group and no relationship was found between alcohol use and cultural identification. In this study, the sample size was relatively small and contained a large number of recovering alcoholics, and the traditional category referred to Native Americans living on reservations. This makes comparison with a Maori sample difficult.

Oetting et al. (1998) believe the relationship between cultural identification and alcohol use is complicated by individual differences in strength of identification, the presence of sub-cultures, contextual variation in substance use norms, and the acquirement of cultural and alcohol norms from different primary sources. Beauvais

(1998) believes the complexities of cultural identification and the difficulties inherent in measuring this paradigm have meant that, although it is clear culture has important impacts on behaviour, a conclusive link between alcohol use and cultural identification has not been established.

2.7 Mental Health and Alcohol Behaviour

The relationship between alcohol consumption and mental health has been well documented, with literature generally concentrated on correlations between problem drinking and poor mental health. Countless research has established significant links between alcohol abuse or dependency and measures of distress, such as depression and anxiety. High co-morbidity exists between alcohol dependence and major depression, and both disorders are commonly found in the general population (Swendsen and Merikangas, 2000). Individuals with either disorder have been shown to face a significant risk of developing the other disorder, within a one year period (Gilman & Abraham, 2001). According to Swendsen and Merikangas (2000), this association is neither causal, nor etiological, but involves a combination of these and other co-morbidity factors. Binge drinking has also been correlated with anxiety and depression (Baron et al., 1998).

Farrell et al. (2001) also linked substance abuse with other psychiatric disorders, finding alcohol dependent people were more than twice as likely to have a psychiatric problem, than people who were not dependent on alcohol. Wilsnack, Wilsnack, Kristjanson, Vogeltanz-Holm, and Windle (2004) found a greater risk of suicide amongst women abusing alcohol. Grant et al. (2004) found significant positive relationships between alcohol use disorders and mood and anxiety disorders. Koopman et al. (2003) measured general distress and well-being, in a study examining alcohol use in a highly educated workforce. They established that mental health and well-being was worst amongst respondents classified as harmful drinkers. Women with advanced degrees had better mental health than less educated women, but mental health was worse amongst men with advanced degrees compared to men without. Graham and Schmidt (1999) studied people over 65 years and found poorer psychological well-being, especially depression, was associated with heavier drinking.

Research has also looked at the relationship between psychological well-being and alcohol use. A study of primarily minority youth by Epstein et al.(2002) found a correlation between psychological well-being, personal skills like self efficacy, and drinking. Individuals with better personal skills showed increased well-being and lower levels of alcohol consumption. A similar study that included measures of distress, found psychological well-being was associated with decreased substance use, but psychological distress did not predict future use (Griffin, et al., 2002). Green, Freeborn and Polen (2001) found women with better psychological health drank less alcohol than their female counterparts, but the same finding did not apply to males.

In some studies a U-shaped relationship between alcohol consumption and mental health has been found. Degenhardt, Hall and Lynskey (2001) found rates of affective and anxiety disorders were higher amongst abstainers than drinkers, but highest amongst individuals with alcohol dependence. Caldwell et al. (2002) also found increased levels of depression and anxiety in both non-drinkers and hazardous drinkers amongst males, but only in hazardous drinkers amongst females. Alati et al. (2004) found non-drinkers and heavy drinkers were both more likely to experience depression and anxiety disorders than moderate drinkers, but this finding also applied only to men. Women showed increased depression and anxiety rates as alcohol consumption increased. In contrast, Novak, Burgess, Clark, Zvolensky and Brown (2003) found anxiety sensitivity was not related to alcohol consumption. Golding, Burnam, Wells and Benjamin (1993) could not find significant relationships between alcohol behaviour and depression, even when cultural characteristics and demographic factors were controlled. Eggleston, Woolaway and Schmidt (2004) found social anxiety was significantly related to lower rates of drinking.

2.8 Summary

2.81 Rationale for the Study

The importance of including cultural factors in alcohol treatment and education services involving Maori has been established (Huriwai et al., 2000; Sellman et al., 1997). Alcohol prevalence rates amongst Maori have also been well documented (Robertson, et al., 2002). Moewaka Barnes, et al. (2003) conducted a national survey on Maori drinking patterns and attitudes to alcohol related issues. Similar studies

have been carried out by De Bonnier et al. (2004), Dacey (1995), and Habgood et al. (2001). However, none of these studies have addressed Maori identification. Numerous studies examining the effects of culture on alcohol behaviour have been conducted on Native American populations. The majority of this research is focused on the affects of acculturation and assimilation on alcohol abuse and dependence (Beauvais, 1998; James et al., 2000; Oetting et al., 1998).

Research on strength of Maori identification and mental health is also scarce. A study conducted overseas found some evidence that ethnic identification is positively related to measures of psychological well-being, and negatively related to measures of distress (Roberts et al., 1999). However, this study was primarily concerned with comparing different ethnic identities, rather than establishing differences within one culture. Durie (1999) has stressed the importance of strengthening Maori identification in improving mental health amongst Maori. Te Hoe Nuku Roa (1996) has provided some evidence of this, but once again there is little research in New Zealand on this topic, and it is necessary to look overseas to find relevant literature.

Research on alcohol behaviour is generally focused on the relationship between alcohol abuse and poor mental health (Farrell et al., 2001; Gilman & Abraham, 2001; Grant et al., 2004; Koopman et al., 2003; Swendsen and Merikangas, 2000). There have been some reports on the physiological, psychological and social benefits of moderate drinking (Essig, 2002; Klatsy, 2003; Peele & Brodsky, 2000), although these findings remain contentious amongst alcohol researchers (Chick, 1999). Research on drinking motivations and affect is also abundant, but is largely concentrated on college populations (Baer, 2002). Opinion on alcohol related issues amongst Maori has been studied (Dacey, 1997; De Bonnier et al., 2004; Moewaka Barnes et al., 2003) however further data in this area would be valuable.

To summarise, there is no current research that analyses the relationships between alcohol opinion, motivation and affect amongst Maori. Research investigating the effects of Maori identification on mental health and alcohol behaviour is also non-existent. Any research in this area would therefore contribute to the literature.

The purposes of the present study were **(1)** to examine the behaviour, motivations, feelings and opinions associated with alcohol consumption within a large sample of Maori in New Zealand, **(2)** to compare appropriate data with extant findings from other relevant studies, and **(3)** to test the following hypotheses about relationships among Maori identification, mental health, and motivations and affects associated with drinking:

2.82 Hypotheses

Hypothesis One

Maori identification will be related directly to mental health, such that stronger identification will be associated with better mental health and well-being. Te Hoe Nuku Roa's (1996) study suggests that health and well-being were better when identity was most secure.

Hypothesis Two

Maori identification and mental health will be related inversely to alcohol behaviours, such that stronger cultural identification and better mental health will be associated with consuming less alcohol and drinking less frequently.

It has been suggested that links exist between an insecure Maori identity and substance abuse (Durie, 2001; Robertson et al., 2002). Positive relationships have also been identified between stronger cultural identification and decreased alcohol use (Whitbeck et al., 2004). Correlations between poor mental health and heavy alcohol use (Koopman et al, 2003) and better mental health and lower alcohol consumption (Epstein et al., 2002) have also been found.

Hypothesis Three

3a) Mental health will be related directly to socially motivated drinking and to positive affect, and inversely related to negative affect. Better mental health will be associated directly with drinking to have fun and to improve sociability. It will also be associated with positive feelings of confidence, happiness, relaxation, attractiveness and sexual arousal after drinking and inversely associated with negative emotions, such as anger, aggressiveness and unhappiness.

The relationship between poor mental health and heavy, problematic drinking is well established (Caldwell et al., 2002; Swendsen and Merikangas, 2000). Increased well-being and mental health have also been linked with lower levels of alcohol consumption (Epstein, Griffin & Botvin, 2002) and greater positive affect after drinking (Baum-Baicker, 1985). Increased positive affect has also been found amongst people who drink for social reasons (Crundall, 1995; Turrisi, 1999). People with worse mental health may be more likely to drink to cope and to experience negative affect from drinking (Cooper, 1994).

3b) Heavy alcohol consumption will be directly related to coping and conformity motivations and inversely related to positive affect. Frequency of alcohol consumption will be related directly to internal physiological motivations, taste and tension reduction.

Drinking for social purposes and drinking for emotional escape or relief from negative emotions have been recognised as two distinct motivational themes (Baer, 2002; Cooper, 1994; Kairouz et al., 2002; Labouvie & Bates, 2002). Coping and conformity motivations have been linked with heavy and problematic drinking, whereas social motivations are generally not problematic (Brown, 1985; Cooper; 1994; Cox & Klinger, 1988; Hesselbrock et al., 1987). Although moderate drinking has been directly linked with positive affect from drinking (Baum-Baicker, 1985; Peele and Brodsky, 2000), positive affect often decreases as consumption increases (Russell, Light & Gruenewald, 2004). Frequency of consumption has been directly linked with enjoying the taste of alcohol (Hesselbrock et al., 1987) and with tension reduction (Cox and Klinger, 1988).

CHAPTER THREE

METHOD

3.1 Participants

The current sample consisted of 447 people of Maori descent from within New Zealand. Respondents were aged between 18 and 80 years of age (M = 33.9, SD = 11.4, Median = 32). The demographic variables of this sample were compared with New Zealand's Maori population, aged 18 years and over, in the 2001 census (Table 1). Pearson's chi-square tests were performed on relevant demographic variables to evaluate the extent to which the current sample was representative of Maori in New Zealand.

In order to calculate chi squares, demographic data from the current study were regrouped to match the categories used in the 2001 census. Age was broken into two categories '18 to 29 years' and '30 to 65 years' for ease of comparison. 'Single and de facto' categories were blended to form a 'never married group.' The 'advanced vocational' and 'bachelor degree or higher' items from the census questionnaire were combined and then compared with the teaching or university degree item from the current questionnaire, which was deemed to be equivalent. Polytechnic/ trade and bursary categories were eliminated from comparison. The categorisation for income groups also differed slightly, with the census grouping income from $15-20,000, $20-30,000, $30-40,000, and $40-50,000 rather than $15-19,000 and so forth. Number of dependents and whether respondents were currently at university, could not be compared.

From Table 1, chi-square tests revealed that survey percentages for age (1.88), location (0.21) and marital status (3.22) were similar to those found in the 2001 census population $p > .05$. However, the current sample was not representative in terms of gender (22.48), income (133.81) or education (30.52), *ps* $< .001$. These findings suggest that the current sample is not representative of the Maori population nationwide, with more women, a higher level of education, and a higher income bracket found in this sample, compared to the general population of Maori aged 18 years or older in New Zealand.

Table 1

Comparison of Current Sample with Maori Population Aged 18 Years and Over, in 2001 Census

	Current Sample N = 447		Maori Population 18+ (2001 Census) N = 298, 725			
Variable	*n*	Percentage	*n*	Percentage	χ^2	df
Age					22.48	1
18 – 29 years	182	41.4	100, 713	33.7		
30 – 65 years	254	57.7	180, 375	60.4		
Gender					1.88	1
Male	113	25.3	156, 831	49.0		
Female	334	74.7	172, 968	51.0		
Marital status					3.22	2
Single / de facto	264	59.1	164, 457	49.9		
Married	135	30.2	93, 939	28.5		
Divorce /sep /wid	46	10.3	49, 146	14.9		
Dependents					-	-
None	226	50.6	-	-		
One	71	15.9	-	-		
Two	74	16.6	-	-		
Three	39	8.7	-	-		
Four	17	3.8	-	-		
Five or more	13	2.8	-	-		
Income					133.81	5
Under $15,000	100	22.4	145, 578	44.0		
$15-19,000	46	10.3	30, 726	9.3		
$20-29,000	34	7.6	51, 435	15.6		
$30-39,000	82	18.3	30, 816	9.3		
$40-49,000	62	13.9	14, 550	4.4		
$50,000+	110	24.6	14, 853	4.5		
Education					30.52	3
No formal quals	31	6.9	122, 475	37.1		
5th form	33	7.4	51, 138	15.5		
6th form	60	13.4	31, 038	9.4		
Polytech / Trade	79	17.7	-	-		
Bursary/Wananga	58	13.0	-	-		
Teaching / Uni	182	40.7	26, 904	4.0		
University					-	-
Yes	319	71.4	-	-		
No	119	26.6	-	-		
Location					0.21	2
Rural	65	14.5	-	16.0		
Small town	61	13.6	-	12.7		
City	320	71.6	-	71.2		

Note: *n*s vary due to missing values

3.2 Measures

The questionnaire (Appendix A) consisted of a number of measures.

3.21 Demographics

Eight demographic categories were chosen (Table 1). Stevenson's (2001) education scale was adopted because it provided a wide array of options that covered the many changes in New Zealand's education system over the past decade. It also included several Maori based educational institutions. A trade or polytechnic qualification option was also added. Urban, rural and small town (less than 10,000 people) options were given to establish if alcohol behaviour varied between rural and small town environments. In order to make comparisons with other measures, demographic categories were grouped for ease of analysis. Two groups were formed for age, 18 to 29 years and 30 to 65 years, so data could be compared with data from the Moewaka Barnes et al. (2003) survey. Single and divorced or separated were grouped together and de-facto and married were also combined, to look at differences that may exist between people who are in relationships and those who are not. Respondents who wrote widowed were placed in the single, divorced or separated group. By dividing sample responses at the half way point, respondents who had no dependents were compared with those who had one or more dependents and income was divided into those earning less than $30,000 and those earning $30,000 or more per annum. People whose highest level of education was a polytechnic or trade qualification formed one group, and those with a bursary, teaching or university degree formed another. Rural and small town categories were joined for location, as both groups had a comparatively small number of respondents.

3.22 Maori Identification

Maori cultural identity was measured using the cultural identity (CI) measure developed by Stevenson (in press). This seven item measure is based on the cultural indicators questionnaire used by Te Hoe Nuku Roa (1996). Maori cultural identity questions measure self identification, ancestral knowledge, Marae attendance, involvement with whanau, financial interest in Maori land, over all contact with Maori people, and ability with Maori language. Two questions were added concerning participation in cultural activities. The first measured the number of

courses taken in Maori language or culture, and the second measured current or past membership, and participation, in a Maori culture club. To control for general participation and membership tendencies, participants were asked to identify the number of social groups they belonged to that did not involve Maori culture. Each question was scored from 0 to 3, except for the question concerning Maori land, which was scored either 0 or 1. Possible total scores for the nine item questionnaire ranged from 0 to 25, with a higher score representing a stronger cultural identity.

The CI questionnaire was chosen because it is concise and easily implemented, making it suitable for large samples. It has been validated against Te Hoe Nuku Roa (1997 and 2000) and shows good internal consistency and concurrent validity (.55). It is important to note that it is only one measure of cultural identity and is not assumed to measure all cultural aspects.

3.23 Mental Health

The Mental Health Inventory (MHI) is a 38 item inventory that measures general underlying psychological distress and well-being (Veit & Ware, 1983). It is a hierarchical factor model with five lower order and two higher order factors. Questions measuring anxiety, depression, and loss of behavioural and emotional control are combined to give a score for psychological distress. Emotional ties and general positive affect are combined to measure well-being. The two higher order factors, psychological distress and psychological well-being, are then joined to give a total score for General Mental Health.

To encourage respondents to complete the whole questionnaire, choices for each item were rated on a four point scale, rather than a six point scale, with the most extreme choices at either end of each question being eliminated from the original measure. Each question was scored on a scale from 1 to 4, with some items reverse scored. Possible total scores ranged from 38 to 152. A higher total score on this scale indicates better functioning.

This measure was employed because it was developed for use in general populations and contains measures of well-being, which allow the positive aspects of mental health to be assessed. It may also improve the accuracy of mental health

measurement by distinguishing among persons who receive perfect scores on measures of psychological distress (Veit & Ware, 1983). The MHI has high internal consistency, ranging from .83 to .91 for the lower order factors and .92 to .96 for higher order and total mental health scores. It also has stability co-efficients ranging from .56 to .64 (Veit & Ware, 1983).

3.24 Alcohol Behaviour

Respondents were asked whether they had consumed alcohol at all in the past 12 months. If they responded negatively, they were classified as abstainers and were not required to complete the alcohol behaviour, opinion or reasons for drinking scale. If they responded affirmatively, they were asked to indicate how many drinks they consumed on a typical occasion. This was an open ended question but responses that exceeded 10 drinks per occasion were recorded as 10 to reduce skewness.
One drink was defined as one glass of wine, one can of beer, or a double nip of spirits (Habgood et al., 2001). Respondents then reported how frequently they drank alcohol (1 = daily, 5 = monthly or less). They were also asked to identify their preferred drink (1 = wine, 2 = beer, or 3 = spirits), and whether they ever drank alcohol when they were alone. For later analysis, frequency of consumption data was categorised, according to the median, as those who had four drinks or less on a typical occasion, and those who had five drinks or more. Frequency was likewise categorised, as those who drank at least once fortnightly, and those who consumed alcohol monthly or less.

3.25 Reasons for Drinking

Drinking motivations were assessed using a 15 item measure. To keep the questionnaire short, lengthy scales such as the 90 item Alcohol Expectancy Questionnaire (AEQ; Brown et al., 1980) were not used. However, individual items were selected from the current literature, according to the regularity of their use (Carey & Carey, 1995; Cooper, 1994; Cronin, 1997; Hesselbrock et al., 1987; Kairouz et al., 2002). Seven items measured participant's motivations for drinking and eight items measured emotional affect. Drinking motivations contained items related to both external (drinking to be more sociable) and internal (like the taste) reinforcement (Cox and Klinger, 1988). Drinking affect items contained both positive (drinking makes me feel happy), and negative (drinking makes me feel angry) emotional

reactions. A four point likert type scale was used for both (1 = Agree, 2 = Tend to agree, 3 = Tend to disagree, 4 = Disagree).

3.26 Opinion

Attitude toward alcohol related matters was assessed using an 11-item questionnaire. Subjects were asked to rate the degree to which they agreed with each statement on a four point likert type scale (1 = Agree, 2 = Tend to agree, 3 = Tend to disagree, 4 = Disagree). Six questions concerning attitude toward drunkenness, problematic teenage drinking, drink driving, advertising, perceived health benefits of drinking, and happiness with current consumption were taken from the attitudes section of the 2000 Maori National Survey (Moewaka Barnes et al., 2003). A question concerning buying takeaway alcohol was eliminated as it was primarily designed for a teenage sample. Items concerning the suitability of different beverages for different times of the day, parents setting limits on teenagers drinking, and the enforcement of underage drinking laws were also discarded and an item concerning a current policy issue, raising the legal drinking age back to 20 years old, was added. Four questions were included from De Bonnaire et al.'s (2004) study. These questions concerned, affordability of alcohol, family responsibilities, and long term effects of alcohol on physical and mental well-being.

3.3 Procedure

A pilot study was initially conducted (N = 15), to test the clarity and conciseness of the questionnaire, and to assess the length of time it took to complete. Feedback suggested that the MHI items should be adjusted to provide fewer choices, so the response list for each item was altered from six to four options. The reasons for drinking and opinion measures were also adapted from a seven-point to a four-point scale, by removing 'Strongly agree,' 'Strongly disagree,' and 'Neither' from the list of choices. Alcohol behaviour items measuring drinking at home in comparison to drinking at a social occasion were combined to provide one measure of drinks consumed on a typical occasion.

MUAHEC ethical approval was sought and obtained, once the purpose of the research and its emphasis on highlighting the positive aspects of Maori culture, had been

clarified. A Maori support and liaison person was required for cultural advice and feedback, and back-up support from an experienced Maori researcher was gained.

The current sample, consisting of people with Maori ancestry, aged 18 years and over, was obtained using a combination of methods. A snowball technique was initially utilised to try and gain a broader sample than would be obtained from a university population alone. Participants known to the researcher were mailed the questionnaire to complete along with a covering letter written in both Maori and English (Appendix B), describing the purpose of the research and how information gathered would be used. They were informed that they were under no obligation to complete it. Many provided the researcher with further potential participants, who were then mailed the covering letter, questionnaire and a return envelope.

A website was designed on studentresearcher.com which allowed participants to complete the questionnaire anonymously online. Consent was then gained to send a mass email to all Massey University students who had acknowledged Maori ancestry in their enrolment forms. These students were encouraged to go to the website via the quick link http://www.studentresearcher.com/box.asp?box=1045 and complete the questionnaire online (Appendix C). Alternatively, they could request for a hard copy of the questionnaire to be posted to them. Participants were also invited to email the researcher to request a summary of the results, either by post or email.

3.31 Data Analysis

All computations were performed using SPSS version 11. First, the frequencies for Maori identification were calculated for all respondents. Frequencies for drinking behaviours, motivation, affect and opinions were then tabulated for all the drinkers in the sample. For the regrouped demographic categories, chi-square tests of equivalent proportions were computed for the drinking behaviours. Behaviour associated with drinking involved the amount of alcohol drunk on one typical occasion, frequency of drinking, type of alcoholic beverage preferred, and solitary drinking. Secondly, the proportions of drinkers to abstainers were compared on the regrouped demographic data, including gender, age, education, income, marital status, number of dependents and location.

Thirdly, comparisons between the present sample's drinking behaviours and the behaviours reported in other studies with Maori samples (De Bonnaire et al., 2004; Bramley et al., 2003; Dacey,1997; Moewaka Barnes et al., 2003) were made. These comparisons included the proportions of drinkers to abstainers, amounts consumed, drinking frequencies, and solitary drinking. Similarly, their opinions on alcohol related issues were compared to selected Maori opinions from other studies (De Bonnaire et al., 2004; Moewaka Barnes et al., 2003).

Fourthly, to determine if there were one or more components generated from the Maori identification, mental health, motivation and affect scales, principal components factor analysis with varimax rotation were computed (Hair et al., 1998). The distributions of scores for each of the resulting factors were examined for normality and internal consistency. If normality was achieved, then parametric methods of data analysis were undertaken. Otherwise, non-parametric methods were used to analyse the data involving the factors.

Fifthly, the statistical significance of differences in means between categories for demographic and drinking groups on the Maori identification, mental health, motivation and affect factors were tested. Lastly, the correlations between the factor scores were computed to test the hypotheses involving the relationships among Maori identification, mental health, motivation and affect, and drinking behaviour.

CHAPTER FOUR

RESULTS

4.1 Maori Identification

Two thirds of respondents identified completely as Maori, with just over 40 percent reporting participation in marae activities a few times a year. Just over half said whanau played a very large part in their lives, and over 50 percent had financial interests in Maori land. Only nine percent reported their ability with Maori language as very good, whilst three quarters of the sample had taken at least one course in Maori language or culture.

A quarter of participants had not participated in marae activities in the last 12 months. Twenty percent said whanau played a small or very small part in their lives, whilst 11.2 percent only identified a little as Maori and a further 1.8 percent did not identify at all. A quarter of respondents said they associated with few or no Maori, and 40 percent rated their ability with Maori language as poor. A further 25 percent had never taken a course in Maori language or culture, and 40 percent had never been in a Maori culture club. Maori identification frequencies are contained in Appendix D.

4.2 Alcohol Behaviour

Three hundred and ninety three respondents had consumed alcohol in the past year, whilst 54 had not. Just over 50 percent of drinkers consumed between one and four drinks on a typical occasion, with 14 percent drinking an average of one drink per occasion, and the same number drinking 10 drinks or more. Fifty percent of respondents drank monthly or less compared with only 1.5 percent who drank daily. Approximately 40 percent drank wine, 32 percent drank spirits and 25 percent drank beer. A third of respondents said they sometimes drank alone compared with two thirds who did not. Alcohol behaviour frequencies are contained in Appendix E.

4.3 Reasons for Drinking

Over 50 percent of drinkers disagreed that drinking to relieve boredom, to deal with emotional problems, and to feel a sense of belonging, were reasons they chose to drink. The majority of drinkers tended to agree that they drank to have fun, improve sociability, to relax and wind down, and because they liked the taste. Responses for reasons for drinking are shown in Table 2.

Table 2

Total Response Percentages Recorded for Drinking Motivations (N = 387)

Drinking Motivations	Agree	Tend to Agree	Tend to Disagree	Disagree	Skew
I drink to relieve boredom	2	9	17	73	-1.80
I drink to have fun	34	35	12	19	0.55
I drink because I like the taste	32	47	12	9	0.81
I drink to be more sociable	18	37	22	24	0.11
I drink to relax and wind down	36	40	11	13	0.79
I drink to deal with personal/ emotional problems	4	12	19	65	-1.37
I drink to feel a sense of belonging	3	15	23	59	-1.12

Drinkers tended to agree that alcohol elicited positive emotional reactions. Seventy percent agreed or tended to agree that alcohol made them feel happy, and over half said they felt more confident. Nearly 90 percent of drinkers said alcohol made them feel relaxed but 70 percent tended to disagree or disagreed that alcohol made them feel attractive. Similar numbers of drinkers became sexually aroused as those who did not. Most drinkers in this sample disagreed that alcohol caused negative emotions, with over 90 percent disagreeing that drinking alcohol made them feel angry, depressed, or aggressive. Responses to drinking affect items are shown in Table 3.

Table 3
Total Response Percentages Recorded for Drinking Affect (N = 386).

Feelings Alcohol Elicits	Agree	Tend to Agree	Tend to Disagree	Disagree	Skew
Happy	30	51	10	9	0.86
Angry	1	2	18	78	-2.39
Confident	18	43	20	19	0.31
Depressed / Unhappy	1	5	23	71	-1.84
Relaxed	40	49	6	5	1.07
Attractive	6	23	35	36	-0.51
Aggressive	2	5	22	72	-1.90
Amorous / Sexually aroused	11	37	22	30	-0.02

4.4 Opinions

Over 50 percent of drinkers in this sample agreed that drinking by teenagers was a problem in their community and endorsed raising the legal age limit to 20 years old. Two thirds of drinkers said they were happy with the amount of alcohol they currently consumed, whilst three quarters agreed or tended to agree that it was all right to get drunk now and again. A third also agreed or tended to agree that their drinking was good for their health.

In this study, 39 percent of drinkers said they could afford as much alcohol as they liked, whilst 40 percent limited their drinking because of responsibilities to their family. All items were heavily skewed, with the exception of items concerning the long term effects of alcohol on physical and mental well being, where responses were evenly distributed. Opinions on alcohol related issues are shown in Appendix F.

4.5 Demographic Groups and Alcohol Behaviour

Chi-square calculations were performed to look for significant relationships between alcohol behaviour and demographic groups. Quantity of alcohol consumed was significantly related to gender, χ^2 (N = 392) = .003, age, χ^2 (N = 388) = .000, marital

status, χ^2 (N = 390) = .000, income, χ^2 (N = 385) = .000, and education, χ^2 (N = 390) = .029. Males, younger, unattached, lower income, and those with less formal education, consumed more alcohol on average than females, older, attached, high income and highly educated groups, respectively.

Frequency of alcohol consumed was significantly related to gender, χ^2 (N = 395) = .002 and dependents, χ^2 (N = 391) = .048, with males and people with no dependents drinking more frequently than females and those with one or more dependents. Preference was also significantly related to gender, χ^2 (N = 375) = .000, with men more likely to drink beer and women more likely to drink wine and spirits.

Solitary consumption was significantly related to age, χ^2 (N = 392) = .001, with older drinkers more likely to drink when alone, than younger drinkers. Abstinence was significantly related to age, χ^2 (N = 440) = .014 and education, χ^2 (N = 443) = .007. Respondents who were older, with less formal education were more likely to abstain from drinking.

4.6 Alcohol Behaviour Comparisons

Eighty eight percent of the current sample had consumed alcohol in the past year. This figure was slightly higher than the 80 percent (Bramley et al., 2003; Dacey, 1997; Moewaka Barnes et al., 2003) and 82 percent (De Bonnaire, 2004) found in previous studies.

The median consumption rate for this sample was four drinks, with 53 percent averaging four drinks or fewer per drinking occasion, and 14 percent drinking 10 glasses or more. De Bonnaire (2004) found 22 percent of their respondents drank 10 glasses or more on the last drinking occasion. This compared with an average of five to six drinks for women and a seven to eight drink average for men reported by Moewaka Barnes et al. (2003). Fourteen percent of men and 21 percent of women drank less than two drinks on a typical occasion. Dacey (1997) found 40 percent of women drank four drinks or more, and 46 percent of men drank six drinks or more, on their last drinking occasion.

Half of the current sample reported drinking monthly or less, 34 percent drank at least once a week, and 1.5 percent drank daily. Moewaka Barnes et al. (2003) found a lower rate of monthly drinkers (20 percent), and a higher average frequency rate of once every three days, with eight percent drinking daily. Dacey (1997) also reported a higher average frequency rate of once a week, with six percent of Maori respondents consuming alcohol daily. De Bonnaire et al. (2004) reported that 39 percent of their sample drank at least once a week.

De Bonnaire et al. (2004) found seven percent of their sample said they sometimes drank alone. This is lower than the 30 percent reported in the present study.

4.7 Comparison of Opinion with Previous Studies

In comparison to Moewaka Barnes et al. (2003), more respondents in the current survey felt it was all right to get drunk occasionally, 77 versus 57 percent. A higher percentage of the present sample were also happy with the amount of alcohol they currently consumed at 92 percent and 82 percent, respectively, and more respondents viewed teenage drinking as problematic in their community, 90 percent compared with 85 percent. In both samples, 37 percent of respondents believed their drinking was good for their health.

In comparison to De Bonnaire et al. (2004), slightly fewer respondents in this sample limited the amount of alcohol they drank because of responsibilities to their family, at 67 percent and 71 percent, respectively. Agreement percentages for concern with long term effects on physical and mental well-being items were nearly identical, 53 and 44 percent for this sample, in comparison to 54 and 46 percent. Comparisons between opinions in this study and those found in De Bonnaire et al. (2004) and Moewaka Barnes et al. (2003) are shown in Table 4.

Table 4

Comparison of Percentages for Opinion on Alcohol Related Issues (N = 380)

	Current Sample		Comparison Sample	
Opinion	Agree/ Tend to agree	Disagree/ Tend to disagree	Agree/ Tend to agree	Disagree/ Tend to disagree
It is all right to get drunk now and again	77	23	57	43
Drinking by teenagers is a problem in our community	90	10	87	13
* I limit the amount of alcohol because of responsibilities to my family	68	32	71	29
I am happy with the amount of alcohol I currently drink	92	8	82	18
Overall, I believe my drinking is good for my health	37	63	37	63
People who drive after having too much to drink are likely to get caught	76	24	66	34
I really enjoy some of the TV ads that are used to sell alcohol	42	58	33	67
* I am concerned about the long term effects of alcohol on my *physical* well-being	53	47	52	48
* I am concerned about the long term effects of alcohol on my *mental* well-being	44	56	46	54

***Note*:** The comparison sample is Moewaka Barnes et al. (2003), except where indicated by * in which case the current sample is compared with De Bonnaire et al. (2004).

4.8 Maori Identification Factor Analysis

To ascertain if the measures yielded different aspects of Maori identification, scores for the nine Maori identification items were subjected to principal components factor analysis with varimax rotation. The Kaiser-Meyer-Olin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity were computed to determine if the correlation matrices were suitable for factor analysis. The high KMO of .859 on the Maori identification raw data indicated that the sampling was adequate. Bartlett's Test of Sphericity was significant, showing scores for all items were highly correlated, χ^2 (36, N = 430) = 951.37, ps < .001.

For the Maori identification items (Table 5), the loadings on the first factor (labelled Maori Identity or MI), which accounted for 39.9 percent of the scale variance, were greater than .500 for all items, except naming generations of Maori ancestry (.444). Scree plots (not shown) with eigenvalues greater than 1 suggested that these items loaded optimally on a single factor.

The ranks of the weights on the MI items were significantly different from the ranks of the weights on the corresponding items of Cultural Identity (CI; Stevenson, in press), $U = 0$, $z = -3.13$, $p = .002$ (exact, two-tailed). While extent of Maori identity, involvement with whanau, and whakapapa received the three highest weights for the CI index, number of Maori contacts, number of marae visits and te reo ranked highly for the MI factor.

By omitting naming ancestry from the respective analysis, total scores were computed. The resulting distribution of total MI scores approximated normality with no outliers, $z = 1.25$, $p > .05$. Cronbach's alpha coefficient of internal consistency for total MI scores was .80.

Table 5

Results of Principal Components Factor Analysis of Maori Identification Items and Rankings of Weights (N = 430)

Item	MI Factor Loading	Rank MI[a]	Rank CI[b]
Extent identify as Maori	.689	4	1
Whakapapa (generations named)	.444	7	3
Marae visits	.737	2	5
Involvement with whanau	.552	5	2
Whenua (financial interest in land)	.533	6	7
Maori contacts	.749	1	6
Te Reo (Maori language ability)	.716	3	4
Maori courses taken	.637	-	-
Maori cultural club participation	.559	-	-
Eigenvalue	3.59		

Note: [a]MI = Maori Identity factor. [b]CI = Cultural Identity items the ranks of which are based on actual contribution of cultural indicators shown in Stevenson (in press).

4.9 Mental Health Inventory Factor Analysis

Principal components factor analysis with varimax rotation was performed on the scores for the 38 Mental Health Inventory (MHI) items. The Kaiser-Meyer-Olin (KMO) measure of sampling adequacy was high (.958), and Bartlett's Test of Sphericity was significant, χ^2 (703, N = 357) = 9,626.86, ps < .001, indicating that the correlation matrices were suitable for factor analysis. For the MHI (Table 6), loadings on the first factor, which accounted for 42.8 percent of the variance in scores, were high for all items, except for hands shaking (.400). Scree plots (not shown) with eigenvalues greater than 1 suggested that these items loaded optimally on a single factor.

By omitting hands shaking from the respective analysis, total scores were computed for MHI. The resulting distribution of total MHI scores was significantly negatively skewed, z = - 5.31, p < .05. Squared transformations of MHI scores (Hair et al., 2002) failed to improve normality significantly, z = - 3.46, p < .05. Cronbach's alpha coefficient of internal consistency for the total MHI was .93.

Table 6

Results of Principal Components Factor Analysis for the Mental Health Inventory (N = 357)

Item	Factor Loading	Item	Factor Loading
Satisfaction with personal life	-.616	Felt lonely	.612
Nervous or jumpy	.519	Promising future	-.699
Interesting daily life	-.560	Free of tension	-.676
General enjoyment	-.689	Losing your mind	-.640
Felt depressed in last month	.694	Felt loved and wanted	-.568
Felt nervous	.598	Expect interesting day ahead	-.583
Felt tense or high-strung	.683	Firm control of behaviour	-.683
Hands shaking	.400	Nothing to look forward to	.659
Felt calm and peaceful	-.750	Felt emotionally stable	-.695
Felt downhearted	.748	Felt like crying	.694
Better off dead	.559	Relax without difficulty	-.665
Full love life	-.547	Not turning out as planned	.597
Bothered by nerves	.557	Wonderful adventure	-.619
Down in the dumps	.740	Taking your own life	.512
Restless, fidgety, inpatient	.645	Moody and brooding	.687
Cheerful and light hearted	-.743	Rattled, upset, flustered	.655
Anxious or worried	.722	Happy person	-.813
Difficulty trying to calm down	.712	Low spirits	.822
Wake feeling rested	-.657	Strain, stress and pressure	.629

***Note*:** Negative values indicate reversed direction of ratings. Eigenvalue = 3.59.

4.10 Reasons for Drinking Factor Analysis

To ascertain if positive and negative components existed for drinking motivations and drinking affect, the responses for the drinking motivation (DM) and drinking affect (DA) items were subjected to principal components factor analysis with varimax rotation. The Kaiser-Meyer-Olin (KMO) measure of sampling adequacy indicated that factor analysis was appropriate for each measure, .751 and .745 respectively.

Scree plots (not shown) with eigenvalues greater than 1, indicated that two factors, accounted for 52.8 percent of the variance in the motivation item scores, and 59.7 percent of the variance in DA item scores. Tables 7 and 8 show the results of the factor analysis for each measure, respectively. Inspection of the loadings suggested two factors for drinking motivation, External Motives (EM), accounting for 36.7 percent of the total variance in DM, and Internal Motives (IM), accounting for 16.1 percent. Drinking to relax and liking the taste of alcohol were the components of IM. The other items contributed to EM. Boredom relief and dealing with emotional problems were conceptualised as external motivations because by drinking alcohol, external means are taken to deal with internal states. For drinking affect, the two factors were labelled Positive Affect (PA; 36.9 percent), which included items such as drinking makes me feel confident, and attractive, and Negative Affect (NA; 22.8 pecent), which included drinking makes me feel angry, aggressive or depressed.

Anderson-Rubin estimates of factor scores with means of 0 and standard deviations of 1 were computed for further analysis. The estimates ensure orthogonality of the factors which are uncorrelated (SPSS 11 Help). Cronbach's alpha coefficients of internal consistency for EM, PA and NA ranged from .71 to .77. As IM consisted of only two items, its coefficient was quite low (.34).

Table 7

Results of Principal Components Factor Analysis with Varimax Rotation for the Drinking Motivation Scales (N = 387)

Item	Factor 1 Loading	Factor 2 Loading	Communalities
Sense of belonging and friendship	.751		.570
Improves sociability	.730		.533
Boredom relief	.679		.491
To have fun	.612		.424
Deal with emotional problems	.575		.472
Like the taste		.842	.720
Relax and wind down		.627	.485
Eigenvalue	2.57	1.12	
Percentage of variance	36.73	16.05	
Cronbach's alpha	.71	.34	

Note: Factor loadings less than .5 are not shown.

Table 8

Results of Principal Components Factor Analysis with Varimax Rotation for the Drinking Affect Scales (N = 387)

Item "Makes me feel . . ."	Factor 1 Loading	Factor 2 Loading	Communalities
Confident	.784		.641
Happy	.733		.546
Attractive	.729		.601
Relaxed	.664		.455
Amorous / Sexually aroused	.659		.514
Angry		.870	.758
Aggressive		.835	.710
Depressed / Unhappy		.739	.554
Eigenvalue	2.95	1.83	
Percentage of variance	36.90	22.85	
Cronbach's alpha	.77	.77	

Note: Factor loadings less than .5 are not shown.

Box plots were computed for all interval and ratio variables, and were inspected for outliers and normality of distributions of data. The distributions of scores were skewed, and outliers were found for all scales, except for the MI scale. Non-parametric methods were therefore used to compare demographic groups with dependent variables, and to compute correlations between the variables.

4.11 Maori Identification, Demographic and Alcohol Behaviour Comparisons

There were significant differences between mean ranks of MI scores for several alcohol behaviour and demographic groups. Results of Mann Whitney U tests for demographic and alcohol behaviour differences in Maori identification scores are shown in (Table 9). Females, older people, and those with dependents showed higher MI scores than males, younger people, and those with no dependents; respectively. For effect sizes, the z-values show that the differences between the expected mean differences between two groups' ranks and the actual differences (Hair et al., 1998) were more than two standard deviations for each of the three demographic variables. Differences in mean ranks for income, marital status, education, currently at university, location, consuming alcohol in the past year, and solitary drinking were not significant.

Table 9

Mann-Whitney U Tests of Differences between Mean Ranks of Maori Identification (MI) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Ranks	*U*	*z*	*p*[a]
Gender			15,120.5	-2.59	.009
Male	112	191.50			
Female	323	227.19			
Age			19,748.5	-2.02	.043
18-29 years	177	200.57			
30-65 years	252	225.13			
Income			19,820.0	-1.62	.105
Under $30K	174	201.41			
$30K plus	251	221.04			
Marital group			21,577.0	-0.88	.382
Single/sep/wid/div	178	210.72			
Defacto / Married	255	221.38			
Dependents			19,052.0	-3.00	.003
None	220	197.10			
One or more	208	232.90			
Education			23,012.0	-0.12	.905
Up to trade	198	215.72			
Tertiary	234	217.16			
Student			16,521.0	-1.21	.382
Not at uni	115	225.34			
Uni student	311	209.12			
Location			18,279.0	-0.56	.574
Rural	121	222.93			
City	313	215.40			
Consumed in last year			9530.5	-0.31	.756
Abstainer	51	212.87			
Drinker	384	218.68			
Do you ever drink alone			15,325.0	-1.45	.148
Yes	132	182.60			
No	255	199.90			

[a]Exact (2-tailed) significance. *n*s vary due to missing values.

4.12 Mental Health, Demographic and Alcohol Behaviour Comparisons

There were significant differences between mean ranks of MHI scores for several alcohol behaviour and demographic groups. Results of Mann Whitney U tests for demographic and alcohol behaviour differences in Mental Health Inventory scores are shown in Table 10. Older people, higher income earners, and those married or in de-facto relationships reported comparatively higher MHI scores than younger people, people on lower incomes, and those who were not in relationships. Effect sizes were very large, with 2 values ranging from 2.69 to 4.93. Differences in mean ranks for dependents, education, being a student, location, consuming alcohol in the past year, and solitary drinking were not significant.

Table 10

Mann-Whitney U Tests of Differences between Mean Ranks of Mental Health Inventory (MHI) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Rank	*U*	*z*	*p* [a]
Gender			10,870.5	-1.55	.112
Male	92	193.3			
Female	265	174.0			
Age			12,417.5	-2.69	.009
18-29 years	143	158.8			
30-65 years	208	187.8			
Income			10,157.50	-4.93	.000
Under $30K	143	143.0			
$30K plus	206	197.2			
Marital group			12,304.0	-.3.04	.002
Single/sep/wid/div	142	158.2			
Defacto / Married	214	192.0			
Dependents			15,342.5	-0.33	.741
None	180	179.3			
One or more	174	175.7			
Education			14,760.5	-0.84	.403
Up to trade	158	183.1			
Tertiary	197	173.9			
Student			11,298.0	-1.06	.290
Not at uni	96	184.8			
Uni student	254	172.0			
Location			12,397.5	-0.28	.778
Rural	98	181.1			
City	258	177.6			
Consumed in last year			4991.0	-1.78	.075
Abstainer	38	207.2			
Drinker	319	175.7			
Do you ever drink alone			11,427.5	-0.16	.876
Yes	110	161.6			
No	210	159.9			

Note: Scores ranged from 62 to 135. [a] Exact (2-tailed) significance. *n*s vary due to missing values.

4.13 Reasons for Drinking, Demographic and Alcohol Behaviour Comparisons

4.13.1 Drinking Motivations

There were significant differences between mean ranks of EM and IM scores for several alcohol behaviour and demographic groups. Results of Mann Whitney U tests for demographic and alcohol behaviour differences in External Motivation and Internal Motivation scores are shown in Tables 11 and 12, respectively.

For EM, females, older people, higher income earners, those married or in de-facto relationships, and people with one or more dependents are more likely to be externally motivated comparatively than males, younger people, people on lower incomes, and those who are not in relationships, and do not have dependents. Effect sizes were quite large. Differences in mean ranks for education, being a student, location, and solitary drinking were not significant.

For IM, respondents who sometimes drank alone were more likely to be internally motivated than those who never drank alone and the effect size was extremely high ($z = -4.70$). Differences for the other demographic variables were not significant.

Table 11

Mann-Whitney U Tests of Differences between Mean Ranks of External Motivation (EM) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Ranks	*U*	*z*	*p*[a]
Gender			11,411.5	-2.87	.004
Male	98	165.94			
Female	289	203.51			
Age			14,162.0	-3.66	.000
18-29 years	170	168.81			
30-65 years	213	210.51			
Income			14,046.0	-3.22	.001
Under $30K	155	168.62			
$30K plus	225	205.57			
Marital group			15,018.5	-2.87	.004
Single/sep/wid/div	164	174.08			
Defacto / Married	221	207.04			
Dependents			16,096.0	-2.12	.034
None	200	180.98			
One or more	184	205.02			
Education			18,080.0	-0.21	.831
Up to trade	168	194.88			
Tertiary	218	192.44			
Student			12,773.0	-1.70	.089
Not at uni	104	175.32			
Uni student	277	196.89			
Location			14,275.5	-0.22	.829
Rural	102	195.54			
City	284	192.77			
Do you ever drink alone			16,990.0	-0.02	.985
Yes	135	194.15			
No	252	193.92			

[a]Exact (2-tailed) significance. *n*s vary due to missing values.

Table 12

Mann-Whitney U Tests of Differences between Mean Ranks of Internal Motivation (IM) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Ranks	*U*	*z*	*p*[a]
Gender			13,159.5	-1.05	.295
Male	98	204.22			
Female	289	190.53			
Age			17,022.0	-1.01	.314
18-29 years	170	185.63			
30-65 years	213	197.08			
Income			17,154.0	-0.27	.788
Under $30K	155	188.67			
$30K plus	225	191.76			
Marital group			17,958.5	-0.15	.880
Single/sep/wid/div	164	194.00			
Defacto / Married	221	192.26			
Dependents			18,309.0	-0.08	.933
None	200	192.04			
One or more	184	192.99			
Education			17,510.0	-0.74	.461
Up to trade	168	188.73			
Tertiary	218	197.18			
Student			14,012.0	-0.41	.682
Not at uni	104	194.77			
Uni student	277	189.58			
Location			12,927.5	-1.61	.107
Rural	102	178.24			
City	284	198.98			
Do you ever drink alone			12,077.0	-4.70	.000
Yes	135	157.46			
No	252	213.58			

[a]Exact (2-tailed) significance. *n*s vary due to missing values.

4.13.2 Drinking Affect

There were significant differences between mean ranks of PA and NA scores for several demographic groups. Results of Mann Whitney U tests for demographic and alcohol behaviour differences in positive (PA) and negative (NA) affect scores are shown in Tables 13 and 14.

For PA, older people and higher income earners reported comparatively higher positive affect than younger people and those on lower incomes. Differences in mean ranks for gender, marital group, dependents, education, being a student, location, and solitary consumption were not significant.

For NA, people who were older, higher income earners, those who had dependents, and people who lived rurally were less likely to experience negative affect from drinking than those who were younger, on lower incomes, without dependents and lived in the city. Differences in mean ranks for gender, marital status, education, being a student, and solitary consumption were not significant.

Table 13

Mann-Whitney U Tests of Differences between Mean Ranks of Positive Affect (PA) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Ranks	*U*	*z*	*p*[a]
Gender			13,349.0	-0.80	.424
Male	98	185.71			
Female	288	196.15			
Age			13,109.5	-4.62	.000
18-29 years	169	162.57			
30-65 years	214	215.24			
Income			14,608.5	-2.69	.007
Under $30K	155	172.25			
$30K plus	225	203.07			
Marital group			17,594.5	-0.39	.698
Single/sep/wid/div	163	189.94			
Defacto / Married	221	194.39			
Dependents			16,971.0	-1.21	.226
None	202	185.51			
One or more	181	199.24			
Education			18,015.0	-0.13	.901
Up to trade	165	192.18			
Tertiary	220	193.61			
Student			13,825.0	-0.55	.581
Not at uni	104	185.43			
Uni student	276	192.41			
Location			14,004.0	-0.26	.797
Rural	100	195.46			
City	285	192.14			
Do you ever drink alone			15,968.5	-0.88	.380
Yes	134	200.33			
No	252	189.87			

[a]Exact (2-tailed) significance. *n*s vary due to missing values.

Table 14

Mann-Whitney U Tests of Differences between Mean Ranks of Negative Affect (NA) Scores for Demographic Groups and Alcohol Behaviour

Group	*n*	Mean Ranks	*U*	*z*	*p*[a]
Gender			12,374.0	-1.82	.068
Male	98	175.77			
Female	288	199.53			
Age			15,390.5	-2.50	.012
18-29 years	169	176.07			
30-65 years	214	204.58			
Income			14,099.5	-3.17	.002
Under $30K	155	168.96			
$30K plus	225	205.34			
Marital group			16,325.5	-1.57	.117
Single/sep/wid/div	163	182.16			
Defacto / Married	221	200.13			
Dependents			15,692.0	-2.40	.017
None	202	179.18			
One or more	181	206.30			
Education			18,147.0	-0.00	.998
Up to trade	165	193.02			
Tertiary	220	192.99			
Student			13,525.0	-0.87	.386
Not at uni	104	198.45			
Uni student	276	187.50			
Location			12,037.0	-2.31	.021
Rural	100	215.13			
City	285	185.24			
Do you ever drink alone			16,756.5	-0.12	.903
Yes	134	194.45			
No	252	192.99			

[a]Exact (2-tailed) significance. ns vary due to missing values. A higher score equates to lower negative affect.

4.14 Hypotheses

In order to test the hypotheses, Spearman's rho correlations were performed (Table 15). To minimise the possibility of Type II errors, the .01 level of significance was required.

Table 15

Spearman's rho Correlation Coefficients for MI, MHI, EM, IM, PA, NA and Alcohol Behaviour Scores

Variable	MHI	EM	IM	PA	NA	Quantity	Frequency
MI	.05	.05	.07	.10	.04	.06	.20*
MHI		.39*	.09	.23*	.29*	-.17*	.01
EM			-.01	.45*	.24*	-.36*	.16*
IM				.26*	-.10	-.11	.29*
PA					-.05	-.33*	.13
NA						-.00	.00
Quantity							-.10

Note: * $p < .01$, two-tailed.

(MI = Maori Identification, MHI = Mental Health Inventory, EM = External Motivation, IM = Internal Motivation, PA = Positive Affect, NA = Negative Affect).

Hypothesis One:

Maori Identity (MI) scores were not significantly related to Mental Health Inventory (MHI) scores ($r_s = -.05$, $p > .05$). It was found that age and the number of groups belonged to were significantly related to MI, ($r_s = -.15$, $p < .01$) and ($r_s = .26$, $p < .001$), respectively. When the effects of age and number of social groups belonged to were partialled out, the correlation between MI scores and MHI scores were still not significant ($r_s = .05$).

Hypothesis Two:

2a) MI scores were not significantly related to quantity of alcohol consumption (r_s = .06, p > .05), but were significantly negatively related to frequency of alcohol consumption (r_s = -.20, p < .001), indicating that with increases in MI there were decreases in the frequency of alcohol consumption.

2b) MHI scores were significantly related to quantity (r_s = -.17, p < .01) but not to frequency (r_s = .01, p > .05) of alcohol consumption, indicating that with increases in MHI, there were decreases in the quantity of alcohol consumed.

Hypothesis Three:

3a) MHI scores were significantly positively related to external motivation (r_s = .39, p < .001), positive affect (r_s = .21, p < .001) and negative affect (r_s = .29, p < .001). Increases in NA factor scores infer decreases in negative affect. Better mental health was associated directly with drinking for externally motivated reasons and to positive affect after drinking. It was inversely associated with negative affect after drinking.

3b) Quantity of alcohol consumption was significantly negatively related to external motivation (r_s = -.36, p < .001) and to positive affect (r_s = -.33, p < .001). Heavier drinking was associated with weaker external motivation and with less positive affect after drinking alcohol. Frequency of alcohol consumption was significantly positively related with both external (r_s = .16, p < .01) and internal motivation (r_s = .29, p < .001). Increases in both motivations were associated with increases in alcohol consumption.

4.15 Alcohol Behaviour and Opinion

Spearman's rho correlation matrixes were also performed for quantity and frequency of alcohol consumption and opinion measures (Table 16). Average consumption was not significantly related to frequency of consumption (r_s = -.10, p > .01; see Table 15). Possible health benefits from drinking (r_s = .23, p < .001) and affordability of alcohol (r_s = .22, p < .001) were significantly related to average consumption. Satisfaction with current consumption was significantly negatively related to frequency of

consumption ($r_s = -.24$, $p < .001$). Heavier drinkers were more likely to believe moderate drinking had health benefits and that alcohol was affordable. More frequent drinkers were less likely to be satisfied with current consumption.

Table 16

Spearman's Rho Correlation Coefficients for Opinions and Alcohol Behaviour

Opinions	Quantity $r_s =$	Frequency $r_s =$
It is all right to get drunk now and again	-.41*	.19*
Drinking by teenagers is a problem in our Community	.21*	-.14*
The legal age of drinking should be raised from 18 back to 20 years old	.11	-.15*
I can afford as much alcohol as I want	.22*	.07
I limit the amount of alcohol I drink because of responsibilities to my family	.15*	-.08
I am happy with the amount of alcohol I currently drink	.23*	-.24*
Overall, I believe my drinking is good for my health	.23*	-.01
People who drive after having too much to drink are likely to get caught	.02	.06
I really enjoy some of the tv ads that are used to sell alcohol	-.15*	.07
I am concerned about the long term effects of alcohol on my *physical* well-being	-.06	-.07
I am concerned about the long term effects of alcohol on my *mental* well-being	-.01	-.06

* $p < .01$, two-tailed.

CHAPTER FIVE

DISCUSSION

5.1 Hypotheses

Hypothesis One

The initial aim was to establish if stronger Maori identification would be significantly related to better mental health. Te Hoe Nuku Roa's (1996) suggestion that health and well-being were better where identity is stronger or most secure, was not found in the present study. Strength of Maori identification was normally distributed in this sample, but scores on the mental health measure were heavily skewed. Although the MHI was designed for use with non-clinical populations, because the large majority of the current sample had good mental health it may have been more difficult to find significant relationships with Maori identification.

Hypothesis Two

2a) It was hypothesised that with stronger Maori identification there would be less consumption of alcohol and less frequency of drinking. This hypothesis was partially supported. Stronger Maori identification was associated with less frequent drinking but not with quantity of alcohol consumed. Stevenson's (2001) study also failed to find a significant relationship between cultural identity and alcohol consumption. One possible reason for this could be the inherent difficulties in trying to measure strength of identification. It is also possible that restricting the upper limit of consumption to 10 drinks on a typical occasion might have excluded the full range of heavy drinkers in this sample.

There are a couple of possible reasons why Maori identification may be negatively related to frequency of consumption. Firstly, it has been reported that infrequent drinking is usual practice amongst Maori (De Bonnier et al., 2004) and therefore strength of identification may reflect this pattern. It is also possible that Maori view regular drinking as problematic, but do not view occasional binge drinking in the same way. An Australian study found young people classified by researchers as heavy drinkers did not view themselves as hazardous drinkers, because they drank infrequently and because binge drinking was common practice (White, Hill & Segan,

1997). As binge drinking is widely practiced amongst both Maori and non-Maori in New Zealand, it could be assumed that differences would not be detected between Maori identification and quantity of consumption.

2b) The hypothesis that mental health would be associated with less consumption of alcohol and lower frequency of drinking was also partially supported. Mental health was not significantly related to frequency of alcohol consumption, but the relationship between mental health and average consumption was significant. This suggests people with better mental health will drink just as regularly, but consume less alcohol per drinking occasion, than those with worse mental health. Previous studies have found heavy alcohol consumption has negative effects on mental health (Koopman et al, 2003), and people with poor mental health are also more likely to binge drink (Baron et al., 1998; Weschler, Dowdall, Davenport & Castillo, 1995). Frequency of consumption does not seem to have a negative impact on mental health if consumption is low and may even be beneficial (Mc Elduff & Dobson, 1997).

Hypothesis Three

3a) The final hypothesis, that mental health would be associated directly with drinking for socially motivated reasons was supported. This finding supports previous research by Cooper (1994) indicating that drinking for positive social reasons is normative, socially accepted and generally unproblematic. Further, the supposition that better general mental health would be related to increased positive emotions, and decreased negative emotions after consuming alcohol, was also found. This is in line with Baum-Baicker's (1985) conclusion that better mental health is related to greater positive affect after drinking, and Swendsen and Merikangas' (2000) study linking problem drinking with mental disorders and negative affect. Feelings of anger and depression are more likely amongst people with poorer mental health and drinking may exacerbate these feelings. This can occur even if their reasons for drinking are positive ones (Carey & Correia, 1997). On the other hand, people with better mental health are more likely to have positive thoughts and emotions and therefore, feelings of happiness and relaxation are more likely to be elicited from drinking.

3b) The assumption that heavier drinking would be directly related to coping and conformity motivations was not supported. It was anticipated that heavier drinking would be associated with dealing with problems, relieving boredom and feeling a sense of belonging. In fact the opposite was found, with heavier drinkers less likely to be motivated by external factors. One reason for this finding may have been the way items were categorised. Factor analysis showed two clear factors for both drinking motivations and drinking affect. For drinking affect, the two factors identified (positive and negative affect) were straightforward. For motivations, the separation of items was less clear cut. Firstly, items in both externally motivated and internally motivated categories had positively and negatively reinforced items. Negatively reinforced items have been widely linked to problematic drinking (Brown, 1985; Cox & Klinger, 1988; O'Callaghan & Callan, 1992) whereas positively reinforced items generally have not. Socialisation items are thought to relate to young people, binge drinking and drinking in groups (Crundall, 1995 & Turrisi, 1999). Drinking to deal with problems and to relieve boredom has been linked with regular heavy consumption and solitary drinking (Cooper, 1994). The alignment of these items in the same category was therefore problematic in drawing comparisons with other studies. This may have impacted on analysis with other variables and also affected demographic associations made.

The hypothesis that heavier drinking would be inversely related to positive affect was supported. As alcohol consumption increases, positive affect decreases. This makes sense from a physiological point of view because although alcohol can create feelings of pleasure (Carlson & Buskist, 1997) increasing quantities of alcohol will have increasingly detrimental effects on physical and psychological well-being (Stewart, 1997). The hypothesis that more frequent drinkers would have greater internal motivation was also supported, indicating regular drinkers are more likely to enjoy the taste of alcohol and the feelings of relaxation it elicits. Results also showed a direct relationship between external motivation and frequency. Thus, in this study frequent drinkers were more likely than infrequent drinkers to endorse all the available reasons for drinking. Once again, the categorisation of drinking motivation items may have affected this outcome.

5.2 Maori Identification

Responses to the Maori identification item in the MI measure indicated different levels of self identification. This finding was expected considering the mixed ancestry of most Maori in New Zealand. Whilst some respondents identified as Maori, this may not be the culture they identify with most strongly. A fifth of respondents said they sometimes identified as Maori depending on the situation. There are many possible reasons why some situations may not be conducive to self identification, but unfortunately it was not within the realm of this study to review these.

Forty percent of participants had not attended marae activities, or had attended once in the past year, which suggests many Maori today are not actively involved in their marae. It is possible that these Maori could also be dislocated from their wider whanau. However, 80 percent of the current sample said whanau played a large or very large part in their lives, which suggests this is not the case. It is more probable that it was difficult for the high number of students and city dwellers in this sample to regularly visit home marae. Baxter (1998) suggests it is relatively common for many Maori to be dislocated from their marae these days because of urbanisation.

One in four respondents said they had good or very good ability with Maori language. Although this number is not terribly high, it is understandable given the history of Maori language in New Zealand. Urbanisation, punishment for speaking Maori in schools, and failure to include Maori language in the school curriculum, are only some of the factors that contributed to a loss of language for many Maori in the twentieth century (Ballara, 2004). The renewed emphasis on reviving the Maori language in the 1980's with the introduction of Kohanga Reo (Maori immersion pre-schools) and Kura Kaupapa (Maori language primary schools) has meant many Maori youth are now able to converse fluently in te reo. However, many respondents in this survey were schooled before the 1980's and would not have had the opportunity to learn Maori language this way. The high percentage of respondents in this sample taking courses in Maori language and culture is an encouraging sign. Maori language is considered an essential element in maintaining pride and identity and the importance of the loss of language for two generations of Maori should not be underestimated (Ballara, 2004).

There has been some suggestion that there may be different 'qualitites' of Maori identification, that is, differences between learning and living the culture (Stevenson, 2001). This view suggests differences exist between Maori who have been brought up in a more traditional Maori environment and have learned the culture through experience, and those who have not had a traditional Maori upbringing but have learnt their culture through study and other means. Differences may exist, as Stevenson (2001) found Maori living the culture were more likely to be socio-economically disadvantaged than those who learnt the culture. However, these disparities were not considered significant enough to require separate measures of identification or classification in this study.

Maori self identification and items that measure participation in the Maori world, may measure different aspects of culture. Participants might be more exuberant in endorsing Maori self identification than the frequencies of their reported behaviour would warrant. For example, 42 percent reported having attended marae activities a few times in the past year, and a further 40 percent had participated once or not at all. Many of these respondents still identified completely as Maori, although their participation in activities thought to measure strength of identity was low. Financial interest in Maori land and generations of Maori ancestry known were both non-participation items and both recorded the lowest rankings for the MI measure. This suggests that participation may be a more integral measure of cultural identity. Scores for the Maori Identification scale were highly correlated with good internal consistency. One measure of identification was shown which suggests that Maori identity can be measured as a single construct.

There were significant differences between ranks for MI and CI items (Stevenson, in press, Table 2). Contact with other Maori, participation in marae activities and ability with Maori language were the three top ranked MI items, whereas none of these appeared in the CI top three. Differences in rank might have occurred for several reasons. Firstly, the present sample was not representative of the general Maori population in New Zealand. With greater proportions of female, higher education, tertiary students, and higher income groups, the present sample possibly had more individuals actively involved in promoting Maori awareness. Maori in the higher income bracket, and those in tertiary education would expect to associate with more

non-Maori in their work and school lives. The majority of this sample were also urban based which may mean they have less frequent access to their marae. These measures would therefore be more likely to show strength of commitment to Maori culture and lifestyle in this sample than in Stevensons. Hence, Maori contacts and visiting marae ranked higher in the MI scale than the corresponding CI items.

The Maori self identification item was reworded, with four options given rather than the dichotomous option provided in Stevenson's questionnaire. Although most of the current sample (66 percent) selected "completely" to the question, "To what extent do you identify as a New Zealand Maori?" a further 21 percent chose "to some extent, it depends upon the situation." If these options were not available, these responses would probably have counted as yes responses, which would have strengthened the over all ranking of this measure. The weighting of the Maori self identification item was sufficient (.689) for it to be included on the MI factor; however the responses to it might not have been as reliable as to some of the other items.

MI was found to be significantly related to age, which supports Stevenson's (2001) finding that older people have stronger cultural identification. Significant differences were also found between respondents who had dependents and those who did not, but these findings may have been confounded by age, as older people were also more likely to have dependents. One reason for age differences may be because the older age group faced wider cultural discrimination when they were growing up and are therefore more likely to realise the importance of protecting and maintaining Maori culture. They are more likely to have children and may want to pass on knowledge and understanding of Maori culture to the next generation in order to instil pride in their ancestry. Younger people may also have more social engagements and be actively involved in sport and other activities which may limit their participation in cultural activities.

University courses may encourage interest in cultural issues as students are taught about the Treaty of Waitangi, the loss of Maori land, the effects of acculturation and other areas that have impacted on Maori welfare today. Increased knowledge of these issues and in some cases increased opportunity to become actively involved, could instil a greater interest in cultural issues and a desire for greater immersion in Maori

culture. The higher number of females at university would therefore explain gender differences found, with females generally reporting stronger identification than males. As the median age for both genders was identical, age was not a confounding factor in this case.

It has been suggested that Maori living rurally could be expected to have a stronger sense of cultural identification than other Maori because they are more likely to be active on their marae, to associate with more Maori and to be exposed to other aspects of Maori culture, such as language (Stevenson, 2001). This suggestion was not supported in the present study. This may be explained by the low number of rural participants in this sample and the consequent grouping of rurally based Maori with Maori who lived in small towns. Stevenson's (2001) finding that higher income was related to stronger cultural identification was not supported here, and no other demographic variables were significant.

5.3 Mental Health

Although the internal consistency was high for the mental health measure, factor analysis failed to identify five lower order factors which meant mental health had to be analysed using one scale. Unfortunately, measures of distress (depression, anxiety and loss of behavioural and emotional control) and measures of well-being (general positive affect and emotional ties) could not be individually compared with the Maori identification measure. All factors were heavily skewed with most participants having good mental health according to the MHI. This may have limited the opportunity of finding significant relationships between the two variables.

Better mental health was significantly related to age, with older respondents having better health than younger respondents. Better mental health was also related to marital status, but once again this may have been confounded with age as older people were more likely to be married or in defacto relationships than younger people. This finding is not surprising considering the established links between young people and depression and anxiety (Kaplan & Saddock, 2003). Socio-economic influences have been shown to impact on mental health. In this study, education and personal income were the constructs used to measure socio-economic status, and whilst a lower income

was related to poorer mental health, the relationship between mental health and education was not significant. The large number of tertiary students, highly educated and high earning respondents in this sample would elevate levels of mental health and means comparison with previous studies is difficult.

5.4 Alcohol Behaviour

Problems exist when measuring and reporting on alcohol behaviour because researchers tend to combine measures of frequency and quantity making it difficult to differentiate between these drinking behaviours. The quantity and regularity required to be classified as a light, moderate, heavy, binge or hazardous drinker is also unclear.

In this study, nearly 90 percent of respondents had consumed alcohol in the past year which shows that alcohol remains a commonly used drug amongst Maori in New Zealand. Half of the current sample would be classified as binge drinkers, according to Raloff's (2003) classification of five or more drinks per occasion. On the other hand, half of this sample drank alcohol monthly or less. This supports earlier studies that have documented the tendency for Maori to drink alcohol relatively infrequently, especially in comparison to non-Maori in New Zealand (De Bonnaire et al. 2004; Dacey, 1997). Although binge drinking has been identified as harmful, quantity of alcohol consumed was not significantly related to frequency of consumption in this sample. This suggests that respondents, who drank larger quantities of alcohol at one time, did not do so regularly. Although binge drinking has been shown to be problematic, this finding is dependent on the regularity of this behaviour (Epstein, Labouvie, McCrady, Swingle & Wern, 2004). This suggests that drinking behaviour for most participants in this study is not problematic

Negative opinion toward solitary drinking found by the Ministry of Health, (1997) was not found in this study, with a third of respondents agreeing that they sometimes drank alcohol when they were on their own. Although Cooper (1994) found drinking alone was associated with drinking to deal with negative affect and problem drinking, there is no evidence to suggest this is the case here. It is more likely that opinion on solitary drinking varies amongst people, with many feeling happy to drink a glass of alcohol if they feel like it, regardless of whether others are around. The higher

number of respondents reporting sometimes drinking alone may also reflect a trend toward a more cosmopolitan style of drinking in New Zealand, where enjoying a glass of wine after work or with dinner is more likely to be common practice. Changing family dynamics and increased hours of work may also mean more people are likely to spend longer periods of time alone. Older drinkers were more likely to drink alone then younger people, which could reflect different drinking motivations amongst older people and also differences in their living situation.

Males, younger, unattached, lower income, and those with less formal education, were found to consume more alcohol on average than females, older, attached, high income and highly educated groups, respectively. These findings were predicted in line with previous literature (Casswell, Pledger, and Hooper, 2002; Casswell, Pledger & Pratap, 2002; Heiden, 1996; Labouvie and Bates, 2002; Moewaka Barnes, McPherson, and Bhatta, 2003; Muthen & Muthen, 2000; Nystrom, 1992). This indicates demographic differences within the Maori population have similar impacts on alcohol behaviour as they do within other populations.

People with no dependents were found to drink more frequently than those with one or more dependents. This was anticipated as people with dependents would be expected to have greater family commitments, financial obligations and time restraints. Men also drank more frequently than women, which supported findings by Baldwin, Oei and Young (1993) and Moewaka Barnes et al. (2003). Although it was anticipated that men would prefer beer and women would prefer wine (Park, 1995), a significant relationship between women and spirits was not anticipated. One reason for this finding could be the popularity of "Ready to Drinks" (RTD's) amongst women in New Zealand. Older people were more likely to abstain from drinking altogether, which supports Eigenbrodt et al.'s (2001) finding that drinking generally diminishes with age.

In comparison to previous studies, the number of Maori drinkers was slightly higher in this sample. One possible reason for this is the initial information sheet sent to potential participants stated that the current research would be looking at Maori identification and alcohol behaviour. This may have deterred many non-drinkers from requesting a questionnaire. The lower rates of consumption and frequency in

this sample may be explained by demographic differences. In particular, the comparatively high socio-economic status of respondents and the high number of females in comparison to samples used in previous studies.

5.5 Reasons for Drinking

The majority of drinkers in this sample tended to agree that they drank to have fun, improve sociability, and to relax and wind down. Additionally, most respondents disagreed that drinking to relieve boredom, to deal with emotional problems, and to feel a sense of belonging were reasons they chose to drink. This supports the theory that people drink because of the positive experiences they expect to have (Cox and Klinger, 1990; Marin et al., 1993). Although a third of participants agreed they liked the taste of alcohol, 20 percent disagreed or tended to disagree, which suggests taste is not the primary motivation for some drinkers.

While participants tended to endorse positive affect items, such as happiness, relaxation and confidence, responses were more contradictory for feelings of attractiveness and sexual arousal. This could be because these are more personal concepts that participants are more reluctant to endorse, or may be to do with the different physiological effects alcohol has on different people. Negative affect items were generally not endorsed, which suggests most people generally feel good after consuming alcohol.

Females, older people, higher income earners, those married or in de-facto relationships, and respondents with one or more dependents were more likely to be externally motivated comparatively. This finding is not in line with current literature which suggests the opposite in nearly every case (e.g., Dore, 2002; Kairouz et al., 2002; Turrisi, 1999). It would be anticipated that socialisation items in particular would be associated with young, single, childless and low income respondents. No demographic variables were significantly related to internal motivation, but a relationship with solitary drinking was found. Solitary drinkers are more likely to be internally motivated. This makes sense because internally motivated drinkers are not reliant on external factors but instead, tend to drink for the physiological sensations they experience.

Older people and higher income groups reported comparatively higher positive affect from drinking. The finding that older people consumed lower amounts of alcohol than younger people, and the expectation that older people would also have higher average incomes, would be confounding factors here. People who were older, higher income earners, people with dependents, and those who lived rurally or in small towns were less likely to experience negative affect from drinking. These findings imply drinking behaviour is both modified and exacerbated by individual motivations and drinking affect.

5.6 Opinion

For most items in the opinion measure views were one sided, with respondents either all tending towards agreement or all tending to disagree. Opinions reported in this study show widespread concern for problematic teenage drinking and strong support for restricting teenage access to alcohol by raising the legal age limit. This finding probably reflects the low number of teenagers sampled in this survey. However, views were more liberal in response to occasional drunkenness, with wide acceptance shown in line with findings by Moewaka Barnes et al. (2003). Liberal views on drunkenness do not seem to be because people think alcohol is good for them. The drinkers who thought their drinking was good for their health were outnumbered two to one. This may illustrate the fact that mounting literature advocating the health benefits of alcohol use still lags behind literature on the harmful effects of alcohol, at least in terms of informing the public and influencing opinion. It may also reflect the complexities of possible health benefits. Beneficial drinking usually relates to frequently drinking low volumes of alcohol, which is not the pattern of drinking displayed by most Maori, who tend to be binge drinkers. Benefits also appear to be limited to older age groups and many Maori may view the harmful consequences of alcohol as outnumbering any possible benefits.

Most drinkers were happy with the amount of alcohol they consumed. This supports the view that the majority of people who drink do not experience alcohol related difficulties (Heath, 1995). A high percentage of respondents did not enjoy alcohol advertising on television. This could be because advertising tends to target teenagers,

especially young men, both of which were lacking in this sample. The item used to evaluate affordability in this study asked respondents whether they could afford as much alcohol as they wanted. The majority of this sample found alcohol affordable. This may be because of the large proportion of high income earners in this sample, and the relative irregularity with which most respondents consumed alcohol.

Overall, opinions on alcohol policy and other alcohol related issues were similar to those reported in previous studies with Maori populations (De Bonnaire et al., 2004; Moewaka Barnes et al., 2003). The most significant difference was wider acceptance of occasional drunkenness found in the present study. This could be because this study contained a higher percentage of students, although this is unlikely considering the median age of this sample was thirty two. A higher percentage of the present sample were also happy with their personal consumption. In this study, satisfaction with current consumption was not significantly associated with heavier drinking but it was related to frequency, with more frequent drinkers being less satisfied with how much they drank. The higher satisfaction rate is therefore likely to be a reflection of the high number of infrequent drinkers in this study.

Heavier drinkers were more likely to believe moderate drinking had health benefits than lighter drinkers. Support for this finding has been established in previous studies (Hall, 1996; Ogborne & Smart, 2001). People who consumed more alcohol on average were significantly more likely to say they could afford as much alcohol as they liked. Hesselbrock et al. (1987) also found heavier drinkers were less likely to say cost was an issue in their drinking behaviour. Average alcohol consumption was directly related to lower annual income in this study. Higher income respondents in this sample were also older however, and younger people would be expected to have more disposable income.

5.7 Limitations of the Present Study

A major hindrance in this study was the lack of research available on Maori identification. There were no current studies that compared Maori identification with alcohol behaviour, mental health and other alcohol related factors. According to Smith (1999), research with Maori has been hindered by an understandable lack of trust by the indigenous population toward researchers, given their historical misuse and misinterpretation of information. Maori have only recently gained some control over who conducts research on their people, and how this research is used. This may be one reason that there is such a dearth of information on the positive impacts of cultural identification. Another reason may be because many studies are focused on the disparities that exist between Maori and non-Maori rather than on differences that exist between Maori. The difficulties that exist in trying to categorise Maori by strength of identification may also contribute to the current lack of research.

It is difficult to find a scale that can accurately measure identification in any culture, and Maori are no exception. Grouping people with different tribal affiliations, from different historical backgrounds and with different ancestry will always be problematic. Stevenson's (in press) measure of cultural identification is new and relatively untested. However, this measure was specifically designed to be used with a Maori population and the conciseness of the measure made it ideal for the current study. The CI measure allowed respondents to report their own beliefs, participation and degree of identification with the Maori culture. Although the generations named item had to be removed to improve reliability, two questions were added by the author to measure level of participation in cultural activities which should have strengthened the measure over all. However, further studies using this measure would be desirable in order to measure reliability.

The MHI was altered by reducing the number of options available from seven to four. This was done to reduce confusion and to encourage respondents to complete the entire questionnaire. However, this may have meant respondents were prevented from answering questions more vehemently. For example, item 21 of the MHI did not allow a "never" option and respondents were forced to reply "almost never" to the statement "During the past month, how often did you feel that others would be better

off if you were dead?" This may have eliminated extreme scores and might have made finding distinctions between respondents more difficult. Also, the MHI has not been used with a Maori population before and cultural differences may have had an impact on results.

It is difficult to find a way to accurately measure alcohol consumption due to the wide array of drinking patterns generally found in any society. Alcoholic beverages come in different sizes and contain varying volumes of alcohol and the serving size will vary both for alcohol consumed at home (Lemmens 1994) and on licensed premises (Banwell 1999). In this study a simple quantity-frequency self report measure was used requiring respondents to estimate how much alcohol they usually consumed and how often they typically drank. Although this measure is commonly utilised (Lemmens, Tan & Knibbe, 1992) it has been suggested that respondents tend to ignore times when they have consumed vast amounts of alcohol which means overall consumption is underestimated (Gruenewald & Nephew 1994). Lemmens et al. (1992) report an alternative method of measurement which asks participants to report how much they have drunk in the last week, but this has resulted in higher than average consumption rates being reported. It would also be ineffective for measuring alcohol behaviour amongst irregular drinkers. For this reason, the current measure was deemed most suitable for this sample.

Abstainers were not requested to fill out the opinion section because four questions were not applicable to non-drinkers. However, it would have been desirable for abstainers to answer the remaining opinion items so comparisons between drinkers and non-drinkers could be made. For the alcoholic preference item, many respondents failed to identify a preferred drink and chose to tick several choices which meant these responses counted as missing variables. This limited the viability of this measure.

Unfortunately, the current sample was not representative in terms of gender, income, education, or student membership with high proportions of females, students, high income and highly educated people. This makes comparison of results with the general Maori population difficult. Attempts were made to improve the numbers of

males, non-students, low income and less educated Maori by using a snowball sample, but unfortunately this did not alter the demographic differences that existed.

5.8 Recommendations for Future Research

The lack of current research examining the beneficial impacts of strength of Maori identification mean the possibilities for future research are numerous. This sample contained 447 Maori aged 18 and over. Although 18 is the legal age for drinking alcohol in New Zealand, it is common for teenagers to regularly consume alcohol, particularly in heavier drinking sessions (Habgood et al., 2001). As with adults, literature is concentrated on the problematic aspects of teenage drinking behaviour and it would therefore be useful to conduct the current study with an adolescent population. Another possibility could be to examine relationships between Maori identification and tobacco use. Tobacco is the second most commonly used drug in New Zealand. The rates of smoking amongst Maori are high and known to be responsible for numerous health problems. Research in this area could contribute toward programs to deter Maori from smoking and to encourage quitting amongst those who already smoke.

There is also a lack of research on the effects of acculturation amongst Maori. Studies to date have failed to establish whether greater acculturation comes at the expense of lower Maori identification or if these two dimensions are distinct. Studies examining acculturation, alcohol behaviour and mental health amongst Native Americans in the United States have also had mixed results. With many Maori identifying foremost with their hapu or iwi, comparisons could also be made between different iwi to assess the impact of acculturation on different regions. Exploration in this area could also look at how Maori culture has changed and adapted in recent years and whether cultural differences exist between young and old, and rural and urban Maori.

This quantitative study examined five different variables. A simplified study that was qualitative in nature may enable a more comprehensive look at some of the issues touched on in this study. For example, a more complete understanding of Maori identification could be ascertained by asking each individual what Maori culture meant to them, what aspects of the culture they identified with most or least strongly,

and why certain situations were not conducive to self identification. This would allow for a more enriched understanding of the complexities of Maori culture and would provide useful information in how to best measure such a diverse and dynamic construct. As culture has different meanings for different individuals, it would also allow a more personal analysis of how individuals believe their culture has enriched their lives and improved self efficacy.

Finally, it would be interesting to assess relationships between Maori identification and clinically diagnosed mental disorders and alcohol problems. The DSM-IV is a recognised measure of mental illness in New Zealand. Therefore, a sample containing Maori who have been clinically diagnosed with depression, anxiety, alcohol abuse or dependence according to the DSM-IV would allow more extensive analysis of relationships between Maori identity, mental health and alcohol behaviour. It would also enable comparisons to be made between clinical populations of Maori with Maori in the general population. This could improve clinical methods for dealing with Maori, by taking culturally relevant issues into consideration in both diagnosis and treatment.

5.9 Practical Applications

While there was no significant relationship between heaviness of alcohol consumption and strength of Maori identity, the association between frequency of drinking and identity gives an indication that stronger Maori identification might affect one aspect of alcohol behaviour. This information could be useful for Maori being treated for alcohol abuse and supports the continuation of current treatment approaches that highlight the importance of cultural pride and self esteem amongst Maori. These approaches emphasise strengthening self identification and empowering individuals, as well as identifying the need to connect with whanau, hapu and iwi. This research suggests these are all important factors, and that instilling cultural pride could be an important element, not only in the recovery process but also in prevention programs.

Studies on alcohol behaviour tend to suggest that regularly drinking small amounts of alcohol is generally unproblematic. This drinking behaviour is promoted as 'safe' by health agencies in New Zealand such as ALAC. This study suggests that this style of

drinking is not commonly adapted by Maori in New Zealand. Changing the binge style of drinking that is currently most prevalent amongst Maori will not only require further education, but will need to tackle ingrained national, cultural and social patterns. This study showed high endorsement of socially motivated reasons for drinking. In fact, most Maori drank for the social benefits alcohol elicited and perceived the emotions obtained from drinking as primarily positive. The acceptance of occasional drunkenness was also high. This suggests that the majority of Maori do not experience difficulties from their drinking and do not view occasional over consumption of alcohol as problematic. It could also indicate that problems and harm associated with alcohol use have become normalised. For these reasons, future health campaigns would need to take these issues into account in order to convey their message successfully.

Finally, Maori as a people are as diverse as any other culture. In this study, many Maori were not active in their marae, could not speak the language and were not involved in cultural activities. The sense of Maori identification was still strong amongst this group, with many completely identifying as Maori. However, some respondents said they mixed with few other Maori in their lives and their self identification as Maori was also low. These findings emphasise the importance of not assuming that all Maori will feel comfortable in a Maori environment. Expecting Maori to understand all aspects of their culture is unreasonable. Whilst it is important to give Maori the opportunity to learn or embrace cultural values and to work within a cultural framework in a treatment setting, differences between individual Maori should be considered. Whilst many Maori may wish to increase their cultural knowledge, others may not and it is important that they are not forced to do so.

5.10 Conclusion

In conclusion, this research assessed the relationships between five key variables; Maori identification, mental health, alcohol behaviour, reasons for drinking and alcohol related opinion. The findings in this study suggest:

- There might be a significant relationship between Maori identification and mental health, but for various reasons this was not detected in the present study.

- Maori identification was not related with average consumption of alcohol, but it was related to frequency of consumption, with stronger Maori identification related to less frequent drinking.

- Maori with better mental health were significantly more likely to drink less alcohol on average, but not to drink less frequently. They were also more likely to drink for socially motivated reasons and to feel positive emotions after drinking, and less likely to feel negative emotions after drinking than those with worse mental health.

- Maori who were heavier drinkers were less likely to be externally motivated and less likely to feel positive affect after drinking alcohol. Maori who were frequent drinkers were found to be both externally and internally motivated.

The results of this research show that some important relationships do exist between strength of Maori identification, mental health, alcohol behaviour, reasons for drinking and alcohol related opinion. A larger sample size that is more representative of the Maori population in New Zealand may reveal further relationships that this study failed to find. Although a significant relationship between Maori identification and mental health was not established, further studies using different measures would be necessary to fully explore potential relationships. The small scale of this research and the limited number of resources may not have allowed as full an exploration of this topic as desired and future research in this area would be beneficial. In particular, a qualitative study may enable a better understanding of Maori identification and the meaning culture has for different individuals. A strong sense of Maori identification may play an important role, not only in influencing drinking behaviour, but in providing a sense of purpose and establishing behavioural guidelines for many Maori today. However, from the findings of the present study, the support for this possibility is inconclusive given the complex nature of Maori identification and of alcohol use.

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Appendix A
Questionnaire

ALCOHOL SURVEY QUESTIONNAIRE

Demographics

Gender: Male ☐ Female ☐

Age: _____

Marital status: single ☐ de-facto ☐ married ☐ divorced / separated ☐

Number of dependents: _____

Income per annum: ($1000's)

Under 15 ☐ 15-19 ☐ 20-29☐ 30-39 ☐ 40-49 ☐ 50+ ☐

Education: (Highest level of education *completed*)

No formal qualifications / Access ☐ 5th form Certificate or equivalent ☐

UE / 6th form Cert/ Marae based ☐ Polytechnic / Trade qualification ☐

Bursary/ Scholarship/ Wananga based ☐ Teaching / University degree ☐

Are you currently at University? Yes ☐ No ☐

Where do you live? Rural ☐ Small town (10, 000 or less) ☐ City ☐

MAORI IDENTIFICATION

Please tick one response for each question

1. To what extent do you identify as a New Zealand Maori?

☐ Completely
☐ To some extent, depends on the situation
☐ Only a little
☐ Not at all

2. How many generations of your Maori ancestry can you name?

☐ 1 generation (parents)
☐ 2 generations (grandparents)
☐ 3 generations (great grandparents)
☐ More than 3 generations

3. How often have you attended Marae activities over the past 12 months?

☐ Not at all
☐ Once
☐ A few times
☐ More than once a month

4. In terms of <u>your</u> involvement with <u>your</u> whanau, does <u>your</u> whanau play...

- ☐ A very large part in your life
- ☐ A large part in your life
- ☐ A small part in your life
- ☐ A very small part in your life

5. Do you have a financial interest in Maori land (i.e as an owner, part/ potential owner or beneficiary)?

- ☐ Yes
- ☐ No

6. This question considers your contact with people. In general, would you say that your contacts are with...

- ☐ Mainly Maori
- ☐ Some Maori
- ☐ Few Maori
- ☐ No Maori

7. How would you rate your overall ability with Maori language?

- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

8. I have taken _____ courses in Maori language and / or culture.

- ☐ More than 5
- ☐ 3 or 4
- ☐ 1 or 2
- ☐ 0

9. Which of the following best applies?

- ☐ I am a member of a Maori culture club, and take part in *most* of their activities.
- ☐ I am a member of a Maori culture club, and take part in *some* of their activities.
- ☐ I have been a member of a Maori culture club, and took part in their activities.
- ☐ I have *not* been a member of a Maori culture club.

10. How many social groups do you participate in that aren't focused on Maori culture? (e.g clubs, church groups, sports teams etc).

- ☐ More than 5
- ☐ 3 or 4
- ☐ 1 or 2
- ☐ 0

BEHAVIOUR

Please tick the response that best describes your opinion or write your answer in the space provided.

1. Have you drunk alcohol at all in the past 12 months?

☐ Yes

☐ No

IF NO, SKIP TO PAGE 6, GENERAL HEALTH QUESTIONNAIRE

2. How many drinks do you usually consume on a typical occasion?

_____ (1 drink = 1 glass of wine, 1 can of beer, double nip of spirits)

3. How often do you drink alcohol?

☐ Daily

☐ 3-4 times a week

☐ 1-2 times a week

☐ Fortnightly

☐ Monthly or less

4. What do you usually drink?

☐ Wine

☐ Beer

☐ Spirits

5. Do you ever drink alcohol when you are alone?

☐ Yes

☐ No

OPINION

Please circle the number that best describes your opinion.

1 Agree
2 Tend to Agree
3 Tend to Disagree
4 Disagree

1.	**It is all right to get drunk now and again.**	1	2	3	4
2.	**Drinking by teenagers is a problem in our community.**	1	2	3	4
3.	**The legal age of drinking should be raised from 18 back to 20 years old.**	1	2	3	4
4.	**I can afford as much alcohol as I want.**	1	2	3	4
5.	**I limit the amount of alcohol I drink because of responsibilities to my family.**	1	2	3	4
6.	**I am happy with the amount of alcohol I currently drink.**	1	2	3	4
7.	**Overall, I believe my drinking is good for my health.**	1	2	3	4
8.	**People who drive after having too much to drink are likely to get caught.**	1	2	3	4
9.	**I really enjoy some of the TV ads that are used to sell alcohol.**	1	2	3	4
10.	**I am concerned about the long term effects of alcohol on my *physical* well-being.**	1	2	3	4
11.	**I am concerned about the long term effects of alcohol on my *mental* well-being.**	1	2	3	4

REASONS FOR DRINKING

Please circle the number that best describes your opinion:

1 Agree
2 Tend to Agree
3 Tend to Disagree
4 Disagree

1. Why do you usually drink alcohol?

a)	I drink to relieve boredom	1	2	3	4
b)	I drink to have fun	1	2	3	4
c)	I drink because I like the taste	1	2	3	4
d)	I drink to be more sociable/ talkative	1	2	3	4
e)	I drink to relax and wind down	1	2	3	4
f)	I drink to deal with personal or emotional problems (eg: stress, anger, relationship problems).	1	2	3	4
g)	I drink to feel a sense of belonging and friendship	1	2	3	4

2. Drinking alcohol usually makes me feel?

a)	Happy	1	2	3	4
b)	Angry	1	2	3	4
c)	Confident	1	2	3	4
d)	Depressed / Unhappy	1	2	3	4
e)	Relaxed	1	2	3	4
f)	Attractive	1	2	3	4
g)	Aggressive	1	2	3	4
h)	Amorous / Sexually aroused	1	2	3	4

GENERAL HEALTH

Please tick the answer that best reflects your opinion.

1. How happy, satisfied, or pleased have you been with your personal life during the past month?

- ☐ Very happy most of the time
- ☐ Generally satisfied, pleased
- ☐ Generally dissatisfied, unhappy
- ☐ Unhappy most of the time

2. How much of the time have you felt lonely during the past month?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

3. How often did you become nervous or jumpy when faced with excitement or unexpected situations during the past month?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

4. During the past month, how much of the time have you felt that the future looks hopeful and promising?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

5. How much of the time, during the past month, has your daily life been full of things that were interesting to you?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

6. How much of the time, during the past month, did you feel relaxed and free of tension?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

7. During the past month, how much of the time have you generally enjoyed the things you do?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

8. During the past month, have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel or of your memory?

- ☐ No, not at all
- ☐ Maybe a little
- ☐ Yes, and I have been a little concerned
- ☐ Yes, and I am quite concerned about it

9. Did you feel depressed during the past month?

- ☐ Yes, very depressed almost every day
- ☐ Yes, quite depressed several times
- ☐ Yes, a little depressed now and then
- ☐ No, never felt depressed at all

10. During the past month, how much of the time have you felt loved and wanted?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

11. How much of the time, during the past month, have you been a very nervous person?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

12. When you got up in the morning, this past month, about how often did you expect to have an interesting day?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

13. During the past month, how much of the time have you felt tense or "high-strung"?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

14. During the past month, have you been in firm control of your behaviour, thoughts, emotions, feelings?

- ☐ Yes, for the most part
- ☐ Yes, I guess so
- ☐ No, not too well
- ☐ No, and I am quite disturbed

15. During the past month, how often did your hands shake when you tried to do something?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

16. During the past month, how often did you feel that you had nothing to look forward to?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

17. How much of the time, during the past month, have you felt calm and peaceful?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

18. How much of the time, during the past month, have you felt emotionally stable?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

19. How much of the time, during the past month, have you felt downhearted and blue?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

20. How often have you felt like crying, during the past month?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

21. During the past month, how often did you feel that others would be better off if you were dead?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

22. How much of the time, during the past month, were you able to relax without difficulty?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

23. During the past month, how much of the time did you feel that your love relationships, loving and being loved, were full and competent?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

24. How often, during the past month, did you feel that nothing turned out for you the way you wanted it to?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

25. How much have you been bothered by nervousness, or your 'nerves,' during the past month?

- ☐ Very much bothered
- ☐ Bothered quite a bit by nerves
- ☐ Bothered just a little by nerves
- ☐ Not bothered at all by this

26. During the past month, how much of the time has living been a wonderful adventure for you?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

27. How often, during the past month, have you felt so down in the dumps that nothing could cheer you up?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

28. During the past month, did you ever think about taking your own life?

- ☐ Yes, fairly often
- ☐ Yes, a couple of times
- ☐ Yes, at one time
- ☐ No, never

29. During the past month, how much of the time have you felt restless, fidgety or impatient?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

30. During the past month, how much of the time have you been moody or brooded about things?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

31. How much of the time, during the past month, have you felt cheerful, light-hearted?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

32. During the past month, how often did you get rattled, upset, or flustered?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

33. During the past month, have you been anxious or worried?

- ☐ Yes, very much so
- ☐ Some, enough to bother me
- ☐ Yes, a little bit
- ☐ No, not at all

34. During the past month, how much of the time were you a happy person?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

35. How often in the past month did you find yourself having difficulty trying to calm down?

- ☐ Very often
- ☐ Fairly often
- ☐ Sometimes
- ☐ Almost never

36. During the past month, how much of the time have you been in low or very low spirits?

- ☐ Most of the time
- ☐ Some of the time
- ☐ A little of the time
- ☐ Rarely

37. How often, during the past month, have you been waking up feeling fresh and rested?

- ☐ Almost everyday
- ☐ Most days
- ☐ Some days, but usually not
- ☐ Hardly ever

38. During the past month, have you been under or felt you were under any strain, stress, or pressure?

- ☐ Yes, quite a lot of pressure
- ☐ Yes some, more than usual
- ☐ Yes, a little bit
- ☐ No, not at all

Appendix B

Participant Information Sheet (Mail)

(Massey University Letterhead)

MAORI IDENTIFICATION AND ALCOHOL BEHAVIOUR

Information Sheet

Researcher:	Erin Ebbett	Supervisor:	Dr Dave Clarke
Contact details:	Erin.Ebbett.1@uni.massey.ac.nz	Contact details:	d.clarke@massey.ac.nz
Iwi:	Te Rarawa, Ngati Kahu, Te Aupouri	Phone:	(09) 414 0800 *extn*.9075
Hapu:	Ngati Moroki		

You are invited, as a person of Maori descent, to participate in this research project. The purpose of this study is to see what aspects of cultural identity are related to general mental health and attitudes toward alcohol use. The negative effects of alcohol on Maori have been well researched and they will not be the focus of this study. This study is being conducted to fulfil the requirements of a Masters thesis for my Master of Arts in Psychology.

Your participation in this study is entirely voluntary. Completion and return of this questionnaire is taken to imply consent. Please complete this questionnaire only once. You have the right to decline to answer any particular question.

⇒ No identifying information will be gathered to ensure anonymity.

⇒ The entire questionnaire is expected to take 20-30 minutes.

⇒ If you have any concerns regarding this research you can contact the researcher or supervisor at the above e-mail addresses.

⇒ Only summary data will be used for thesis preparation, publication and review.
Data will be stored under locked conditions within the Massey Albany Psychology Department and disposed of by the supervisor after the required 5- year period.

⇒ If you would like to receive a summarised version of my research findings, please send me an e-mail to the above address and research findings will be e-mailed to you.

⇒ If the completion of this survey causes you any discomfort, please feel free to contact Marlene Ngapo, Maori Learning Coordinator, Massey University.
Telephone: 414 0800 extn 9669 or E-mail: m.i.ngapo@massey.ac.nz

On completion, please place the questionnaire in the post-paid envelope provided.
THANK YOU SO MUCH FOR YOUR CONTRIBUTION TO THIS RESEARCH

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Application 04/050. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Campus Human Ethics Committee: Albany, telephone 09 414 0800 x9078, email humanethicsalb@massey.ac.nz.

TE MAORI: KO NGAA WHAKAMOHIO ME AANA AHUATANGA A TE WAIPIRO

He Wharangi Mohiohio

Kairangahau: Ko Erin Ebbett
Karere Rorohiko: Erin.Ebbett.1@uni.massey.ac.nz
Iwi: Te Rarawa, Ngati Kahu, Te Aupouri
Hapu: Ngati Moroki

Kaitiaki: Dr Dave Clarke
Karere Rorohiko: d.clarke@massey.ac.nz
Waea Kōrero: (09) 414 0800 extn – 9075

Kua whiria koe, he tangata Māori hoki, ki te uru mai ki tēnei mahi rangahau. Ko te whainga ia o tēnei rangahautanga, he tirotiro, he whakatau hoki i te panga o te tuakiri Māori ki te Hauora Hinengaro o te tangata, ki tōna hihiri hoki me tōna whanonga ki te Inu Waipiro. Kua ata tirohia ke i ngā tau ki mua ngā mahi kino o te inu wai piro ki te iwi māori, a, ehara hoki wēnei i te kaupapa nui o tēnei mahi rangahau. E whakahaeretia ana tēnei mahi rangahau hei whakatutuki i ngā mātauranga tuhinga whakapae mō te Tohu Paerua Psychology.

Kei a koe te tikanga ki te uru mai, ki te kore ranei e uru mai ki tēnei rangahautanga. Ki te whakaoti koe i tēnei rarangi patai, ka whakahokia mai ai, he mea tērā nou kei te whakaae koe ki te uru. Kei a koe hoki te tikanga ki te whakarere i tētehi o ngā patai nei.

- E kore hoki koe e pataingia mō ētehi kōrero whakamohio i a koe, kia noho huna tonu koe.
- E kore e rahi atu i te 20 mineti ki te whakakii atu i te rarangi patai nei.
- Mena he patai au mō tēnei rangahau, whakapa mai ki te Kairangahau, ki tana Kaitiaki ranei i runga i ngā karere rorohiko kei runga ake nei.
- He kōrero whakarāpopoto anake ka meinga atu ki te whakareri, ki te tā me te arotake i tēnei tuhinga whakapae. Ka rakangia atu ngā kohikohinga nei ki te Tari Psychology o Massey Albany, a, ka whakakorehia e te Kaitiaki nei i te pahuretanga atu o ngā tau e rima.
- Ki te hiahia koe i tētehi whakarapopotohanga o aku kitenga i roto i tēnei rangahau, whakapā mai ki ahau i runga i te karere hiko o runga nei, ā, ka tukuna atu aku kitenga ki a koe i runga anō i te karere hiko.
- Ki te raru tonu koe ki te whakaoti i tēnei rārangi pātai, kia whakapa mai koe ki a: Marlene Ngapo, Māori Learning Co-ordinator, Massey University, Albany. Waea: 414 0800 extn. 9669 **or** Karere Hiko: m.i.ngapo@massey.ac.nz

Kia oti rā i a koe, kuhuna atu tō rārangi pātai
ki te kōpaki utu-kore kei muri nei.

TĒNĀ RAWA ATU KOE I AWHINA NEI I TĒNEI MAHI RANGAHAU

This project has been reviewed and approved by the Massey University Human Ethics Committee, ALB Application 04/050. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Campus Human Ethics Committee: Albany, telephone 09 414 0800 x9078, email humanethicsalb@massey.ac.nz.

Appendix C

Participant Information Sheet (E-mail)

Tena koe, tena koutou ki nga iwi o te Motu

Ko Erin Ebbett taku ingoa
Ko Te Rarawa te iwi
Ko Whangatauatia te maunga
Ko Karirikura te moana
Ko Ngati Moroki te hapu
Ko Korou Kore te marae

I am a Massey University student at the Albany campus completing a Master of Arts degree in Psychology. I am looking for Maori participants to complete a research questionnaire, either online or by post. It takes about 20 to 30 minutes to complete.

Your responses are submitted to a database and will remain completely anonymous. You can send me a separate request for feedback on the results which will be available later in the year.

The purpose of this study is to see what aspects of cultural identity are related to general mental health and attitudes toward alcohol use. The negative effects of alcohol on Maori have been well researched and they will not be the focus of this study.

There are two ways you can take part in this research project.

1. Log on to: http://studentresearcher.com/box.asp?box=1045

2. Contact me by e-mail: Erin.Ebbett.1@uni.massey.ac.nz for a questionnaire and a freepost envelope.

This project has been approved by the Massey University Albany Human Ethics Committee, 04/050.

Thank you for considering my request.

Ka nui te mihi ki a koe, ki a koutou, ki a tatou katoa.

Noho ora mai ra.

Erin Ebbett
Te Rarawa, Te Aupouri, Ngati Kahu

Appendix D
Maori Identification Frequencies

Maori identification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	completely	294	65.8	65.9	65.9
	To some extent, depends on the situation	94	21.0	21.1	87.0
	Only a little	50	11.2	11.2	98.2
	Not at all	8	1.8	1.8	100.0
	Total	446	99.8	100.0	
Missing	System	1	.2		
Total		447	100.0		

Generations of Maori ancestry known

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	one generation	13	2.9	3.0	3.0
	Two generations	74	16.6	16.9	19.9
	three generations	120	26.8	27.4	47.3
	More than three generations	231	51.7	52.7	100.0
	Total	438	98.0	100.0	
Missing	System	9	2.0		
Total		447	100.0		

Marae activities attended in past year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	115	25.7	25.8	25.8
	Once	63	14.1	14.1	39.9
	A few times	186	41.6	41.7	81.6
	More than once a month	82	18.3	18.4	100.0
	Total	446	99.8	100.0	
Missing	System	1	.2		
Total		447	100.0		

Whanau involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A very large part in your life	237	53.0	53.6	53.6
	A large part in your life	117	26.2	26.5	80.1
	A small part in your life	47	10.5	10.6	90.7
	A very small part in your life	41	9.2	9.3	100.0
	Total	442	98.9	100.0	
Missing	System	5	1.1		
Total		447	100.0		

Financial interest in Maori land

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	256	57.3	57.5	57.5
	No	189	42.3	42.5	100.0
	Total	445	99.6	100.0	
Missing	System	2	.4		
Total		447	100.0		

Contact with people

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mainly Maori	125	28.0	28.2	28.2
	Some Maori	211	47.2	47.6	75.8
	Few Maori	103	23.0	23.3	99.1
	No Maori	4	.9	.9	100.0
	Total	443	99.1	100.0	
Missing	System	4	.9		
Total		447	100.0		

Ability with Maori language

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very good	40	8.9	9.0	9.0
	Good	74	16.6	16.6	25.6
	Fair	152	34.0	34.1	59.6
	Poor	180	40.3	40.4	100.0
	Total	446	99.8	100.0	
Missing	System	1	.2		
Total		447	100.0		

Maori courses taken

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 5	63	14.1	14.2	14.2
	3 or 4	81	18.1	18.2	32.4
	1 or 2	191	42.7	42.9	75.3
	0	110	24.6	24.7	100.0
	Total	445	99.6	100.0	
Missing	System	2	.4		
Total		447	100.0		

Maori cultural club membership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Take part in most Maori culture club activities	23	5.1	5.2	5.2
	Take part in some activities	12	2.7	2.7	7.8
	Was a member and took part in activities	237	53.0	53.1	61.0
	Have not been a member of a Maori culture group	174	38.9	39.0	100.0
	Total	446	99.8	100.0	
Missing	System	1	.2		
Total		447	100.0		

Appendix E
Alcohol Behaviour Frequencies

Alcohol consumption in past year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	393	87.9	87.9	87.9
	No	54	12.1	12.1	100.0
	Total	447	100.0	100.0	

Average consumption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	56	12.5	14.3	14.3
	2.00	57	12.8	14.5	28.8
	3.00	51	11.4	13.0	41.8
	4.00	45	10.1	11.5	53.3
	5.00	40	8.9	10.2	63.5
	6.00	40	8.9	10.2	73.7
	7.00	10	2.2	2.6	76.3
	8.00	31	6.9	7.9	84.2
	9.00	6	1.3	1.5	85.7
	10.00	56	12.5	14.3	100.0
	Total	392	87.7	100.0	
Missing	System	55	12.3		
Total		447	100.0		

Frequency of consumption

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	6	1.3	1.5	1.5
	3-4 times a week	27	6.0	6.8	8.4
	1-2 times a week	103	23.0	26.1	34.4
	Fortnightly	61	13.6	15.4	49.9
	Monthly or less	198	44.3	50.1	100.0
	Total	395	88.4	100.0	
Missing	System	52	11.6		
Total		447	100.0		

Alcoholic preference

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Wine	155	34.7	41.3	41.3
	Beer	98	21.9	26.1	67.5
	Spirits	122	27.3	32.5	100.0
	Total	375	83.9	100.0	
Missing	System	72	16.1		
Total		447	100.0		

Do you ever drink alone?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	137	30.6	34.6	34.6
	No	259	57.9	65.4	100.0
	Total	396	88.6	100.0	
Missing	System	51	11.4		
Total		447	100.0		

Appendix F
Opinion Frequencies

Total Response Percentages for Opinion on Alcohol Related Issues (N = 380)

	Agree	Tend to agree	Tend to disagree	Disagree	Skew
It is all right to get drunk now and again	38	39	15	8	0.76
Drinking by teenagers is a problem in our community	63	27	10	0	1.16
The legal age of drinking should be raised from 18 back to 20 years old	59	12	14	15	0.89
I can afford as much alcohol as I want	39	20	19	23	0.30
I limit the amount of alcohol because of responsibilities to my family	46	22	12	20	0.62
I am happy with the amount of alcohol I currently drink	75	18	5	2	2.10
Overall, I believe my drinking is good for my health	12	25	34	29	-0.33
People who drive after having too much to drink are likely to get caught	43	26	27	4	0.46
I really enjoy some of the TV ads that are used to sell alcohol	11	31	25	33	-0.21
I am concerned about the long term effects of alcohol on my *physical* well-being	27	26	25	22	0.09
I am concerned about the long term effects of alcohol on my *mental* well-being	24	21	27	29	-0.17