Hauora: a socio-cultural perspective.

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Charles Smith Olson
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HE MIHIMIHI

Ko Tararua te manga,
ko Oroua te awa,
ko Ngati Kauwhata te iwi.
Tihei mauri ora,
ki te whaeao ki te ao marama.
E nga mana e nga reo,
he mihi tenei na te ngakau iti.
Tuatahi me mihi au ki te wahi ngaro.
Tuarua ki te hunga kua mene
ki te po haere, moe mai i roto i te ariki.
Kati me kii he koha tenei pukapuka hei titiro ma koutou.
Ko te kupu whakamutunga,
ka tapae atu tenei pukapuka
hei tohu whakamaumahara ki a Charles Smith Brown.
Otira kua takoto ia ki te rua koiwi o ona matua tupuna.
Haere e pa i te tai o te ata mo te tai o te ahiahi taua tutaki au.
No reira ratou ki a ratou.
Tatou ki a tatou tena tatou katoa.

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ABSTRACT

The present study investigates the role that socio-cultural factors have had on the health of Maori. To date most explanations for observed health disparities between Maori and non-Maori have been found to be inadequate and may actually be due to socio-cultural factors. Supporting this suggestion are health differences between younger and older Maori since the urbanisation of the 1950's and the similarities Maori have with other ethnic minorities globally. Measures of Maoritanga were created in the present study and completed by 128 subjects. These were used to divide the sample into acculturated, partially acculturated and enculturated Maori. Groups differing in enculturation, and gender, were compared on a number of health issues. Health was assessed in terms of subjective well-being, general distress, physical symptoms, and chronic illness. Utilisation of Pakeha and Maori health systems were also examined as well as five health behaviours that have been found to differ between Maori and non-Maori. Although the Maoritanga measure appeared to be highly reliable, it failed to find any health differences between levels of enculturation. However, females with low self-reported Maoritanga were found to exhibit significantly more physical symptoms and general distress than females with high self-reported Maoritanga. For the five health behaviours, differences were found between males and females but not between levels of enculturation. There were some differences in the way that different Maori utilised Pakeha and Maori health systems. It appears that culture does have an important role in the health of Maori consequently more indepth investigation is required.

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FOREWORD

I, like many other Maori, was brought up in a Pakeha environment both domestically and educationally. It was an environment that was totally devoid of any cultural aspect Maori. I was the perfect example of a Maori, through generations of progressive assimilation, that had become 'Pakehafied'. But what does this mean exactly? Does it mean that I can forget the racial taunts and jibes I got as kid and still sometimes get today? Does it mean that I can forget my cultural ancestry which was so effectively rubbished during my school years? Does it mean, because of this cultural conditioning that I got as a kid, that I didn't need to feel ashamed to be a Maori? Does it mean that I can forget my salient physical characteristics such as my skin colour, the black hair, the brown eyes, and the thick lips? Does it mean that I can also forget that there are Maori who are culturally distinct from me who have retained a sense of pride in being Maori. Does it mean that I can forget the high failure rate of Maori in the Pakeha education system, that half the prison population is Maori and that the majority of Maori are in the two lowest socioeconomic classes? No, all of these issues remain with all Maori including a so called acculturated Maori. It's there every moment of every day, it's in the mirror, in the papers, on the street and in day to day relationships with both Maori and Pakeha.

All Maori, have been socially and culturally disadvantaged in Aotearoa, including Maori who have become acculturated to the Pakeha lifestyle. Contrary to what many people may believe, to be an acculturated Maori is not advantageous, it doesn't allow one to have a 'foot' in both the Pakeha and Maori worlds. For some Maori being acculturated can be personally demeaning. A person in such a situation is liable to view themselves as a non-identity as they are still called a Maori by Pakeha and sometimes an uncle Tom by some Maori. To be an acculturated Maori is to be an 'Honorary Pakeha' while simultaneously being a 'Clayton's Maori', a person who is not quite Pakeha and yet not quite Maori. A person in such a situation is in danger of feeling inadequate in both Pakeha and Maori society. The result can be a series of negative outcomes some of which include self blame, guilt, anger, and self-destructive behaviour. In one way or another I have experienced or seen all of the above, either in my own life or in the lives of other Maori around me. For some strange reason Maori often seek the

company of others who have a background similar to their own. Maybe it is not so surprising that we have Maori gangs, and they adopt names such as the 'Mongrel Mob'.

This thesis is from a perspective of a Maori who has been acculturated and it is the accumulation of not two years work but of more than 30 years of living in Aotearoa. Hopefully it will provide not just Pakeha with a better understanding of why the Maori renaissance is so important, but also Maori like myself, with a better understanding of what may have occurred in their own lives.

WHAKATAUKI

'Tangohia te reo o te tangata ka tu tahanga.

Tangahia te tikanga o te tangata ka noho ngoikore'.

'Take away a people's language and you take away their identity.

Take away a people's culture and you take away their dignity'.

INTRODUCTION

In the last two hundred years since Pakeha colonisation, the health of the Maori has undergone a series of important changes. The Pakeha brought with them numerous diseases which were foreign to the Maori, and a lifestyle that was completely contrary to the traditional Maori pattern of life. Although the Maori population gradually recovered and Maori life expectancy has increased dramatically since the turn of the century, Maori, especially the young, have become burdened with a variety of health problems that have been increasing since the 1950's. Complicating this issue is the failure of past and present explanations to account for the health disparities between Maori and Pakeha. This present study will show that many of the health problems exhibited in young Maori today are due to the effects of assimilation.

Before the arrival of the Pakeha to Aotearoa, the Maori were generally healthy and free from disease (Turbott, 1940). Death in pre-colonial Maori was due mainly to respiratory and intestinal disorders, accidents, inter-tribal warfare, old age or Mate Maori (Maori sickness) (Pool, 1991). Good health, Maori believed, was firstly the product of maintaining a preventative rather than curative philosophy, and secondly being conscious of the relationship that health has with several interrelated dimensions.

Of all the dimensions incorporated within the Maori philosophy of health, there were four considered by Maori, to be the cornerstones of a one's health (Ngata, 1984). These include, te taha wairua (spiritual well-being), this is the unseen spiritual side of a person and provides a sense of identity and belonging. Wairua which means shadow, warns the physical being of any impending danger (Best, 1973). Ancestral Maori believed they were descendants of supernatural beings which originally came from Io (the parent). Maori inherited a minute amount of ira atua (super-normal life) which was

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not only extremely tapu (sacred), but it also represented the vitality of Maori, physically, mentally, morally and spiritually (Best, 1973).

The second element, te taha whanau (family well-being) is the extended family network that encompasses all past and present whakapapa (genealogy). Like te taha wairua this element bestows a sense of identity and belonging as well as being an important resource for social support. To ancestral Maori there was little sense of individualism, the iwi, the hapu and the whanau were an integral part of the person.

The third and fourth elements, are te taha hinengaro (mental well-being), and te taha tinana (physical well-being). Hinengaro includes qualities such as self-confidence and self-esteem while tinana encompasses a person's physical health. Hinengaro and tinana were considered to be the indicators of one's health and not health itself. Maori also knew these two elements were not separate entities but were intimately linked. It was believed that the centre of ones emotions could be found in the stomach (puku) (Best, 1973) This is possibly because Maori noted the effect of emotions on this part of the anatomy. Consequently the term puku has emotive connotations which are typified by certain terms in the Maori language such as pukuriri (argumentative), pukutakaro (playful), pukukata (amused), and pukumahi (industrious).

Land (te whenua), the environment (te ao turoa) were other dimensions considered important for continuing health. Land and the environment provided Maori with resources such as food and water, and through the whanau and genealogical connections, it enabled Maori to maintain their sense of identity and Mana (prestige). Land in this respect, was a place to stand (Turangawaewae) and a place of belonging (Sinclair, 1973) rather than being one of ownership as for Pakeha (Hofstede, 1980). This feeling of a belonging to the land was also typified by the widespread practice of

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placing te whenua (the placenta), of a newborn at birth and later the body at death in Papatuanuku (mother earth), (Sinclair, 1973).

Maori language (te korero Maori) is another important dimension related to the general concept of being and feeling Maori. Maori language is critical in the formation of a positive Maori identity. Without Maori language it is difficult to have mana or to strengthen one's Maoritanga (Walker, 1987).

As a preventative health measure, tapu was also an integral part of Maori life. Tapu provided rules of conduct through tikanga (customs and values), kawa (rituals), karakia (incantation), and deep respect. This created stability, not only within a person, but also within their spiritual, social, and physical environments. It provided a common set of values, beliefs, and attitudes among Maori that was beneficial to one's personal health and to the well-being of the community and physical environment as a whole (Ngata, 1984). In the past, these values, beliefs and attitudes became so strongly ingrained within individual tribal members, that few had the strength to step outside its bounds. To break a tapu would not only mean possible alienation from the whanau it could a enrage the gods resulting in 'he mate Maori' (a Maori sickness) (Buck, 1950). It was therefore imperative for Maori to protect their Mauri ora (spark of life) so that well-being could be maintained. Maori believed that their subsequent decline in health and mana was because the mauri had become noa or tapuless owing to changed habits or lack of precaution. (Best, 1973).

Curing 'he mate Maori' entailed engaging the services of a tohunga (expert). Many sicknesses occurred from the presence of cacodemons and were usually the result of a former tapu transgression (Buck, 1950). Consequently it was important that the person or the person's whanau afflicted with 'he mate Maori' to admit their tapu transgressions

(hara). These admissions empowered the tohunga to exorcise the demon from the person, or possibly the whanau, which was the first step toward cure.

The Pakeha who arrived in Aotearoa early last century were from an entirely different environment to the Maori. They came from an urbanised, industrial nation where conditions were not conducive to optimum health. They brought with them several major health problems, including numerous diseases foreign to the Maori such as venereal disease and tuberculosis. Perhaps more importantly they possessed an entirely different perspective on life and health. Instead of being socially based, the Pakeha perspective was one that focused on the individual and independence. To be healthy in pakeha terms is to be independent and self sufficient (Durie, 1984). Furthermore, the Pakeha approach to land and people recognised economic importance rather than their spiritual or social value (Hofstede, 1980). This cultural perspective, in terms of the health of its members, had several implications. Firstly, health became very much the responsibility of the individual rather than a community concern. Secondly, this approach focused on aspects of a person's physical and mental well-being, and tended to ignore other contributing factors. Moreover, cure rather than prevention became the accepted procedure for health care. Thirdly, different physical symptoms would be provided with different labels and treatments. This Westernised, Pakeha perspective on health is often termed the 'medical model' of health care (Davis, 1981). According to the medical model of health care, illness has links to specific causes, the source of which are treated with specific remedies. Cultural philosophies on health care, that were not Pakeha orientated, were perceived by Pakeha as primeval, erroneous and were generally severely condemned (Best, 1973).

The deterioration in the health of the Maori due to the negative influences of Pakeha colonisation, was a major factor in creating the Treaty of Waitangi. Busby, the British resident in 1837, proposed that the British government should provide Maori with

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protection against the high mortality rate caused by Pakeha colonisation (Orange, 1987). Maori were also keen to develop an agreement between the British crown and Maori tribes. A number of Maori chiefs including Hone Hika and Te Rauparaha, had witnessed the negative impact of Pakeha colonisation on indigenous populations in other foreign countries (Burns, 1980). These chiefs were anxious that such problems would not affect the Maori in Aotearoa.

The ensuing treaty became a critical document that had a direct bearing on the health of Maori. While there is only one Maori text of the treaty, there are several English texts available, some with significant differences and each with a different general thrust. In the Maori text there is an assertion of a sharing of power between the Crown and Maori, while in the English text there is a reference to the transferral of power from Maori to the Crown (Kelsey, 1984). Because few Maori had the ability to read English during this era, it is the Maori text that must be examined.

Of crucial importance, in maintaining culture and Maori health, was the issue of protecting Maori land, language and other properties as well as retaining tribal jurisdiction. The Maori version of the treaty of Waitangi, signed by Maori chiefs, was the recognition by the crown of rangitiratanga (Maori sovereignty). Although article one in the Pakeha version said that the Maori would 'cede to Her Majesty the Queen of England absolutely and without reservations all rights and powers of sovereignty' (The Royal Commission on Social Policy, 1988); in the Maori text instead of sovereignty a composite word 'kawanatanga' was used which implies governorship (Orange, 1987). It is probable that had the Maori chiefs known that kawantanga actually meant total Pakeha jurisdiction, none of the chiefs would have signed the treaty (Kelsey, 1984).

The second article of the treaty also shows anomalies between the Pakeha and Maori versions. In the Pakeha text the chiefs and tribes had a guarantee of 'the full

undisturbed possession of their lands' estates, forests and fisheries and other properties' (Royal Commission on Social Policy, 1988). In the Maori text 'the undisturbed possession' is referred to as 'te tino rangatiratanga' which has been translated as actually meaning 'the full chieftainship' by two independent translators (Kelsey, 1984). The Maori text infers tribal control will remain with Maori while the Pakeha text avoids this reference. The translation of lands, estates, forests and fisheries and other properties is also problematic as the Maori text contained a more general reference in 'taonga katoa', literally translated as 'all gifts'. There is also the contention that Maori believed that this included not only objects of tangible value, but also possessions of cultural importance such as Maori language and culture (Kelsey, 1984). In the Maori version of the treaty, Maori believed they still had jurisdiction over their land and other possessions. Unfortunately in the Pakeha version of the treaty, Maori chiefs had signed away sovereignty to their lands and other possessions to the Queen of England, all they retained was title to the land that had become subordinate to the dictates of the Crown (Orange, 1987).

The third article in the Pakeha version granted to the chiefs 'all the rights and privileges of British subjects'. These rights and privileges in light of the previous two articles, contrary to what the chiefs believed in the Maori version, did not include any right to their lands, nor self government, nor any right to vote. However, the treaty bestowed upon the chiefs the so called 'blessings' of English municipal law (Miller, 1940). This third article allowed Pakeha to create legislation in which Maori autonomy became an impossibility and sometimes a punishable offence, which is what occurred at Parihaka in 1881 (Walker, 1982). In terms of well-being, the third article ensured the continuing health of the Maori through the protection of the Crown. This was to be the responsibility of both the government and tribal chiefs (Royal Commission on Social Policy, 1988). Unfortunately, Maori have often had to instigate and provide their own health programs without the help of Pakeha. One such example is the young Maori

Party formed at the turn of the century to improve the health of Maori and headed by Sir Apirana Ngata (Buck, 1950)..

After the signing of the treaty, a number of Maori tribes initially adjusted well to the Pakeha system as they were able to work communally and prosper economically. Some tribes in the 1850's were growing a variety of foodstuffs, several tribes possessed flour mills, piggeries, fleets of schooners, with Maori holding a monopoly on the North Island coastal trade. Many Maori tribes had become so successful that by 1855 they were supplying half the total exports of the colony (Miller, 1940).

However heavy government taxation of successful tribes, the proceeds of which were spent in Pakeha districts, meant an early end to many of these enterprises (Walker, 1982). Politically, Maori were defenceless as they were unable to have a representative to voice growing Maori concerns (Miller, 1940). These injustices, combined with constant gradual losses of Maori land to the Pakeha, eventually eroded the confidence of the Maori chiefs in the Pakeha system. These influences helped initiate the land wars of the late 1860's..

The consequent land wars gave the government justification to confiscate land from dissenting tribes. This land was then sold by the government to meet increasing Pakeha demand. By 1865 Parliament had unveiled a more efficient, effective and less costly method of obtaining Maori land. The creation of the Native Land Court not only helped destroy the principle of communal land holding by individualising land title, but it also helped de-tribalise Maori, facilitating the assimilative processes. The Native land Court divided Maori into hoko whenua (land sellers) and pupuri whenua (non-sellers) (Walker, 1982). This development was totally contrary to what was envisaged in the Treaty, nevertheless it was also a clear Pakeha intention (Parliamentary Debates, 1870).

The loss and desecration of Maori ancestral land by Pakeha, combined with the assimilatory pressures of a dominant Pakeha culture enforced by Pakeha laws, forced many Maori tribes in the late 1860's, to seek refuge in remote rural localities. The impact this had on Maori tribes was disastrous and had three important implications. Firstly, migration often meant a change to a harsher environment with fewer resources, and a significant drop in general living conditions. Secondly, this isolation meant Maori had inadequate access to Pakeha health care, which caused a serious hindrance to overcome Pakeha introduced diseases. Thirdly, and probably more importantly, it meant a disruption to the stability of the Maori tribal system. The overall impact of these factors resulted in a sustained decrease in the Maori population which lasted until the turn of the century. In 1840 it was estimated that there were 80,000 Maori in Aotearoa but by the early 1890's only 40,000 Maori remained (Pool, 1991).

The gradual improvement in Maori health, which occurred in the early 1900's, was due mainly to three factors. Firstly, through the gradual acquisition of a certain degree of immunity to introduced disease (Turbott, 1940); secondly, to a very high fertility rate (Pool, 1991); thirdly, to the concerted efforts of the young Maori party to educate Maori tribes on hygienic behaviour (Buck, 1950). Major changes occurred for Maori when the Labour government was voted into power in 1935. The policies and legislation this Labour government introduced had a beneficial effect on Maori health. Pensions and social security benefits were introduced, as well as free housing and medical care. While these changes dramatically improved the health of Maori the mortality and morbidity statistics were still poor when compared to the Pakeha. In 1937 the infant mortality rate was four times the non-Maori rate, while bronchial-pneumonia, tuberculosis, and intestinal diseases were respectively 13, 11 and 17 times the Pakeha rate (Turbott, 1940). There was a general belief among physicians of the era that Maori possessed cultural and inherent characteristics which predisposed them to ill health. Consequently Pakeha institutions, such as the education and health systems,

were given the task of educating the Maori on healthy behaviour. This usually meant teaching the Maori a more Pakeha orientated lifestyle (Ball, 1940).

The rapid improvement in the health of Maori after the 1940's provided support for the theory that assimilation was the key to improving Maori health. After the 1950's the demographic characteristics of the Maori population changed considerably. The lower mortality rate combined with a high fertility rate meant that by 1961 half of the Maori population was under 15 years of age (Pool, 1991). The tribal lands that remained in Maori hands could not cope with the rapidly expanding young Maori population, and many of the young sought work in urban centres. In 1926 only 9% of the Maori population lived in towns and cities, but by 1961 this had increased to 29%, and by 1981 to 79% (Pool, 1991).

During this period the Maori population exhibited other changes. Death and morbidity from infectious disease, such as tuberculosis, showed notable reductions. In 1950 the life expectancy for Maori males was 54 years and Maori females 56 years. By 1986 this had increased to 68 years for males and 72 years for females (Pool, 1991). Even with these improvements the mortality data for Maori indicated inconsistencies. An analysis of mortality data since the 1950's showed for Maori males in the 15-24 age group, mortality fell by 20% between 1952 and 1964, but between 1964 and 1975 there was actually a slight increase in mortality (Pomare, 1980). For Maori males in the 25-44 age group there was a 23% reduction in mortality between 1952 and 1964, while in the following ten year period the mortality rate remained stationary. Similarly for males in the 45-64 age group there was an initial rapid decrease in mortality prior to 1964, followed by a small increase (3%) in Maori male mortality during the decade 1964 to 1975. Maori females in the same age cohorts exhibited a similar trend to males over the same time periods, except for females in the 45-64 age group there was a 16% increase in mortality during the decade 1964 to 1975. This is in contrast to the over 65 year age

group whose mortality statistics have steadily decreased over the same 20 year period 1955 to 1975 (Pomare, 1980).

Death from infectious disease has declined rapidly for Maori since the 1950's. Unfortunately over the last 30 years there has been also been a corresponding increase in the number of chronic physical conditions and emotional or psychosomatic problems when compared to non-Maori (Pomare & De Boer, 1988; Wells, 1989; Skegg, 1989). Moreover, even in areas where Maori have improved, such as heart disease, Maori still record an excess in mortality and morbidity in comparison to non-Maori.

The mental health of Maori has changed considerably over the last 40 years, characterised by substantial increases in neurotic and character disorders. Since the early 1950's crude first admission rates to psychiatric institutions have been steadily increasing for Maori. In the period 1953 to 1957 the rate was 68 per 100,000 (Kelly, 1973) by 1983 it was 194 per 100,000. In 1984 Maori were exceeding non-Maori in all age groups below 50 years for first admission to psychiatric institutions, with this trend particularly pronounced in the 20-40 age groups (Sachdev, 1989).

Suicide, self inflicted injury, chronic depression, and alcoholism have become significant problems for young Maori but prior to 1970 these conditions were hardly a evident in the Maori community (Pomare, 1980; Pomare et al., 1988). Although suicide is lower for Maori in comparison to non-Maori in all age groups, it has been steadily increasing over the last twenty years. Paradoxically, there are twice as many incidents of self inflicted injury in Maori than non-Maori, the age groups most at risk are Maori less than 45 years of age, particularly females in the 15-24 age group (Skegg, 1989).

Depression rates have also been increasing since 1970 and this appears to affect more Maori females than males (Pomare et al., 1988). A study by Murchie (1984) found that

8% of young Maori women, aged less than 30 years, and who lived in urban environments, felt chronically depressed. This is in contrast only 3% of mature Maori women, those over 45 years of age, who had the same condition. The researchers surmised that mature Maori women had a greater involvement in Maori cultural life which protected their health. Supporting this argument, are mental health statistics indicating that the imbalance between Maori and non-Maori in the young, is redressed by mature Maori. Maori over the age of 65 years have mental health statistics well below that of non-Maori (Pomare et al., 1988). However the mental health differences between these two generations of Maori may merely indicate cultural differences in the way health is perceived and treated. Depression is a non-existent term and condition for some Maori (Durie, 1985).

Alcoholism is becoming a significant problem for Maori as it is implicated in a series of health related problems. Since 1970 there has been a four fold increase in the rate of first admissions of Maori males to psychiatric hospitals for the treatment of alcoholism. Most of these males were between the ages of 15 and 44 (Pomare et al., 1988). A study of alcohol consumption between Maori and non-Maori by Awatere, Casswell, Cullen, Gilmore & Kupenga (1984) found that although the consumption rates of alcohol between Maori and non-Maori were similar over the long term, the proportion of Maori men consuming 60ml or more of absolute alcohol per day was twice that of non-Maori. This was found to be more evident in the lower and middle occupational groups than in the upper occupational group. Age-standardised rates for the period 1980 to 1984 show alcohol related deaths to be 2.8 times greater in Maori males than non-Maori males (Pomare et al., 1988). Although alcohol-related illness and death is not a significant problem in Maori females (Pomare et al, 1988), Murchie (1984) found the alcohol consumption rate to be heavy and may be on the increase in the young women. When Smith and Pearce (1984) compared alcohol related deaths in Maori to non-Maori

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(excluding alcohol related accidents), alcohol was found to explain 10% of the excess deaths in Maori males and 2% of the excess deaths in Maori females.

As well as the abuse of alcohol by Maori there have been other specific behavioural explanations used to account for the higher morbidity and mortality in Maori (Pomare et al., 1988). Three of the most important behaviours include accidents or risk taking, obesity and cigarette smoking.

Death and injury from accidents, in particular motor vechile accidents, are a major cause of mortality and morbidity in Maori below the age of 45 years. Accidents, after correction for social class, has been found to explain 17% of the excess in deaths recorded in males and 8% of the excess in deaths in females, when compared to non-Maori. Furthermore, the relative risk of Maori to non-Maori has been calculated to be 1.4 for males and 2.0 for females (Smith et al., 1984). Although the heavier alcohol intake of Maori may explain some of the excess involving accidents, it is not enough to explain the total disparity exhibited in comparison to non-Maori. This is particularly evident when comparing the relative risk of death from accidents to alcohol related deaths in Maori females.

Obesity is a health problem which is directly and indirectly the cause of several types of illnesses and diseases (National Research Council, 1989). These ailments include coronary artery disease, high blood pressure, diabetes, gallstones and cancer. Although the mortality figures are low, age standardised rates for the period 1980 to 1984 indicated that death, where obesity is implicated as a factor, occurred 14 times more frequently in Maori males and twice as frequently in Maori females when compared to non-Maori (Pomare et al., 1988). Smith et al., (1984) estimate obesity accounts for 5% of the excess in deaths recorded between Maori and non-Maori. A study of New Zealander's dietary patterns (Birkbeck, 1977) using the Quetelet index, revealed that

Maori are considerably overweight across all age groups. There was one disturbing factor revealed in the study by Murchie (1984), although most overweight women were aware of having a weight problem, very few would actually attempt to rectify this through a change of diet.

Cigarette smoking is another negative behaviour that has been linked to premature mortality and chronic morbidity concerning a wide range of health disorders (Toxic Substances Board, 1989). Cigarettes increase a persons susceptibility to lung cancer, coronary heart disease, and chronic respiratory disease (Robinson, 1987). Maori mortality due to these particular diseases occur at rates between two to four times those of non-Maori (Pomare et al., 1988). While Smith et al., (1984) have estimated that smoking is able to explain around 15% of the excess in deaths between Maori and non-Maori. Maori, especially females, have one of the highest smoking rates in the world (Jacobson, 1986). A recent poll in 1989 (Toxic Substances Board, 1989), estimated that 45% of males and 57% of females were smokers. An analysis of the age groups concerned indicated that 61% of women below 35 years of age were smokers compared to 52% of mature women. The research found that the incidence of smoking in women below the age of 35 has been steadily increasing over the last 20 years. Paradoxically smoking rates for non-Maori in contrast to Maori, have recorded a gradual decline over the last 30 years. In 1981 33% of non-Maori males and 27% of non-Maori females were smokers (Department of Statistics, 1983).

Apart from these specific behavioural patterns which have been used to explain some of the health disparities observed between Maori and non-Maori, a number of broader explanations have also been proposed. It has previously been found that people in the lower socio-economic groups have a greater morbidity and mortality rate than people in the upper socioeconomic groups (Blaxter, 1976). This explanation also appears Plausible as 60 to 70% of Maori are also found in the two lowest socio-economic

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groups (Smith et al., 1984). However, there has also been research indicating that low socio-economic status explains only a small proportion of the mortality rate in Maori (Pearce, Davis & Smith, 1984). Pearce et al., (1984) compared the mortality rate of Maori males and non-Maori males across all socio-economic groups, they found the Maori mortality rate to be higher than non-Maori in every comparison. The greatest mortality difference was found when Maori and non-Maori males were compared across the two lowest socio-economic groups, with Maori recording 50% more deaths. This trend persisted, albeit to a lesser extent, in the next four socio-economic groups. These researchers estimated that only 20% of the excess in deaths observed in Maori could be explained socio-economically. When it is considered that smoking and alcohol consumption rates are probably more prevalent in the lower socio-economic groups, it makes this explanation appear even more deficient.

Inequitable access to health care has frequently also been cited as a plausible factor for the health disparities recorded between Maori and Pakeha (Pomare et al., 1988). It has been suggested that Maori needs are not catered for due to social and cultural barriers within the Pakeha health system. (Abbott & Durie, 1987). However other researchers provide evidence contending that Maori actually have a much higher level of medical contact than non-Maori and actively seek out medical care (Sachdev, 1990). This information suggests the way in which Maori utilises the Pakeha health system and the subsequent health of Maori is probably the result of four factors. Firstly, there is a group of Maori who use the Pakeha health system more than other Maori. Secondly, there are Maori who seek Pakeha treatment for particular types of health problems but not for others. Thirdly, there is a reluctance by some Maori to use the Pakeha health system and do so only when health problems become so chronic that they require continual attention. Fourthly, Pakeha treatment for certain types of health problems for Maori is ineffective and inappropriate. In 1984 only 3 out of 10,000 Maori females were admitted to psychiatric institutions for chronic depression, the majority being less

than 44 years of age (Pomare, 1988). Despite the fact that the psychiatric admission rate would increase appreciably if females over the age of 44 were excluded from the statistics, these figures are in stark contrast with the research by Murchie (1984) who found 8% of young females surveyed reported feeling depressed. It is apparent that depression is a significant problem with young females, but not for mature females. The way in which these two groups of Maori perceive their health and their socio-cultural position may provide an explanation for the way the Pakeha health system is utilised by Maori and the differences in health between these two groups.

The way in which the Pakeha health system is utilised by Maori, the changing health patterns and status of Maori and the health disparities observed between Maori and non-Maori, all appear to have a socio-cultural basis. Past explanations including socio-economic status and the specific behavioural differences between Maori and non-Maori have been inadequate and may be only components of a larger socio-cultural issue (Sachdev, 1990).

To analyse the health of Maori from a socio-cultural perspective, some past demographic changes in Maori must be examined. The 1950's were a period when large numbers of Maori migrated to urban environments, localities dominated culturally and socially by Pakeha. In order for Maori to survive in these foreign environments, several socio-cultural adjustments were required. A Maori communal lifestyle became an impossibility in urban areas, and consequently a basic grasp of the requirements of the Pakeha culture, such as the English language, became necessities. If Maori language is used as a cultural measure estimating the impact of assimilation on Maori, it becomes clear that Maori have undergone important cultural changes in a short period of time. A survey conducted in 1930 when 90% of Maori were rurally based, found 95% of Maori who participated in the survey, spoke Maori (Ball, 1940). This is in contrast to the 1970's where Benton (1979), found 15% of Maori below 15

years, and 38% above 45 years of age, were able to speak Maori. Benton's survey comprised a large sample of 33,000 subjects of Maori descent who originated from both rural and urban environments. Supporting these findings was a later study by Thomas (1988) who found Maori from rural locations generally had a stronger grasp of Maori knowledge and language than Maori from urban environments.

A method of analysing how socio-cultural factors may have impacted on health is to compare the Maori with other ethnic groups who have gone through similar acculturative processes. A number of studies have shown that the health of people from stable, socially based cultural backgrounds, can be adversely affected when they attempt to adapt to the western culture (Beaglehole, 1980; Hunter, 1988; Marmot & Syme, 1976; Cassel, 1974). Three ethnic groups with cultural similarities, who have been similarly affected by Western culture include, the Australian Aborigine, the Japanese, and Pacific Islanders.

Suicides among Australian aborigines, like Maori, were in the past relatively infrequent, but have been steadily increasing over the last thirty years. Research by Hunter (1988) found those likely to commit suicide had a history of alcohol abuse and depression which were the result of disruptions of interpersonal and cultural attachments, culminating in identity problems. Hunter surmised that this may have been due to the rapid changes and reforms during the 1950's and 1960's which were a hasty attempt to assimilate the young to a Western way of life. To aid the assimilatory processes it was a common practice to separate part-aboriginal children away from their parents and keep them on reservations. Here they would be raised in a Westernised manner while keeping tribal contact to a minimum. The eventual effect of this treatment for many was a lifelong feeling of insecurity and alienation, not only from the tribe from there tribe of origin but from the culture that they were expected to adopt (Perkins, 1975).

The Japanese are one of the few socially orientated cultures who have successfully adopted Westernised cultural ideals without radically changing their own cultural values. Nevertheless, the Japanese have also exhibited health problems when they have become culturally isolated within a Westernised environment. A research project involving three thousand Japanese Americans conducted by (Marmot et al., 1976) discovered that those Japanese who were acculturated had five times as many heart attacks as those who were enculturated (that is spoke Japanese at home, and related to their children in a Japanese manner). These findings occurred even when researchers controlled for levels of cholesterol, exercise, smoking and weight of the participants in the study.

Polynesians have been able to retain stable communal values largely because of their relative isolation in the Pacific. Unfortunately they are another group whose health deteriorates when they permanently reside in countries with western ideals. Recent Polynesian immigrants to Aotearoa have been found to exhibit blood pressure levels that are higher than when they were living on the Islands (Beaglehole, 1980). As with the Marmot and Syme study only part of the increase could be attributed to dietary change and weight gain. Similar blood pressure changes have also been noted among the African Zulu who migrate from rural to urban localities (Scotch, 1963).

There have been a small number of studies that have indirectly examined the impact of culture on the health of Maori in Aotearoa. One research project which indicates the effect of socio-cultural factors on health was conducted by Smith, Pool, Pearce, Lyon, Lilly, Davis and Prior in (1985). These researchers investigated the health of Mormon and non-Mormon Maori. They discovered that non-Mormon Maori had a higher mortality rate than Maori who were Mormon. These findings are hardly surprising as Mormons are strict teetotallers, but it was also revealed significant mortality differences between these two groups when children less than four years of age were

compared. The researchers noted that Maori Mormons generally possess stronger extended family values than non-Mormon Maori. As strong extended family connections are also an important component in Maori society, it is also possible that a strong Maori cultural background may have other positive benefits influencing health.

Some studies have attempted a more direct approach in examining socio-cultural effects on health. Cot death in Maori is twice as likely to occur to parents classified as Maori in comparison to parents classified as non-Maori (Pool, 1991). Mitchell & Borman (1989), analysed the geographical location of Maori in Aotearoa and divided Maori into those likely and those who were unlikely, to have social support. The researchers suggested regions that were densely populated with Maori would logically have higher 'cultural density' than regions less densely populated with Maori or low 'cultural density' areas. It was proposed that Maori living in areas of high 'cultural density' would show a lower infant mortality than those Maori from low 'cultural density' areas. However their findings were inconclusive. Maori today have a broad range of cultural orientations and are not revealed using broad comparisons such as differences in population density. This particular technique generally fails to reveal the strength of Maori cultural identification, and how embedded the individual is in Maori society.

This particular type of finding highlights the inherent problems involved in research on Maori health. One question that needs clarification is, 'What and who is a Maori?'. Is it sufficient to classify persons as being Maori according to the degree of Maori blood they may possess? Is it sufficient to classify persons according to their own personal identification? Because of the effects of assimilation during the last 40 years, young Maori today come from vastly different environments. These environments may emphasise a strong Pakeha (acculturated) or Maori (enculturated) approach to life, while there are others with a mixture of both approaches (partly acculturated). If the

health statistics between Maori and non-Maori are any indication, then there is also a strong likelihood that health differences also exist between these three groups of Maori. A common research flaw, when examining Maori health, is to overlook these differences. Instead of the examining the cultural background on a individual level, all Maori tend to be placed under one cultural 'umbrella', increasing the likelihood of confusing results.

Other studies have directly examined health behaviour differences between Maori who were labelled as acculturated and enculturated. A study of Maori fifth formers in Gisborne (Mitchell, 1983a) linked cultural identity with cigarette smoking. Students who knew their marae, their iwi, and attended hui were compared with those students who had no knowledge of their cultural backgrounds or did not participate in Maori activities. A larger proportion of students with a 'high cultural identity' were found to be smokers (31%), than the Maori students with a 'low cultural identity' (14%). Similar patterns were also discovered with Maori students and alcohol intake (Mitchell, 1983b). These studies suggest cultural background, if measured appropriately, can affect behaviour in a variety of ways which directly and indirectly has an influence on health.

Enculturated Maori are likely to have more social concerns than acculturated Maori. It has been found, in some socially orientated cultures, that social concerns become a strong motivating factor dictating whether, for example, smoking is acceptable or not (Makin, Makin, Ostero-Sabogal, Sabogal, & Perez-Stable, 1989). Consequently, to feel part of the group, a member would feel obligated to participate or not to participate in certain behaviours depending on the majority decision. These factors help to explain Mitchell (1983a; 1983b) research results, which found that Maori who had a 'high cultural identity' had a higher incidence of smoking and alcohol consumption, and the

failure for the vast majority of overweight women in the Murchie (1984) study to change their dietary patterns.

The health of enculturated Maori could be expected to differ from acculturated Maori in other ways besides health behaviours. Enculturated Maori have cultural skills and resources which help them in a Pakeha environment, which would directly and indirectly benefit health. This includes customs which relieve stress, such as tangihanga (Maori funeral) which allows an intense, immediate expression of grief and resources such as the availability of an extensive whanau base, (a strong social support network). Enculturated Maori generally have a strong, positive self identity, nurturing the mind, body and spirit which protects against the negative feedback of being Maori in Pakeha society. There are other advantages to enculturation, such as the double benefit of having access to both Pakeha and Maori medicine so the appropriate treatment can be sought for particular health problems. It is also possible that enculturated Maori have a broader concept of health care than acculturated Maori, and possibly gain earlier and more effective treatment. Although a strong inclination to engage in high risk health behaviours would remain, this could be over-shadowed by the other positive aspects that promote good health.

For an acculturated Maori survival in a Pakeha dominated society is dependent on a person gaining a certain measure of self reliance, independence, competitiveness and self discipline. These values in Westernised society are normally passed on from generation to generation and ingrained into the individual from birth (Triandis, Bontempo, & Villareal, 1988). These attributes allow a person to become what is considered successful in Pakeha society. They enable a person to have the optimal chance of gaining occupational prestige and monetary wealth, which in turn becomes a source of social and personal identification (Hofstede, 1980). Moreover, unlike an enculturated Maori, acculturated Maori would be less likely to engage in negative

health behaviours than an enculturated Maori (Mitchell, 1983a; 1983b). Conversely, the inability to adjust to the demands of a Pakeha society, or to take personal control over one's life is considered failure by Pakeha (Triandis et al., 1988). The general well-being of a person under such circumstances is enhanced if Pakeha values have been attained but greatly diminished if not. The responsibility for success or failure in Pakeha society centres very much on the individual, regardless of outside social, cultural or environmental circumstances. In terms of health it has been found that patients often blame themselves for health problems over which they had little control (Taylor, 1982).

Partially acculturated Maori are the group that is possibly the most vulnerable to ill-health. It has often been the belief that to be brought up in two contrasting cultures is advantageous, as it allows a person to obtain the best of two worlds. However the reality of the situation may actually be the reverse. This group includes Maori who may have difficulty in identifying with both the Pakeha and Maori worlds and who lack the resources, knowledge, and skills to enable them to cope in either culture. Mechanisms of stress relief are impaired, such as the level of the social support available; access to Maori health care would be greatly reduced. These Maori maybe inclined to feel more negative about themselves, as they be more liable to regard the Pakeha stereotype of Maori as being correct due to a stronger likelihood of inheriting individualistic Pakeha values. This partially acculturated group could include Maori who encounter difficulties in attempting to live two conflicting lifestyles. This would be less of a problem for acculturated and enculturated Maori who would be more inclined to distance themselves from the opposing culture. This cultural conflict was a problem observed by Gluckman (1968) and experienced by the first generation of Maori born in urban environments during the 1960's. As those adolescents are now adults and are likely to be parents, the effects of those problems may be encountered, in one form or another, by their own children.

Where Maori are placed along this cultural continuum can have several important health implications. Maori today are faced with health problems which were once solely the domain of the Pakeha. One health problem that in recent times has become increasingly significant, particularly for acculturated or partially acculturated young females, is depression. Depression is more than just a psychiatric problem, it's a general health disorder which has been correlated with a variety of health problems (Calabrese, Kling, & Gold, 1987; Byrne, 1987). Some of these health problems include heart disease (Razin, 1982), cancer (Shekelle et al, 1981) and asthma (Friedman & Booth-Kewley, 1987). These are three diseases in which Maori generally compare poorly with non-Maori, particularly among young females (Pomare, 1980; Pomare et al., 1988).

Complicating the problem further are the inherent inadequacies of the Pakeha medical services to deal with certain health problems such as depression. As with most illnesses, a curative approach would be employed emphasising behavioural therapy and antidepressants. However it is unlikely that such an approach will identify and consequently rectify the problem in Maori. A curative approach functions well when examining specific causes of illness (Strecher, De Vellis, Becker, & Rosenstock, 1986) but conditions that are influenced by a complex host of pyscho-social and socio-cultural factors do not respond well using this method of treatment (Davis, 1981). Depression can be initiated, affected and maintained by social factors such as the family (Kiecolt-Glaser, Fisher, O'Grock, Stout, Speicher, & Glaser, 1987), which is governed by the presence or absence of social support (Janis, 1983). Therefore if the rising incidence of depression in young Maori females results from cultural and societal alienation, it will prove to be difficult to overcome using traditional Pakeha treatments. Enculturated Maori females, are more likely to have inherent cultural mechanisms, such as social support, that prevent health problems as well as having access to, and faith in, alternative methods of healing such as the tohunga. Conversely,

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acculturated and partially acculturated females, would take a more curative approach to health, be more inclined to individualise health problems, have less socio-cultural support, feel more alienated, have fewer options available in terms of treatment, and have less faith in alternative forms of healing.

The needs and resources of Maori are likely to vary and have an eventual impact on health. Jemmott and Magloire (1988) have found people have variations their need for social support. The social support deemed adequate by one person may be inadequate by another. Jemmott et al (1988) examined the relationship between academic stress and salivary concentrations of immunoglobin A (S-IgA), which is an antibody with an important role in mucosal defence against respiratory infections. They found that a perceived lack of social support, which varies from individual to individual, significantly reduced salivary concentrations of S-IgA. Consequently, Maori with different cultural orientations are likely to have different individual needs such as with the requirement and availability of social support. This may partially explain the inconclusive findings of the Mitchell et al., (1989) study on cot death. Maori with a strong need for social support may not be receiving the level of support they desire, including those Maori from areas with a high 'cultural density'. These effects would mean poorer health, not only for themselves, but also to those within their immediate whanau. Partially acculturated Maori are more likely to need more social support than acculturated Maori but have less available, when compared to enculturated Maori.

The health disparities observed between Maori and Pakeha, in part result from socio-cultural influences rather than the traditionally proposed explanations. If anything, explanations such as the high incidence of smoking, alcohol abuse, obesity and the relatively low socio-economic status of Maori are possibly only symptoms of a deeper and extensive socio-cultural problem (Sachdev, 1990). Health is influenced by a wide range factors that cannot be confined to specific and traditional explanations and

consideration must first be given to the individuals socio-cultural position. The Maori population has experienced rapid socio-cultural change since the 1940's and as a result have experienced both positive and negative health changes. Ethnic groups who are able to maintain a stable culture and control over its development will have benefits in terms of health for its members. As has been noted previously, the Japanese been able to avoid Western cultural domination in their country. They possess a culture that is not only stable but have with values that are socially orientated. The association may be spurious, between a stable culture, social values and mortality, but the life expectancy of Japanese is also the highest in the world at 76 years for males and 82 years for females (Ichiro, 1990).

There has been a general failure to acknowledge a socio-cultural problem exists in Aotearoa. Perhaps because of the mistaken belief by most Pakeha and some Maori, that we are all one people or 'New Zealander's'. Theoretically this means there is equality between Maori and Pakeha. Unfortunately this also implies that there can be only one viable culture in Aotearoa, this being Pakeha culture. The paradox is that inequality does exist, and that there always has, and always will be, at least two different cultures in Aotearoa, which culturally affect Maori to varying degrees.

Socio-cultural changes are not only needed in Pakeha society but also Maori society to alleviate the stress and alienation on some young Maori. There is evidence of a disturbing trend for young Maori females to be over-represented on many of the indices of health when compared to non-Maori and Maori males (Pomare et al., 1988; Skegg, 1989). The situation has changed in recent times, but in the past females were lowly valued in both Maori and Pakeha society. Accordingly young Maori females are doubly disadvantaged. Murchie (1984) remarks that Maori women are highly valued when they mature, but this is of little use if their health is ravaged when young.

Moreover, if their cultural attachments are weak, it unlikely that young women will ever have a prominent role to perform in Maori society.

This present study will show that Maori vary in their degree of Maoritanga which will have an influence on health, health behaviours and the way Maori and Pakeha health systems are utilised. This will be accomplished by creating a Maoritanga measure to determine the degree of importance Maoritanga has in an individual. The difference in Maoritanga importance will reflect differences in health, health behaviours, and health system utilisation.

One of the more renowned Maoritanga measures was the one developed by Williams (1960), which was used to assess achievement motivation in teacher trainees. This measure was also employed by Ritchie (1963) to study Maori in Rakau. The William's Maoritanga measure contains ten questions that investigate various aspects on being Maori. A sample of the questions used include, 'Do you have one half or more of Maori blood?', 'Do you live on a Pa?', (fortress), and 'Do you use a tohunga?'. The responses are then added to create a final mark out of 10. This method provided a continuum of scores that was trichotomised to provide a group of Maori who were acculturated, enculturated, and partly acculturated. In the Rakau sample, approximately 10% of the sample were found to be acculturated, 20% enculturated, and 70% partly acculturated.

To use the Williams Maoritanga measure in this present study is inappropriate for three reasons. Firstly, it is not possible to assess Maoritanga with only ten questions. Different iwi accentuate different cultural traits to a greater or lesser extent than other iwi (Rangihau, 1975). For some iwi, Maori language is extremely important while for others it holds little value. Secondly, Maori have gone through several changes since the early 1960's. The majority now live in urban areas and are highly integrated with Pakeha. The number of Maori with one half or more of Maori blood has greatly

reduced, and there are few today who live on a Pa. Moreover, because of the changes in Maori during the last 40 years it is inappropriate to have the respondent to answer either yes or no on a question. A large proportion of Maori today have to conform to the requirements of both the Maori and Pakeha cultures. This includes the push and pull of the whanau in Maori society and the pressures of an occupation imposed by Pakeha society. The importance of each is likely to differ between Maori. Therefore different responses would be required to cover the different set of circumstances facing each individual. The third reason why it would be inappropriate to use the William's Maoritanga measure is that it fails to reveal whether Maoritanga is actually important to the person in question. A person may have a detailed knowledge of Maori culture and have certain behaviours that are typically Maori, such as regularly attending hui, but in practice they may possess values or motives that are actually Pakeha. A person's Maoritanga has an intangible value, an inner self-identification which is a manifestation of values and ideals that are typically Maori in orientation.

The Maoritanga measure to be used in this present study needed to take into account the above qualifications. It includes questions that cover a broad cultural area with a wide range of responses from which to choose. It will also endeavour to reveal the respondents inner motives by incorporating a section on identity. This measure should demonstrate that Maoritanga extends along a continuum which will be composed of acculturated, partially acculturated and enculturated Maori.

The specific hypotheses of the present study are as follows:

(1). It is predicted that of the three groups of Maori, enculturated Maori will have relatively better health and partially acculturated Maori relatively worst health, as measured by self-reported health, physical symptoms, general distress and chronic illness.

(2). It is predicted that Maori females will have poorer self-reported health, exhibit more physical symptoms, general distress and chronic illness than Maori males.

(3). Acculturated Maori will engage in less negative health risk behaviours than the partially acculturated and enculturated Maori.

(4). It is predicted that enculturated Maori will have a broader utilisation of the available health services as they would use both Maori and Pakeha systems, whereas the acculturated and the partly acculturated Maori would predominantly use the Pakeha system.

METHOD

Subjects:

Subjects were chosen from students of Maori descent enrolled at Massey university in 1991. It had been assessed, from data supplied by the Maori Studies Department, that there were 530 students who had declared themselves as Maori, on the University roll. University students were chosen as subjects for this study, as tertiary institutions not only attract Maori from Pakeha environments, but the presence of a Maori studies department, and a Maori culture club on campus, increased the likelihood of obtaining a broad cultural cross-section.

There were 128 subjects of Maori decent who participated in the present study. To meet the requirements of the study all subjects were between the ages of 15 and 45 years. These subjects were selected in two ways. The first group of subjects were approached directly in a variety of locations around the University. Subjects were asked if they were Maori and a university student, and if the reply was affirmative, they were asked if they would like to complete a questionnaire concerning Maoritanga and health. A total of 59 subjects completed the questionnaire, in this way, 33 males and 26 females with ages ranging from 18 to 42 years, the mean age being 25 years. The second sample of subjects were obtained through a written request to the enrolment office, to provide a selection of 150 students who had indicated that they were Maori on their enrolment forms. In an effort to gain as broad a cultural cross-section of Maori as possible, the enrolment office was requested to provide 50 who had responded as 'Maori only' on their enrolment form, with the remaining 100 responding as 'Maori/Pakeha'. The subjects in this group were contacted by phone and after a brief initial explanation of the study, were asked if they would take part. A large number of these subjects were unable to participate, as they either could not be contacted, failed to return the questionnaire, or had already been approached in the first sample. Of

those 150 subjects, 69 completed and returned the questionnaire (27 from the group who indicated they were 'Maori only', and 42 from the group who indicated they were 'Maori/Pakeha'). There were 31 males and 38 females in this second sample, ages ranged from 18 to 44 years, with a mean age of 25 years.

Measures:

Maoritanga in this study was assessed using a composite scale derived from four different sources: firstly, from the Williams (1960) Maoritanga measure; secondly, questions derived from a scale used to assess acculturation in American Hispanics (Mendoza, 1989), with the questions being altered to make them appropriate for Maori; thirdly, from a study of Maori university graduates who were from a variety of cultural backgrounds (Fitzgerald, 1977); fourth, from information gained at a personal level, and orally from members of my whanau, Maori researchers, and other prominent Maori.

The resulting measure was composed of 28 questions separated into three sections (see Appendix). Section one labelled 'knowledge', is used to determine the level of knowledge the respondent has of Maori culture. Section two labelled 'behaviour', is used to determine the level of physical involvement the respondent has in Maori society. Section three labelled 'identity', is composed of three sub-sections which examines the respondent's 'personal', 'social' and 'cultural' identities.

There were three questions in the 'knowledge' section measuring aspects such as fluency in Maori language. For each of the three questions, respondents had the choice of five options. There were six questions in the 'behaviour' section. The questions in this section covered such activities as the amount of attendance at hui, Marae, clubs and tangi, to questions concerning tikanga and ritenga in the home. For each question the respondent had the option of five responses. The section on 'identity' is composed

of questions based on the Mendoza acculturation scale (Mendoza, 1989) and modified for Maori respondents. 'Personal identity', inquires about how strongly the respondent feels about their Maoritanga, assessed using six questions. 'Social identity' examines the social relationships the respondent had or prefers to have at a ethnic level, assessed using five questions. 'Cultural identity' examines the respondent's cultural relationships and their importance using eight questions. The overall scores on the Maoritanga measure can range from a low of 0 to a high of 82 with low scores indicating a Pakeha only cultural orientation, and high scores indicating a Maori only cultural orientation.

Maoritanga was also assessed by asking the single question 'If you could place Maoritanga on a scale from nought to ten, with 0 indicating little Maori and 10 more Maori, where do you think you would be placed'. This was termed self-reported Maoritanga (subjective account) and was measured on a 11-point scale.

The second part of the questionnaire was composed of three sections which examined firstly health, secondly health behaviours and thirdly health utilisation. The first section assessed four aspects of health, these included self-reported health, physical symptoms, general distress and chronic illness. The second section examined five different health behaviours previously found to contribute to the poorer health of Maori. These included body-weight regulation, cigarette smoking, alcohol intake, driving (risk-taking) and exercise. As exercise is also considered a health behaviour that may differ between Maori and non-Maori (Pomare et al., 1988) it was also included. The third section examined the respondents health utilisation patterns of Pakeha and Maori health systems.

In section one self-reported health was assessed by using two questions. The first question examines relative health by asking the respondent, 'Compared to others your own age, how would you rate your health at the present time?'. The second question

examines absolute health, 'Compared to a person in excellent health, how would you rate your health at the present time?'. Both items were rated on a seven-point scale from 'terrible' (1) to 'excellent' (7). Self-evaluation of health by averaging these two scales provides a highly accurate estimate of the respondents actual health status (Idler & Kasl, 1991).

Physical symptoms of health was assessed by using a the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) (Cohen and Hoberman, 1983). Although originally composed of 39 items, a shortened version of 32 items was suggested by the authors. This shortened version was successfully adopted in a subsequent study by Laird and Chamberlain (1990) and as a result it was also applied into this present study. The 32 item inventory commences with the question, 'Indicate how much each of the following problems has bothered or disturbed you in the last month?' The items examined cover a wide range and includes aspects such as, 'dizziness', 'diarrhoea', 'acne', 'muscle cramps', and 'listlessness' all rated on a five-point scale ranging from 'not at all' (0) to 'extremely' (4) .

General distress was assessed by using the abbreviated Hopkins Symptom Checklist (HSCL-21) (Green, Walkey, McCormick & Taylor, 1988). This checklist is a shortened 21 item version of a scale that originally consisted of 58 items (Derogatis, Lipman, Rickels, Uhlenhuth & Covi, 1974). Although this shortened version is relatively new, it has been found to compare favourably with the longer version (Deane, Leathem & Spicer, 1992). The HSCL-21 or general distress checklist, assesses three separate factors. These factors include general distress items such as 'Trouble concentrating', somatic distress such as 'Hot or cold spells', and performance difficulty such as 'Difficulty in speaking when you are excited', seven questions for each factor. The general distress checklist begins with the statement 'How have you felt during the past seven days including today?', responses were then rated on a four point rating scale

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ranging from 'not at all' (1) to 'extremely' (4). One of the questions in the general distress checklist, namely 'feeling blue', was reworded to 'Feeling depressed or down', to make it more applicable to respondents in Aotearoa.

Chronic illness was assessed by asking the respondent, 'Do you have any condition which you are being treated for regularly or have to take regular medication for?'. This question has a dual purpose. Firstly it will determine if chronic illness varies with levels of enculturation. Secondly it determines whether the perception and definition of health and illness varies with level of enculturation. Similar techniques for grouping chronic illness have been successfully used in previous studies (Blaxter, 1985).

The second section examined five health behaviours. These health behaviours were examined in a manner similar to the study conducted by Timko and Ajzen (1986). Three separate components were examined for each behaviour. The first component assessed attitude, ('Generally do you consider getting regular exercise to be?'). The second component assessed the degree of personal control that the respondent has over the behaviour, ('Personally do you consider getting regular exercise for you to be?'). The third component examined the frequency with which the respondent engaged in the behaviour ('Do you get regular exercise?'). Respondents recorded their responses on 7-point semantic differential scales that had 'good' (1) to bad (7) for attitude; 'easy' (1) to 'difficult' (7) for control; and 'always'(1) to 'never' (7) for frequency of behaviour. Low scores on each of the scales is indicative of a good attitude, strong personal control and a low frequency of engaging negatively in the behaviour. The scores for attitude, control and frequency can be combined across the five behaviours to provide a general score for attitude, control and frequency, or each behavioural component for each behaviour can be examined separately.

The third section examined how the respondent utilised the health systems, both Pakeha and Maori. The questions on health utilisation had four questions focusing on general practitioners and four questions focusing on tohunga. The questions and responses available were the same for both general practitioners and tohunga. The first question for general practitioners asked 'How often do you use a general practitioner?', responses available included 'Never', through to 'Regularly'. The second question asked 'When would you or do you use a general practitioner?', five responses were available including 'Not at all', to 'For all types of problems'. The third question asked 'Do you feel a general practitioner provides you or would provide you with adequate treatment?', responses included 'Don't know', 'To an extent', 'No', and 'Yes'. The fourth question asked 'Do you have a problem with access to a general practitioner?', responses included 'Geographic or financial difficulties', 'Social or cultural difficulties', 'Combination of the above factors' and 'No difficulties'.

Procedure:

A draft of the Maoritanga measure was initially tested on six subjects, three female and three male, who had declared themselves to be Maori. The ages of these subjects ranged from 25 to 32. The researcher ensured, from prior knowledge of the subjects concerned, that the subjects would represent a broad cultural cross-section. The overall scores on the Maoritanga measure for this small sample ranged from 26 to 68. The six subjects who participated were unable to detect any major faults in the measure, but indicated that some of the questions required rewording to clarify their meaning. The subjects who participated in the pilot study, were also asked if they felt offended or threatened in any way by the measure, as there was a concern that the study could offend some Maori. Rather than feeling threatened, all of the subjects considered it to be interesting and thought provoking.

In the main study all respondents were given a consent form which included written material on the objectives of the survey (see appendix). The form also included information on whether they were eligible to participate in the study, an assurance that the information they would provide would remain confidential to the researchers, and that they also had the right to refuse to answer any question. If the subjects were interested in obtaining feedback on the overall results of the survey, it was requested that they leave a return address on the consent form. After agreeing to participate, the subjects in the first group were handed the Maoritanga questionnaire which they perused and queries answered. Information was also supplied on where the researcher could be contacted in the event of a future problem or query, and where to send completed questionnaires and consent forms. The subjects were also asked to write any comments they felt applicable on the questionnaire, which may have been of help to the researchers when analysing the results.

The second group of subjects which were supplied by the enrolment office, were phoned, and the reason for the call explained. An explanation was also provided on how and why their names and phone numbers were acquired, and any questions the subjects had were answered. A questionnaire, consent form and a free-post envelope, were mailed out to those subjects who agreed to participate. A permanent address was also requested from those who wanted feedback on the overall results.

RESULTS

Prior to analysis, all variables were examined using the statistical package for the social sciences (SPSS) for accuracy of data entry, missing and outlying values. Listwise deletion was used to eliminate any cases with missing data. One case for physical symptoms was found to be an extreme outlier, to reduce it's influence on the distribution, the value was recoded one unit above the next extreme score.

A reliability analysis was conducted on the Maoritanga measure to determine Cronbach's alpha and examine inter-item correlations. Of the 28 items, two correlated poorly with several of the other items. These were two questions on social identity and cultural identity (see Appendix). Socially respondents reported that they were unconcerned about where they resided, nor were they critical of any specific culture. Furthermore these two questions had several missing values. At this point Cronbach's alpha was .93, as the deletion of these two items would increase Cronbach's alpha to .94, the decision was made to omit these two questions from further analysis. High reliability was also found among the sub-scales, even though some of these sub-scales had few items. All of the sub-scales had high inter-correlations, of all the sub-scales social identity had the lowest correlations with the other sub-scales and the Maoritanga measure overall (see Table 1).

A frequency distribution of the Maoritanga measure revealed a broad range of scores with a minimum score of seven and a maximum of 70 (n=112). Table 1 displays the means, standard deviations, Cronbach's alpha and inter-correlations between the sub-scales and the Maoritanga measure overall. The scores on the Maoritanga measure were trichotomised into three groups composed of those subjects scoring below the 33th percentile (acculturated Maori), those between the 33th and 66th percentile (partly

acculturated Maori), and those above the 66th percentile (enculturated Maori). There were 38, 36 and 38 respondents in each group respectively.

A frequency distribution of self-reported Maoritanga revealed a broad spread of scores with a minimum score of 0 and a maximum of ten, it was also found to correlate very highly with the Maoritanga measure (see Table 1). Self-reported Maoritanga was also trichotomised into three separate groups applying the same method as used for the Maoritanga measure. This resulted in 43 subjects with low, 33 in the mid range, and 49 subjects recorded as having high self-reported Maoritanga (n = 125).

Table 1. Correlations, means, standard deviations and reliability of the Maoritanga measure, the sub-scales and self-reported Maoritanga.

Scales	1	2	3	4	5	6	Mean	S.D.	C.Alpha
1. Knowledge							5.10	2.42	.75
2. Behaviour	.82						8.54	6.01	.88
3. Personal	.72	.79					11.97	4.15	.79
4. Social	.51	.60	.58				5.52	1.97	.73
5. Cultural	.69	.76	.76	.69			7.84	3.38	.83
6. Maoritanga	.87	.94	.90	.71	.87		37.85	16.01	.94
7. S-R Maoritanga	.67	.63	.68	.49	.68	.72	5.53	2.42	N/A

For self-reported health, physical symptoms and general distress, the Maoritanga measure was examined first followed by self-reported Maoritanga. These analyses, using analysis of variance (anova), tested the hypotheses that health differences will vary with degree of enculturation and between the genders. An analysis of self-reported

health did not yield a significant effect for Maoritanga (F (2, 106) = .556, p > .05), for sex (F (1, 106) = 1.88, P > .05), nor for the interaction between Maoritanga and sex (F (2, 106) = .090, p > .05). Figure 1 displays the group means for self-reported health.
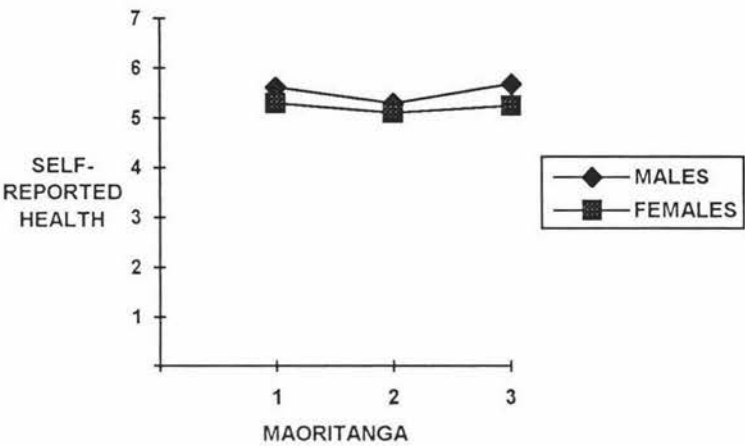
Figure 1. *Mean self-reported health for Maoritanga by sex.*

An analysis of physical symptoms revealed no main effect for Maoritanga (F (2, 103) = 1.019, p > .05). Sex was found to be significant (F (1, 103) = 4.383, p < .05), with females having more physical symptoms than males. However, there was a non-significant interaction between sex and Maoritanga (F (2, 103) = .386, p > .05). Figure 2 displays the group means for physical symptoms.

Figure 2. *Mean physical symptom for Maoritanga by sex*

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An analysis of the general distress found non-significant effects for Maoritanga, (F (2, 103) = .650, p > .05), sex (F (1, 103) = 2.528, p > .05), nor for the interaction between Maoritanga and sex (F (2, 103) = .208, p > .05). Figure 3 displays the group means for general distress.

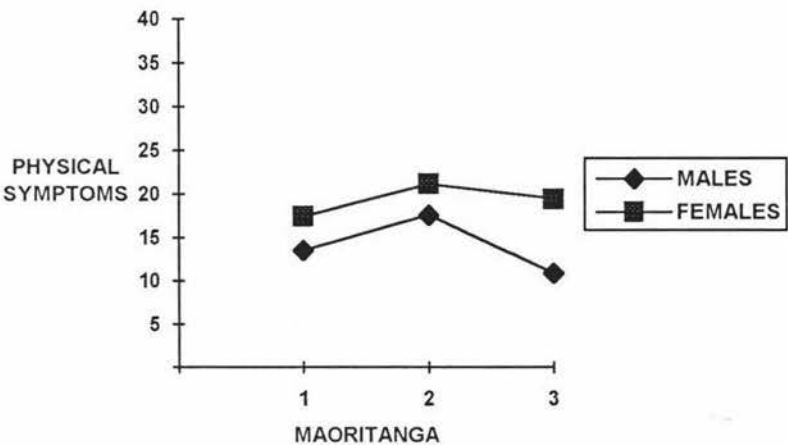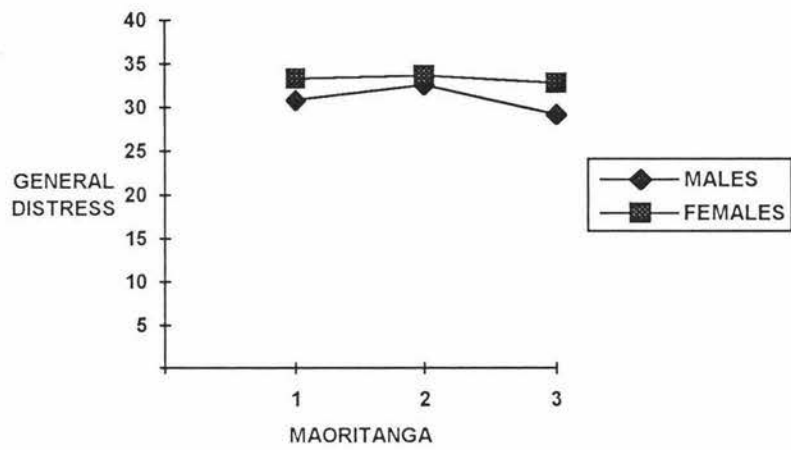**Figure 3**. *Mean general distress for Maoritanga by sex.*

The above results for self-reported health, physical symptoms and general distress, failed to support the hypotheses that there would be health differences varying with enculturation. A sex difference was found for one of the analyses, females were found to exhibit more physical symptoms than males. This finding partially supported the hypothesis that females would have poorer health than males.

Self-reported health, physical symptoms, and general distress were again analysed using self-reported Maoritanga. These analyses were conducted to determine whether personal perceptions of one's Maoritanga had an impact on health. The analysis of self-reported health found non-significant effects for self-reported Maoritanga (F (2, 119) = .457, p > .05), for sex (F (1, 119) = 1.409, p > .05), and the interaction effect between sex and self-reported Maoritanga, (F (2, 119), = 1.003, p > .05). Figure 4 displays the group means for self-reported health.
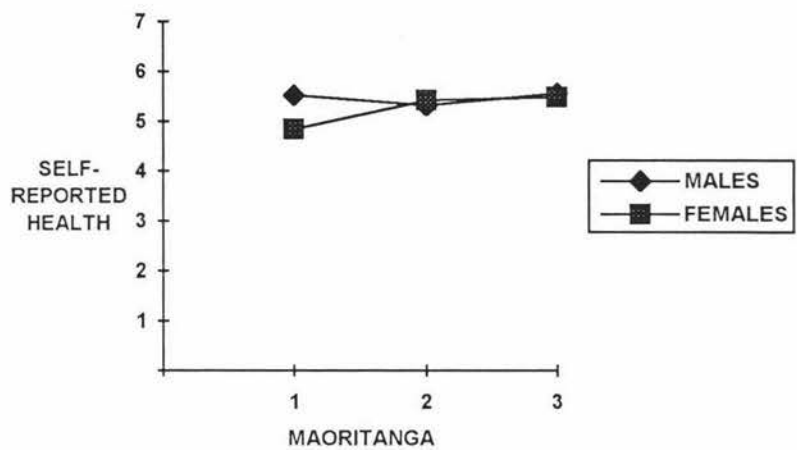
Figure 4. *Mean self-reported health for self-reported Maoritanga by sex.*

An analysis of physical symptoms showed a non-significant effect for self-reported Maoritanga (F (2, 115) = 2.764, p > .05). Sex was found to be significant (F (1, 115) = .4.709, p < .05), females showed generally more physical symptoms than males. However, there was a non-significant interaction between sex and self-reported Maoritanga (F (2, 115) = 2.224, p > .05). An examination of the mean physical symptom scores (see Figure 5), revealed that females with low self-reported Maoritanga had nearly twice the number of physical symptoms than females who had high self-reported Maoritanga. A comparison (the Newman-keuls test) was conducted between females with low, and high self-reported Maoritanga. This comparison revealed a significant difference (F (2, 58) = 4.071, p < .05), females with low self-reported Maoritanga showed more physical symptoms than females with high self-reported Maoritanga. The comparisons between medium with high or low self-reported Maoritanga were non-significant.

Figure 5. *Mean physical symptoms for self-reported Maoritanga by sex.*

An analysis of general distress failed to show main effects for self-reported Maoritanga ($F_{(2, 118)} = 2.676$, $p > .05$), for sex ($F_{(1, 118)} = 1.490$, $p > .05$), and the interaction between self-reported Maoritanga and sex ($F_{(2, 118)} = 1.962$, $p > .05$). An examination of the means (see Figure 6) indicated possible differences between females with low and high self-reported Maoritanga. A comparison was conducted between these two groups. This analysis was found to be significant ($F_{(2, 57)} = 3.916$, $p < .05$), females with low self-reported Maoritanga had more general distress than females with high self-reported Maoritanga. Comparisons between medium with high and low self-reported Maoritanga were non-significant.

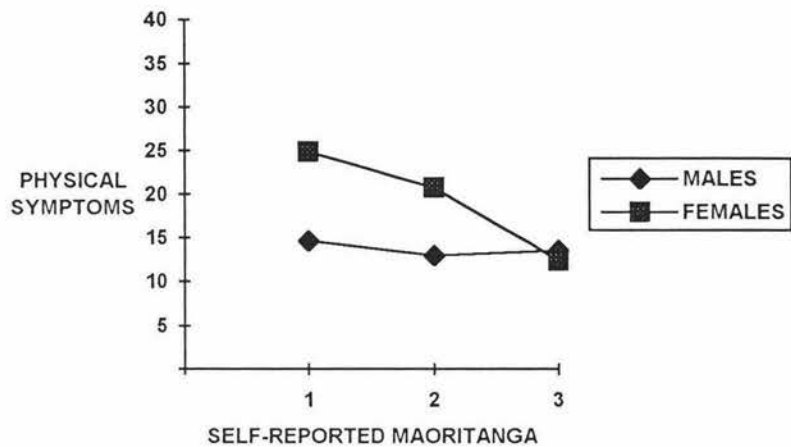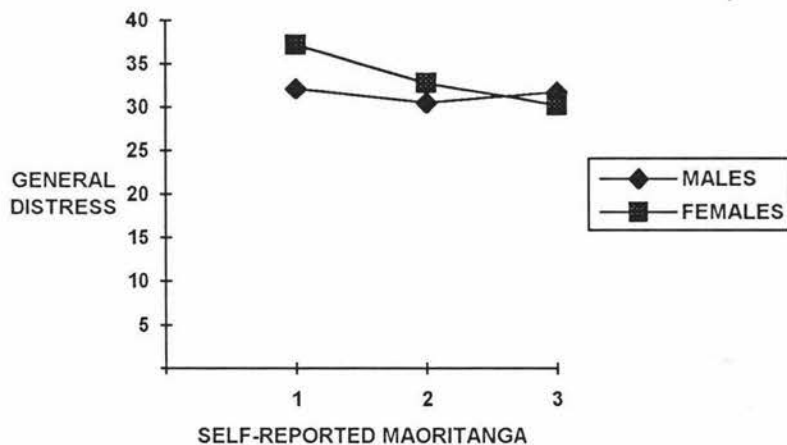**Figure 6.** *Mean general distress for self-reported Maoritanga by sex.*

The results for self-reported Maoritanga showed that females had significantly more health problems, in terms of physical symptoms and general distress, than males. Although there were no significant interactions between self-reported Maoritanga and sex for physical symptoms and general distress, the comparisons indicated health differences between males and females appeared to be due to females with low self-reported Maoritanga.

A frequency distribution of chronic illness showed that 83% of the respondents reported being free of chronic ailments. This may have resulted from having a youthful sample of respondents. Because reported chronic illness was so low it was not analysed in reference to the Maoritanga measure or the respondent's self-reported Maoritanga. For those respondents who reported chronic illness, asthma was the most commonly reported condition with seven responses. Asthma was followed by bronchitis with three cases; hay-fever, two cases; and migraine, two cases. The remaining respondents reported a variety of conditions from anxiety to stomach ulcer.

It was predicted that partly acculturated and enculturated Maori would indulge more negatively in five behaviours that previous research has found to cause poorer health in Maori than non-Maori. These five behaviours included alcohol and cigarette consumption, driving over the speed limit (risk taking) regulating body-weight and exercise. The three components of attitude, control, and frequency across the five behaviours were added together to provide a global score for attitude, control and frequency. High scores were associated with a poor attitude, less control and a higher frequency of indulging negatively in the five behaviours concerned. The influence of Maoritanga and self-reported Maoritanga on the three components was examined using anova. This analysis was conducted to determine if attitude, control and greater frequency for engaging negatively in the five behaviours varied with enculturation or sex of the respondent.

Attitude was not significantly influenced by Maoritanga, self-reported Maoritanga or sex of the respondent. Control was also not significantly influenced by Maoritanga, self-reported Maoritanga or sex of the respondent. Frequency was not significant for Maoritanga for the main effect of sex ($F(1, 101) = 3.196$, $p > .05$). However, frequency was significant for self-reported Maoritanga for the main effect of sex ($F(1, 113) = 4.180$, $p < .05$). Females in comparison to males, generally had more negative health behaviours (see Figure 7). No main or interactive effects were found for Maoritanga or self-reported Maoritanga.
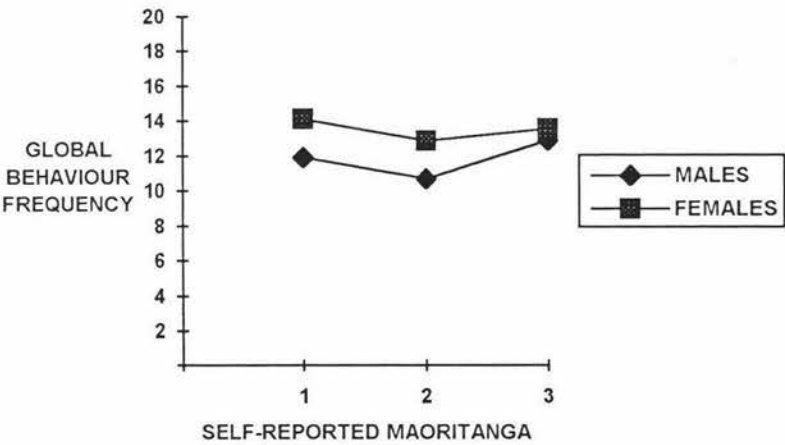
Figure 7. *Mean of the five behaviours for self-reported Maoritanga by sex*

An individual examination of the five health behaviours, found no significant main or interactive effects for Maoritanga and self-reported Maoritanga. However three behaviours exercise, body-weight regulation and exceeding the speed limit differed significantly for sex for both Maoritanga and self-reported Maoritanga.

The first behaviour differing significantly for sex was exercise. A significant effect was found for self-reported Maoritanga ($F(1, 119) = 8.609$, $p < .05$) and Maoritanga, ($F(1, 106) = 10.209$, $p < .05$) females reported a lower exercise frequency than males (see Figure 8).

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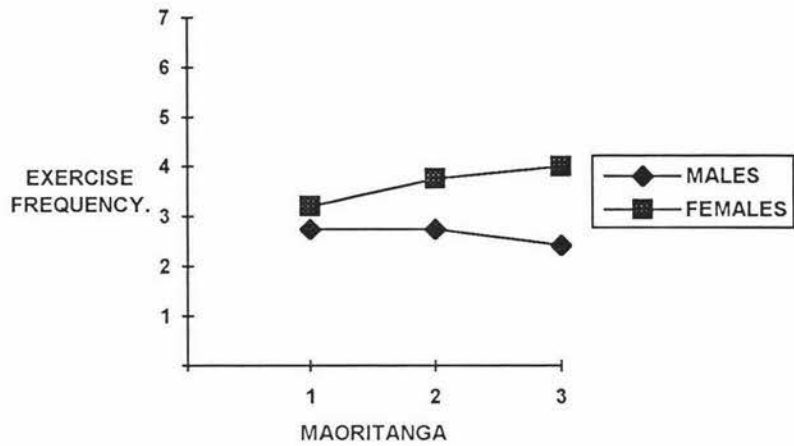
Figure 8. *Mean exercise frequency for Maoritanga by sex*

The control component for exercise was examined, against Maoritanga and self-reported Maoritanga. For self-reported Maoritanga, no main effect was found for sex $(F(1, 119) = 2.699 \ p > .05)$. However for Maoritanga, females generally reported greater difficulty in obtaining regular exercise in comparison to males $(F(1, 106) = 4.728, p < .05)$ (see Figure 9).
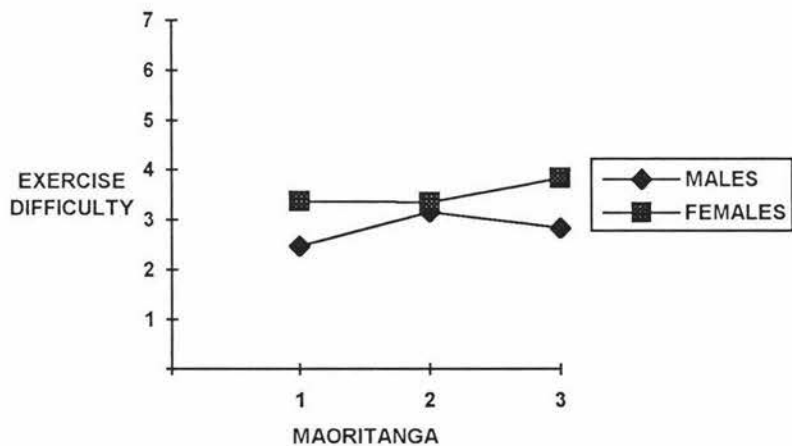
Figure 9. *Mean exercise difficulty for Maoritanga by sex*

The attitude component of exercise was non-significant for both Maoritanga $(F(1, 106) = .852, p > .05)$ and self-reported Maoritanga $(F(1, 119) = 1.221, p > .05)$.

The second health behaviour differing significantly for sex of the respondent was body-weight regulation. Although body-weight regulation was found to be non-significant for Maoritanga (F(1, 106) = 3.716 p > .05), it was found to be significant for self-reported Maoritanga (F(1, 119) = 6.597, p < .05). Females generally did not maintain their weight at a recommended level in comparison to males (see Figure 10).
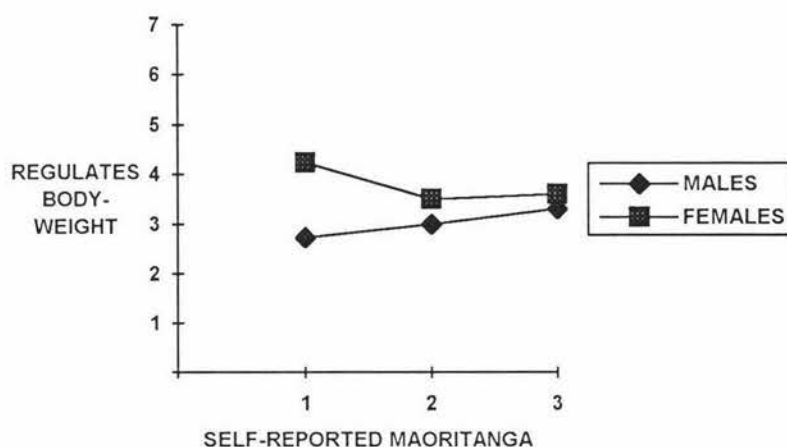
Figure 10. *Mean body-weight regulation for self-reported Maoritanga by sex.*

The control component was analysed and was found to be significant for both Maoritanga (F (1, 106) = 9.416, p < .05) and self-reported Maoritanga, (F(1, 119) = 9.789, p < .05). Females found it more difficult to maintain their weight at a recommended level in comparison to males (see Figure 11).
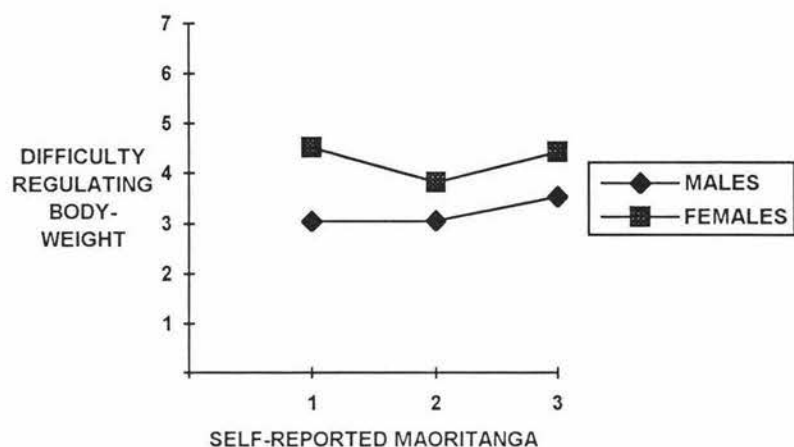
Figure 11. *Mean difficulty in maintaining body-weight for self-reported Maoritanga by sex.*

The attitude for body-weight regulation was non-significant for both self-reported Maoritanga (F(1, 106) = .096, p > .05) and Maoritanga (F(1, 119) = .039, p > .05).

The third health behaviour which was found to be significantly different between males and females, was exceeding the speed limit while driving. A significant difference was found between the sexes for self-reported Maoritanga (F(1, 113) = 6.954, p < .05), and for Maoritanga (F(1, 101) = 6.526, p < .05) males were more likely to exceed the speed limit than females (see Figure 12).
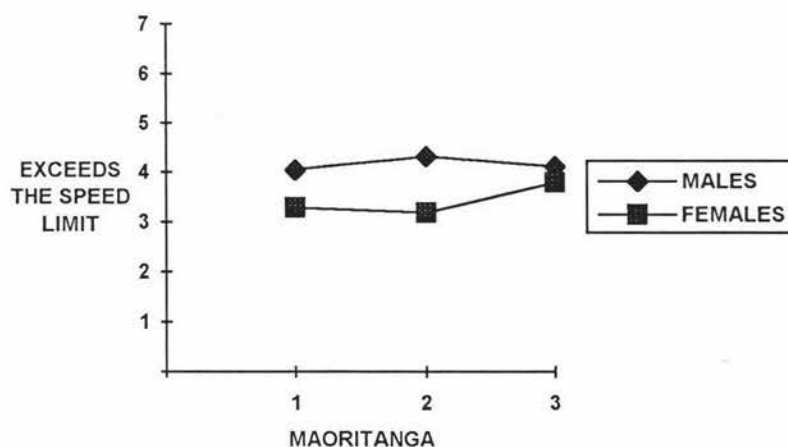
Figure 12. *Mean frequency of exceeding the speed limit Maoritanga by sex.*

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When the control component of driving behaviour was analysed, a non-significant effect for sex of the subject was obtained, for both self-reported Maoritanga ($F(1, 113) = 2.427$, $p > .05$) and Maoritanga ($F(1, 101) = 2.348$, $p > .05$). Both sexes appeared to have equal difficultly remaining under the speed limit.

The attitude component for exceeding the speed limit yielded a non-significant effect for Maoritanga ($F(1, 101) = 2.732$, $p > .05$) but a significant effect for self-reported Maoritanga ($F(1, 113) = 5.419$, $p < .05$). Females in comparison to males believed that it was better to remain under the speed while driving (see Figure 13).
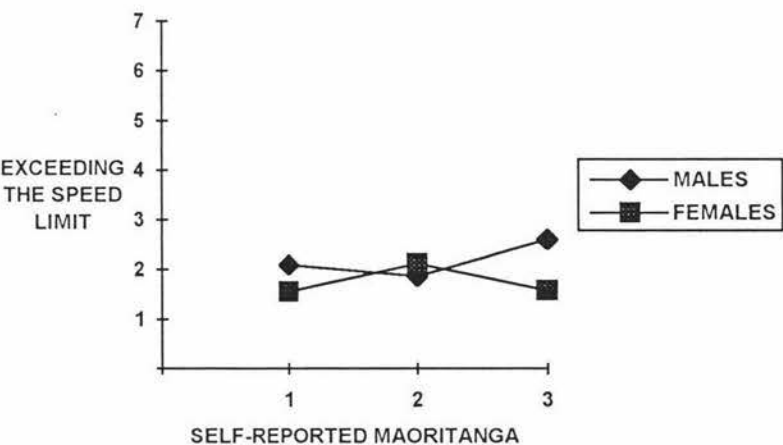
Figure 13. *Mean attitude to exceeding speed limit for self-reported Maoritanga by sex.*

The health behaviours analyses failed to support the hypothesis that enculturated and partly acculturated Maori would have more negative health behaviours than acculturated Maori. However, significant differences were found between males and females with respect to three important health behaviours. These health behaviours tended to differ between the sexes depending on how Maoritanga was measured.

Neither smoking or alcohol consumption provided significant results. It is possible that there are no self-reported Maoritanga, Maoritanga or sex differences for smoking and alcohol consumption rates. However, this is unlikely considering results of previous research has found differences in consumption rates for both culture and gender (Mitchell, 1983a; Mitchell 1983b; Smith et al., 1984; Toxic substances board 1989). The most likely reason for the low actual reported rate of alcohol and cigarette consumption can be found in using a sample composed of university students. University students would probably be wary of abusing alcohol and cigarettes. This was supported by the fact that more than 80% of the sample were non-smokers and 25% of the sample were teetotallers. These are very low figures if they are compared to the rates in Maori generally (Toxic substances Board, 1989).

Four questions for general practitioners and four for tohunga were used to determine whether Maori differed in the way they used these health systems. To determine whether enculturated Maori had greater access to these health systems than partly acculturated and acculturated Maori, the first question asked the respondent, 'how often do you use a general practitioner / tohunga?'. Multivariate analysis of variance (manova) with repeated measures was used to analyse this particular question for self-reported Maoritanga. Anova's rather than manova was used to analyse Maoritanga as it failed to pass the Cochran-Barlett test of homogeneity.

The first anova analysis determined whether there were differences on how often general practitioners were used for Maoritanga by sex of the respondent. A non-significant effect was found for Maoritanga ($F(2, 106) = .037$, $p > .05$), for sex ($F(1, 106) = 1.662$, $p > .05$), and the interaction between Maoritanga and sex, ($F(2, 106) = 1.400$, $p > .05$). The second anova analysis used was to determine whether there were differences in how often a tohunga was used for Maoritanga, this yielded a significant result, ($F(2, 109) = 19.908$, $p < .05$). Maori who were enculturated used tohunga more

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often than Maori who were partly acculturated or acculturated (see Figure 14). The third anova analysis was used to determine whether any differences existed for use of a tohunga by sex, this analysis was non-significant, $(F(1, 125) = .243, p > .05)$.
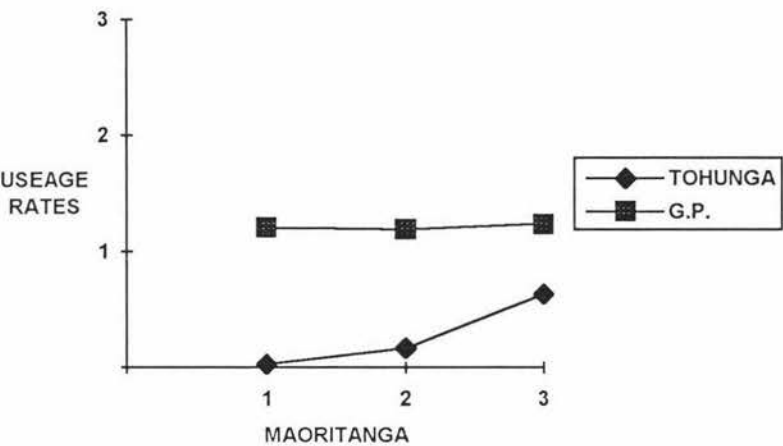
Figure 14. *Usage rates of tohunga and G.P. by Maoritanga.*

Two significant effects were found with the manova analysis. A main effect was found for the frequency of use of tohunga and general practitioners, $(F(1, 118) = 181.88, p < .05)$ general practitioners were used more often than tohunga. Secondly, an interaction was found between self-reported Maoritanga and frequency of use of general practitioners and tohunga, $(F(2, 118) = 4.90, p < .05)$. Maori with high self-reported Maoritanga reported using a tohunga more often than Maori with low self-reported Maoritanga, while the frequency of usage of general practitioners was similar among the three groups. All other main and interactive effects were non-significant.

The results suggest that all of the respondents for both Maoritanga and self-reported Maoritanga had a similar amount of contact with general practitioners, but not tohunga. Respondents classified as enculturated for both Maoritanga and self-reported Maoritanga, had the most contact with tohunga. The results appeared to support the

hypothesis that enculturated Maori have greater accessibility to both tohunga and general practitioners.

Cross-tabulations were used to descriptively analyse the results of the remaining three questions in health utilisation. A chi-square analysis was not performed on the data due to the presence of a large number of empty cells. Consequently the findings for the following questions need to be examined with due caution as they may not be an accurate description of what is actually occurring in the population. Self-reported Maoritanga was also not analysed for two reasons. Firstly due to the inadequate and unequal sample size across the groups, and the cells which would have made comparisons to the Maoritanga grouping not only difficult, but also infeasible. Secondly, a visual examination of the results between Maoritanga and self-reported Maoritanga, found the pattern of responding to be very similar in both classifications.

The second question in the utilisation of health section, asked respondent's to indicate the reasons why they would use a general practitioner. The most common response was for 'emotional or physical problems' (40% of the sample) (see Table 2). No respondent indicated they would use a general practitioner for spiritual problems. There was a large number of respondents (25% of the sample) who appeared to have little confidence in general practitioners as they reported using general practitioners only as a 'last option' or 'not at all / haven't tried'. The majority of these respondents (80%) had been classified as either enculturated or partly acculturated Maori.

The most common response for the usage of a tohunga was 'not at all / haven't tried', (54% of all males and 48% of all females), the majority of these respondents were acculturated Maori. Of the enculturated group who said they would use a tohunga, 38% of males, and 22% of females reported they would use a tohunga for spiritual purposes. There was also a large proportion of enculturated Maori who appeared to have

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reservations about using a tohunga. Twenty-six percent of the enculturated group reported that they would only use a tohunga as a 'last option' or 'not at all / haven't tried' (see Table 2).

Table 2. *Reasons for usage by respondents of the two health systems, for sex and Maoritanga (n's).*

| Sex | General Practitioner Maoritanga group | | | | | | Tohunga Maoritanga group | | | | | |
| | 1 | | 2 | | 3 | | 1 | | 2 | | 3 | |
	M	F	M	F	M	F	M	F	M	F	M	F
All problems	5	6	6	3	5	3	-	-	2	2	5	5
Spiritual	-	-	-	-	-	-	1	1	3	1	7	4
Phys/Emotional	10	11	9	8	7	9	-	-	-	-	1	1
Last option	4	2	4	6	6	6	1	4	5	3	1	7
Not at all/Untried	-	-	-	-	1	1	16	14	9	11	5	1

M: male

F: female

The third question, in the health utilisation section, asked respondent's whether a general practitioner or a tohunga provides or would provide adequate treatment. For general practitioner the most common response across the sample was 'to an extent', (61% of males and 73% of females). Fewer females (18%) than males (32%) responded as 'yes' (see Table 3).

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The two most common responses for tohunga by both sexes across the sample was, 'to an extent' (33%) and 'don't know' (32%), these two responses tended to vary depending on degree of enculturation. Almost all enculturated females (95%) reported either 'yes' or 'to an extent', while one female reported 'don't know' (5%). This figure compares with 16% of the acculturated female group reporting 'to an extent', with the majority of this group reporting 'no' or 'don't know' (84%). A similar pattern of results were found for males (see Table 3).

Table 3. *Effectiveness of the two health systems, by respondents, for sex and Maoritanga (n's).*

	General Practitioner Maoritanga group						Tohunga Maoritanga group					
	1		2		3		1		2		3	
Sex	M	F	M	F	M	F	M	F	M	F	M	F
Yes	7	3	6	4	5	3	1	-	2	3	7	9
To an extent	10	15	12	12	13	13	3	3	6	6	10	9
No	2	-	1	-	1	2	4	6	5	1	1	-
Don't know	-	1	-	1	-	1	10	10	6	7	1	1

The last question in the health utilisation section asked respondents whether they had a difficulty with access to a general practitioner or tohunga. The most common response for general practitioner was 'no difficulties', males (65%) and females (73%). All Maori

in the acculturated group reported 'no difficulties', while females in the enculturated group, reported a broader variety of problems (see Table 4).

A larger spread of responses were found for access to a tohunga. Enculturated Maori reported mostly 'geographic/financial' difficulties (47%), while the majority of acculturated Maori (75%) reported either 'social/cultural' or 'combination' of difficulties. A large number of acculturated Maori (20%) reported 'no difficulties'. An examination of verbal accounts on the questionnaire's revealed that several respondents actually didn't know a tohunga, but responded with 'no difficulties' presumably because there was no category available to match their preferred response. Therefore actual access to a tohunga would be less for acculturated Maori than indicated in Table 4.

Table 4. *Utilisation problems encountered by respondents with the two health systems for sex and Maoritanga (n's).*

	General Practitioner Maoritanga group						Tohunga Maoritanga group					
	1		2		3		1		2		3	
Sex	M	F	M	F	M	F	M	F	M	F	M	F
Geograp/Finan	-	-	1	3	1	6	-	1	-	2	10	7
Social/Cultural	-	-	-	-	1	4	6	4	3	2	3	3
Comb of above	-	-	1	-	1	2	8	7	6	7	2	3
No difficulties	18	19	12	14	7	7	3	5	9	6	3	6

The overall results of health utilisation supported the hypothesis that enculturated Maori have greater access to general practitioners and tohunga. The descriptive analyses showed some differences for Maoritanga and between males and females. Enculturated Maori were more inclined than acculturated Maori to use general practitioners less, feel that the benefits of using general practitioners were less and had more reservations about and difficulties with access to general practitioners. Females when compared to males also appeared to have more reservations about general practitioners. While acculturated females appear to persevere with general practitioners enculturated females, have other options available including using the tohunga. However, enculturated Maori also emphasised more difficulties, in terms of accessibility, to both tohunga and general practitioners than acculturated Maori.

DISCUSSION

The Maoritanga measure proved to be a highly reliable measure when applied to this present sample of university students. The broad range of scores obtained, indicates that this sample of young Maori had differing cultural backgrounds. To determine whether this particular measure is a valid assessment of Maoritanga entails extensive testing of this measure on a larger group of subjects. Ethically, there were no outstanding problems discovered by using the Maoritanga measure, however there was an initial concern that the measure could be threatening or offensive to some Maori. These fears were allayed when it was found through consulting a number of Maori, that this occurred consciously and unconsciously between Maori anyway. The Maoritanga Measure in this study was used to display cultural differences between Maori. This was applied to show that different health or social policies should be developed to meet the needs of these different groups of Maori. The objectives of any assessment of Maoritanga should strive for a positive outcome for the betterment of all Maori, and the objectives explained to all respondents.

The results of this present study failed to support the hypothesis that there would be health differences between acculturated, partially acculturated and enculturated Maori when using the Maoritanga measure. When self-reported Maoritanga was examined significant health differences were found between males and females for physical symptoms and general distress. The comparisons of physical symptoms and general distress suggested health differences that existed between the sexes was mainly affected by females with low self-reported Maoritanga. Although females with high self-reported Maoritanga showed results that were similar to males, females with low reported Maoritanga had significantly more health problems. It is unclear why a similar health pattern was not observed in males, but it is possible that Maoritanga is interpreted differently between the sexes. With males it may provide an indication of

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their cultural identity, while with females it may indicate cultural identity as well as their position in society in general. There is evidence to suggest that the roles associated with gender can have a positive or negative effect on health (Hayes & Ross, 1987; Umberson, 1987). Moreover, these roles are also mediated by other factors such as social class which can also affect health (Blaxter, 1985).

It has been found that socio-economically disadvantaged females because of adverse social and material circumstances, operate predominantly with a uni-dimensional definition of health (Blaxter & Paterson, 1982). This includes taking a curative approach to health by maintaining the minimum requirements to remain healthy. Socio-economically advantaged females were found to have a multi-dimensional definition of health, encompassing elements such as keeping fit, and preventing the occurrence of illness (Calnan & Johnson, 1985). As has been suggested previously, some females with low self-reported Maoritanga could be referring to the status they feel they have in society. In comparison to females that are enculturated, there is possibly a sub-group of females with low self-reported Maoritanga who are socio-economically and socio-culturally disadvantaged. There are likely to be socio-economically disadvantaged individuals in any random sample of Maori because the majority of Maori are situated in the two lowest socio-economic groups. Women may be socio-culturally disadvantaged because they are Maori women in a Pakeha society (Dann, 1985). Calnan and Johnson (1985) also suggest that there are differences in the way socio-economically advantaged and disadvantaged females are able to communicate their health concerns.

Consequently a partial explanation of the poorer general well-being of females with low self-reported Maoritanga could be found in the way the Pakeha and Maori health systems are utilised. It was revealed in this present study that acculturated females rely more heavily on the Pakeha health system for the treatment of health problems than

enculturated females. Moreover, in comparison to males, females generally had more reservations concerning general practitioners. These findings could reasonably explain the differences in health status between females with low and high self-reported Maoritanga. It could also underlie the high rate of depression found among acculturated females Murchie (1984) and their suspected reluctance to seek treatment. It is possible that there are a sub-group of females with low self-reported Maoritanga who have difficulty in expressing their health concerns to general practitioners. It also seems likely that general practitioners are unable to deal with some of the problems affecting Maori females. A number of cultural differences could heighten this problem including the fact that general practitioners are usually male and non-Maori (Awatere, 1982).

An explanation for the health differences between females with low and high self-reported Maoritanga could lie in the way these two groups view health. Previous research has indicated that enculturated Maori perceive their health in a holistic manner rather than analysing their health in specific terms which is a tendency of non-Maori (Durie, 1985). Similarly, it would also be expected that there would be differences in health between acculturated Maori and enculturated Maori. Although these differences in health perception may partly explain the significant results for females with low and high self-reported Maoritanga, it fails to explain the non-significant results for males, and the non-significant results for both sexes when using the Maoritanga measure. Generally the results of this present study tend to suggest that Maori had similar perceptions of their health. This could be the result of generational differences between Maori. Mature enculturated Maori may have health perceptions that are more traditional and holistic, while younger enculturated Maori could be incorporating a number of Pakeha health values within a Maori philosophy. Supporting this observation is the large number of enculturated Maori in this study who appeared to have reservations about using a tohunga. This would also support the results of the

Murchie (1984) study which found generational differences in depression rates between the younger and the more mature females. It could also explain the non-significant results of this present study for the Maoritanga measure and for males, as subjects were predominantly young.

It may have been too simplistic to suggest in the original hypothesis that Maori from different cultural backgrounds have health differences. It seems likely, given previous research and the results of this present study, that there are sub-sets of Maori with different levels of enculturation, whose health and perceptions of health differ. As was shown with the health differences between females with low and high self-reported Maoritanga, there are possibly other Maori whose health is affected by a complex interaction of tikanga Maori and tikanga Pakeha. It is obvious from this present study that males and females are affected by, and perceive Maoritanga differently. The results also indicate cultural differences between different generations of enculturated Maori. Whether this factor has a positive or negative impact on health would require further investigation.

Contrary to the stated hypothesis no significant effects were found for the five health behaviours for differences in enculturation on the Maoritanga measure or for self-reported Maoritanga. Part of the reason for the non-significant effects may have been due to the use of university students as subjects. University students would possibly be more responsible about their health and be aware of various behavioural health issues. In support of this observation are the overall low mean scores attained by subjects on the health behaviours that were analysed. Moreover there were a high number of non-smokers and teetotallers found in the sample compared to the Maori population in general (Toxic Substances Board, 1989; Smith et al., 1984).

Although health behaviours for Maoritanga and self-reported Maoritanga were found to be non-significant, significant results were found between the sexes. Females differed from males in a negative manner on two health behaviours, exercise and body-weight regulation. Females generally reported less exercise frequency and greater difficulty in obtaining regular exercise in comparison to males. From the data it is difficult to determine why this is occurring as the results could be interpreted in a number of different ways. It is possible that females feel less inclined to exercise than males. However attitude to exercise was non-significant between the genders. The results may be an indication that females have less time for exercise than males, as they could be pre-occupied with other tasks or roles.

The second health behaviour in which females were found to be significantly different from males in a negative manner, was body-weight regulation. Females had more difficulty and were less concerned about controlling and maintaining their body-weight than males. There are two explanations which may account for these results in this present study. Firstly, males may be better able to maintain their body-weight through partaking in more exercise. Secondly the ideal body-weight range may vary not only between the genders but with cultural differences. In terms of gender, body-weight range may be broader for males than females. It has been found that there is a preoccupation with thinness by females (Szmukler 1985; Garfunkel & Gardner, 1982). These gender differences are probably due to Westernised society being less tolerant of females who are overweight than males (Seid,1989). Similarly, in Aotearoa Hall (1978) found that Maori females in comparison to non-Maori, were less inclined to be concerned with thinness or have eating disorders such as anorexia nervosa. Although non-significant results were found between females against degree of enculturation, it is also conceivable that the Westernised body-weight ideal could also affect the three groups of Maori females to differing extents. This could also partially explain the lack

of dietary response by overweight females in the Murchie (1984) study, and requires further investigation.

The third health behaviour which was found to be significantly different between males and females was exceeding the speed limit whilst driving. Although attitudes and difficulty with staying under the speed limit were similar between the sexes, males reported themselves as exceeding the speed limit more than females. Considering the substantial risk-taking differences observed between Maori and non-Maori females (Smith et al., 1984), it would be expected that there would also be significant differences in the driving behaviour of acculturated and enculturated Maori females. However the results were found to be non-significant which again could be the result of using university students as subjects. Students in general may not be experiencing the same type of socio-cultural problems that a broader cross-section of Maori could exhibit. It is also possible that females are involved in risk-taking activities that are not driving related, examining other behaviours could produce a different set of results for females. Moreover, using a broader sample of subjects could also produce a different set of results for both males and females. These factors also require further investigation.

Generally the results provide enough evidence to suggest that socio-cultural factors have an important effect on health. Health and socio-cultural determinants are so closely related that they may actually be more important than the traditionally acknowledged influences including socio-economic status, smoking, cholesterol level, body-weight, alcohol consumption and exercise (Marmot et al., 1976; Beaglehole, 1980). Similar socio-cultural circumstances have previously been found to characterise people who develop a broad spectrum of health problems and health related issues, including tuberculosis (Holmes, 1956) schizophrenia, (Mishler & Scotch, 1963) alcoholism, (Hunter, 1988) depression (Hunter, 1988) multiple accidents (Tillman &

Hobbs, 1949), and suicide (Durkheim, 1951; Hunter, 1988). A common component related to all of these conditions is the marginal status of the people involved in society (Cassel, 1974). Such traits, Cassel suggests, are characteristic of ethnic minorities in culturally foreign environments who have been deprived of meaningful socio-cultural contact. These particular ethnic groups invariably show a high rate of residential or occupational mobility, come from broken homes or have isolated living circumstances and are rejected by the dominant cultural majority. These factors result in an increase in the level of stress an individual experiences which if not alleviated, can produce a variety of health disorders.

Different cultures provide different perceptions of their environment so that the same events are perceived differently (Triandis et al., 1988). If an event is perceived as normal or expected, it will have less stressful consequences than if it is perceived as unusually chronic or unexpected. Stress is therefore a function of the way individuals perceive unpleasant events, effecting the level of stress they experience (Glaser, Rice, Sheridan, Pertel, Stout, Speicher, Pinsky, Kotur, Post, Beck & Kiecolt-Glaser, 1987) Moreover, culture has further implications for the way in which people are able to cope with stressors, and the availability and need for social support (Triandis et al., 1988). The availability and need for social support tends to vary among individuals and has an effect on health (Jemmott et al., 1988).

Beaglehole (1980) suggests that it is the presence of stress rather than the influence of diet that creates health problems. Although a particular diet may predispose a person to a particular type of illness, it is stress that increases a persons vulnerability to illness generally. Similarly cigarette smoking is a specific behaviour that has been directly related to the increased incidence of lung cancer (Robinson, 1987). However it is possible that a stress related condition like depression predisposes a person to illness on a primary level, with cigarette smoking inducing lung cancer at a secondary stage.

In smokers who are highly stressed or depressed, the lungs would be an area that would offer the least resistance to disease, while in highly stressed non-smokers, disease may manifest itself in other ways. Shekelle et al (1981) found that people who are depressed have twice the likelihood of contracting a variety of cancers than people who were not depressed. Moreover, they found depression to be an independent risk factor for cancer over and above other traditional risk factors including smoking, alcohol use, and family history of cancer.

Stress related conditions like depression can create other behavioural problems that can adversely affect health. Individuals who are depressed and or anxious are more likely to consume or abuse alcohol and drugs (Grunberg & Baum, 1985). Drug and alcohol abuse also has direct adverse effects on immune function (Jaffe,1980), as well as indirect effects through alterations in nutrition (Chandra & Newberne, 1977). Moreover, alcohol abuse can enhance distress to an even greater degree (Grunberg & Baum, 1985).

Maori in Aotearoa, particularly the young, have undergone rapid socio-cultural changes over a relatively short period of time and exhibit health problems that have been found in other ethnic minorities (Hunter, 1988; Cassel, 1974). Although no significant health differences were observed in this present study for the Maoritanga measure, it would seem plausible that Maori most vulnerable to ill-health would be those who feel culturally marginalised. Such an explanation would explain the poorer health of females with low self-reported Maoritanga, who would be the most prone to increased levels of stress and consequently ill health. Murchie (1984) also noted that females who were culturally isolated were the most vulnerable to ill-health and had high levels of depression.

Cultural marginality is not just confined to Maori, unemployed Pakeha are likely to feel alienated, not only from the work-force, but also mainstream society (Shirley, 1991). For Pakeha, employment is a source of positive identification (Hofstede, 1980) and provides a sense of self worth (Fineman, 1987). The unemployed in comparison to employed, have higher levels of stress (Siergert, Chung & Taylor, 1990) a higher rate of depression, (Cooper, 1982) alcohol abuse, (Janlert & Hammerstrom, 1992) and suicidal behaviour, (Platt, 1984; Pritchard, 1990). The policy of assimilation has had a similar impact on the health of Maori, an acculturated Maori has lost a positive source of identity (Maoritanga) and self-worth (mana) (Walker, 1987) It is likely that health problems of Maori will be accentuated to a even greater extent if they are not only acculturated, but also unemployed.

The Western or Pakeha approach to health combined with pakeha cultural values have been the factors that have contributed greatly to the health problems in young Maori today. Science and medicine in the last three centuries has been able to unravel the complex bodily processes and the contribution each cell, each system and each organ has to health. Although this strategy has made profound advances in the knowledge of humankind, it has tended to overlook the fact that the human body functions as a unit, rather than being discrete separate entities. Consequently health cannot be separated into discrete components such as mental and physical health, moreover, health cannot be disassociated from a individuals physical, social, and cultural environments.

It was therefore understandable that Maori, prior to the signing of the Treaty of Waitangi, had serious concerns about the impact of Pakeha culture on their health and development. Pakeha who had concerns of their own, created the Treaty of Waitangi in an attempt to quell the swelling tide of racial disquiet. Unfortunately it has only been over the last 20 years that the government has recognised it has a legal, if not moral, obligation to uphold the Treaty of Waitangi. During this 20 year period several

important and major positive changes have occurred for Maori. Some of changes include the creation of the Waitangi tribunal and the provision of greater Maori autonomy to iwi in areas such as education and health (Department of Maori affairs, 1988). These changes have had a number beneficial effects over the last decade, including producing a renewed pride in being Maori. This has become particularly evident as the number of people who now identify themselves as Maori has increased dramatically since the early 1980's (Pool, 1991). However, this revival has also meant that Maoritanga has also gone through a transformation.

Much of the Maori revival can be attributed to the political pressure exerted by the young Maori activists of the late 1960's (Greenland, 1984) but they have also introduced the impetus for cultural change in Aotearoa. It has brought forth and together separate groups with similar but separate interests and ideals. These groups include the Maori women's feminist movement who want change in the roles for women in both Pakeha and Maori society (Dann, 1985). It has brought together iwi and hapu who accentuate the importance of differing aspects of Maoritanga (Rangihau, 1975). There are Maori who believe that many of the old customs should be abandoned in favour of a new direction for Maoridom (Mihaka, 1989). Some Maori feel that separate development is the key to cultural survival while others believe Maori should remain integrated with Pakeha (Levine, 1985). The resurgence in Maori pride also means that enculturated and acculturated Maori are in closer proximity to one another. It also means that Maori and Pakeha will conflict on many different interests including the resolution of land claims. Ultimately all of these issues and conflicts must be resolved if Maori health is to eventually improve.

Health is affected by several factors of which the socio-cultural component is possibly the most important. Much of the inequality between Maori and Pakeha has a socio-cultural basis not only in terms of health but also in other areas such as education.

Moreover, it is not just a question of examining how these two cultures differ, but rather how each of these cultures or their combination, affects different groups of Maori. For example, an acculturated Maori with salient Maori physical characteristics would be treated differently by others, and would probably have different perceptions of who they are, than an acculturated Maori with less salient physical features. Complicating these issues further would be the socio-cultural differences between the genders, such as the status of males and females in both Pakeha and Maori society. Mediating these factors would be socio-economic factors, and employment. These combined variables would result in sub-groups of Maori who would experience varying levels of stress. How this stress is perceived coped with would vary and would affect how a person would use the Pakeha and Maori health systems. The socio-cultural changes that are currently occurring in Aotearoa, such as the Maori renaissance and the feminist movement will over the long term, eventually achieve true equality in areas such as health and education. However, the socio-cultural changes occurring over the short to medium term, could result in the health disparities remaining between the genders, and Maori and Pakeha. Although socio-cultural change may create a more equitable society there are also likely to be conflicts that will maintain if not elevate socio-cultural stress in Aotearoa. Maoridom, Pakeha and Aotearoa faces possibly its greatest challenge to date. Maori and Pakeha need to work together, find a unity, a direction and install socio-cultural change that in time will benefit all members of society. At the same time the cultural diversity of Aotearoa must be maintained and given greater recognition in the social and political institutions of Aotearoa. The Treaty of Waitangi may eventually prove to be the answer to many of these issues.

WHAKATAUKI

E rite ai te tangata

ki nga manu o te ngahere.

ka ketekete te Kaka

ka koko te Tui

ka kuku te Kereru

ahakoa te rereke o nga reo manu.

ka tau tonu ko te wao nui a Tane

no reira tiakina te rereketanga

kia puta ko te kotahitanga.

People are like the birds of the forest

the Kaka chatters,

the Tui sings,

the Kereru croons,

each has its own unique voice.

Within the forest of Tane

there is unity in diversity.

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APPENDIX

THE IMPACT OF CULTURAL EXPERIENCE ON
HEALTH AND HEALTH RELATED BEHAVIOURS

I am a Massey University student doing a Masters Thesis in Psychology. I am conducting a study which aims to explore whether there is a link between cultural experience and health. Due to the assimilatory policies of the 1950's, 60's and 70's young Maori today come from a diverse range of cultural environments, consequently they possess many unique experiences and perceptions. There is research evidence to suggest that a person's cultural orientation may have an impact on health. This particular study attempts to determine whether cultural experience has an effect on a series of health related issues. I am looking for people to participate in the study and this sheet explains what is required of people who take part.

Am I eligible?

You are elgible to participate if you are aged between 15 and 45 years and of Maori descent.

What Would I Have to Do?

You are asked to answer a series of questions comprised of two parts. The first section explores the impact that Maori and/or Pakeha cultures have had on your life. The second section asks about your overall level of health, and health behaviours and utilisation of Maori and pakeha health systems. I would like to emphasise that there are no `right' or `wrong' answers to any of the issues - I want to find out what you think.

What can I expect from the researcher?

If you agree to participate you will:

*   Have the right to refuse to answer any question and to withdraw from the study at any time.

*   Provide information on the understanding that it remains confidential to the researcher. All results will be identified only by code number and will only be seen by the researcher. It will not be possible to identify individuals in any published reports.

*   Have the opportunity to discuss the reasons for the research topic after completing the questionnaire and have feedback on the results on the completion of the study.

Charles Olson
Graduate Student: Psychology Dept
Phone: 356 3175

I have read the above information and agree to take part in this study

Signed: _____

Date: _____

DEMOGRAPHIC DATA:

(1) In what year were you born? _____

(2) Male or Female? _____

MAORITANGA.

DIRECTIONS: For the following 28 questions please circle a catagory that best describes you

KNOWLEDGE:

(1). Can you speak Maori? If so how well?.

a) fluent.
b) good.
c) fair.
d) poor.
e) not at all.

(2). How well do you know your whakapapa?.

a) extremely well; both parental sides back to their canoes.
b) very well; several generations both sides; one side back to the canoe and the other quite a few generations.
c) quite well; several generations one side, few other
d) not very well; 2 or 3 generations both sides.
e) poor; less than 2 generations.

(3). Are you familiar with the kawa on your marae?.

a) extremely well.
b) very well; except for a few aspects.
c) good but still some learning to do.
d) not very well; a lot to learn.
e) don't know what it is.

BEHAVIOUR:

(1). How often do you visit your marae or local urban marae?.

a) several times a month.
b) once or twice a month.
c) several times a year.
d) two or three times a year.
e) never, hardly ever.

(2). How often do you attend hui?.

a) several times a month.
b) two or three times a month.
c) several times a year.
d) two or three times a year.e) never, hardly ever.

(3). Who would you attend tangi for?.

a) usually several times a year for my hapu and in support of several other
   hapu or iwi.
b) several times a year mainly for my hapu but sometimes for other hapu or
   iwi
c) usually only for my hapu or iwi
d) whenever someone in my whanau dies; includes second cousins etc
e) whenever someone in my immediate whanau dies; cousins, parents, etc

(4). Can you mihi proficiently in Maori?.

a) yes very confidently.
b) yes very well but there are aspects that I'm unsure about.
c) yes but I'm not all that confident.
d) yes but only to say who I am and where I'm from.
e) no, not at all.

(5). Are you actively involved in things Maori, such as being part of a Maori
     Club or committee, Sports Club?.

a) yes I'm actively involved in several.
b) yes I'm involved in two or three.
c) yes one or two.
d) I may sometimes go but generally I'm not actively involved.
e) no not at all.

(6). Are there ritenga or tikanga that you practice in the home, such as
     karakia, being aware of certain tapu practices?.

a) regularly and religiously on all aspects Maori.
b) yes but only on aspects that I feel are important.
c) yes but I'm not consistent about it.
d) yes sometimes on a couple of things, not really into it.
e) don't know what it is/don't believe in it.

PERSONAL IDENTITY:

(1). In what ethnic group would you classify yourself?.

a) Maori.
b) both.
c) Pakeha.

(2). Do you vote on the Maori roll?.

a) yes.
b) no.

(3). How important is te taha wairua to you?.

a) highly important.
b) fairly important.
c) not really important.
d) don't know what it is.

(4). Have you or would you give your children Maori first names?.

a) yes all Maori names comprised of tipuna and family names or other Maori names.
b) yes and no, some may have Maori names others, Pakeha.
c) no probably not, maybe as a second name.
d) no definitely not.

(5). Have you or would you send your children to Kohanga Reo or a Whare Wananga?.

a) yes definitely.
b) yes but it may depend on other factors e.g. geographic location of the Wananga, costs etc.
c) yes but Pakeha education takes priority in long run.
d) no the only Maori education will be what the state system will supply.
e) no definitely not under any circumstances.

(6).

(a) Can you name your whanau?.	y/n
(b) Can you name your hapu?.	y/n
(c) Can you name your iwi?.	y/n
(d) Can you name your waka?.	y/n

SOCIAL IDENTITY:

(1). What is the ethnic background of individuals you admire the most?

(a) Maori
(b) both
(c) Pakeha

(2). Is the ethnicity of your friends mainly:

a) Maori.
b) both.
c) Pakeha.

(3). From what ethnic background have you or would you prefer a long term
partner to come from?.

a) Maori.
b) both (either).
c) Pakeha.

(4). What ethnic group do you feel most comfortable with?.

a) Maori.
b) both.
c) Pakeha.

(5). What is the ethnic composition of the community in which you would   most
want to live?.

a) Maori.
b) both.
c) Pakeha.

CULTURAL IDENTITY:

(1). What culture do you feel most comfortable with?.

a) Maori.
b) both cultures.
c) Pakeha.

(2). What culture do you criticise the most?

(a) Pakeha
(b) both
(c) Maori

(3). What is the culture that has had the most positive impact on your life?.

a) Maori.
b) both cultures.
c) Pakeha.

(4). What is the culture that you feel most proud of?.

a) Maori.
b) both cultures
c) Pakeha.

(5). Do you listen to Maori broadcasts on television and radio, such as
    Whakahuia?.

a) always.
b) often.
c) sometimes.
d) never.

(6). What music do you most enjoy listening to?.

a) Maori.
b) both cultures.
c) Pakeha.

(7). After being in a Pakeha environment for prolonged periods, do you often
    feel a strong urge to recharge your batteries (te waiora-a-tane) in a   Maori
    environment?.

a) yes I feel that always.
b) yes I feel that often.
c) yes I feel that sometimes.
d) no I don't feel that at all.

(8). From what cultural background have you or would you prefer a long   term
partner to come from?.

a) Maori.
b) both (either).
c) Pakeha.

SUBJECTIVE ACCOUNT

If you could place Maoritanga on a scale from nought to ten, with 0 indicating little
Maoritanga and 10 indicating more Maoritanga, where do you think you would be
situated.

0---1---2---3---4---5---6---7---8---9---10

....

HEALTH

DIRECTIONS:

The following are a series of questions about your health and health related behaviours. Please circle the number codes provided for questions 1 & 2, which best describes your health.

(1). Compared to others your own age, how would you rate your health at the present time?

terrible   1
very poor   2
poor   3
fair   4
good   5
very good   6
excellent   7

(2). Compared to a person in excellent health, how would you rate your health at the present time?

terrible   1
very poor   2
poor   3
fair   4
good   5
very good   6
excellent   7

(3) Indicate how much each of the following problems has bothered or disturbed you in the last month: Please circle the code number that best describes those conditions for you.

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

1) sleep problems (insomnia)	0 1 2 3 4
2) back pain	0 1 2 3 4
3) dizziness	0 1 2 3 4
4) diarrhoea	0 1 2 3 4

5) headache (migraine)	0 1 2 3 4
6) indigestion	0 1 2 3 4
7) pains in the chest	0 1 2 3 4
8) listlessness	0 1 2 3 4
9) poor appetite	0 1 2 3 4
10) stomach pain (cramp)	0 1 2 3 4
11) constipation	0 1 2 3 4
12) constant fatigue	0 1 2 3 4
13) acne	0 1 2 3 4
14) muscle cramps	0 1 2 3 4
15) cold or cough	0 1 2 3 4
16) bruises	0 1 2 3 4
17) pulled muscle	0 1 2 3 4
18) pulled ligament	0 1 2 3 4
19) severe aches and pains	0 1 2 3 4
20) blurred vision	0 1 2 3 4
21) feeling low in energy	0 1 2 3 4
22) weight change (5lbs or more)	0 1 2 3 4
23) faintness	0 1 2 3 4
24) hands trembling	0 1 2 3 4
25) heart racing	0 1 2 3 4
26) shortness of breath when not exercising or working hard	0 1 2 3 4
27) felt weak all over	0 1 2 3 4
28) nausea or vomiting	0 1 2 3 4
29) pains in lower back	0 1 2 3 4
30) soreness of your muscles	0 1 2 3 4
31) hot or cold spells	0 1 2 3 4
32) numbness or tingling in parts of your body	0 1 2 3 4

DIRECTIONS: How have you felt during the past seven days including today?
Circle the appropriate number, which best describes how distressing you have
found these things over this time.

	NOT AT ALL.	A LITTLE BIT.	QUITE A BIT.	EXTREMELY
Difficulty in speaking when you are excited........	1	2	3	4
Trouble remembering things.......	1	2	3	4
Worried about sloppiness or carelessness..............	1	2	3	4

	NOT AT ALL.	A LITTLE BIT.	QUITE A BIT.	EXTREMELY
Blaming yourself for things.	1	2	3	4
Pains in the lower part of your back.	1	2	3	4
Feeling lonely....	1	2	3	4
Feeling depressed (down)...	1	2	3	4
Your feelings being easily hurt..	1	2	3	4
Feeling others do not understand you or are unsympathetic..	1	2	3	4
Feeling that people are unfriendly or dislike you......	1	2	3	4
Having to do things very slowly in order to be sure you are doing them right.......	1	2	3	4
Feeling inferior to others.......	1	2	3	4
Soreness of your muscles.....	1	2	3	4
Having to check and double check what you do.......	1	2	3	4
Hot or cold spells......	1	2	3	4
Your mind going blank.	1	2	3	4
Numbness or tingling in parts of your body........	1	2	3	4
A lump in your throat...	1	2	3	4
Trouble concentrating..	1	2	3	4

Weakness in parts of your body.	1	2	3	4
Heavy feelings in your arms and legs.....	1	2	3	4

CHRONIC ILLNESS:

Do you have any condition which you are being treated for regularly or have to take regular medication for? Please state.below........

HEALTH BEHAVIOURS

The following concerns five health related behaviours which you may or may not engage in. Please indicate, using the scales provided, your responses for the questions A B & C for each behaviour.

<u>1</u>). Body Weight:

a). Generally do you consider maintaining a persons weight at a desired or recommended level to be

      Good 1 2 3 4 5 6 7 Bad

b). Personally do you consider maintaining your weight at a desired or recommended level to be

      Easy 1 2 3 4 5 6 7 Difficult

c). Do you maintain your body weight at a desired or recommended level?

      Always 1 2 3 4 5 6 7 Never

2). Cigarette Smoking:

a). Generally do you consider abstinance from cigarettes to be

Good 1 2 3 4 5 6 7 Bad

b). Personally do you consider abstinance from cigarettes for you to be

Easy 1 2 3 4 5 6 7 Difficult

c) Do you abstain from cigarettes?

Always 1 2 3 4 5 6 7 Never

3). Exercise:

a). Generally do you consider getting regular exercise to be

Good 1 2 3 4 5 6 7 Bad

b). Personally do you consider getting regular exercise for you to be

Easy 1 2 3 4 5 6 7 Difficult

c). Do you get regular exercise?

Always 1 2 3 4 5 6 7 Never

4). Alcohol:

a). Generally do you consider limiting ones alcohol intake during one session to be

Good 1 2 3 4 5 6 7 Bad

b). Personally do you consider limiting your alcohol intake during one session to be

Easy 1 2 3 4 5 6 7 Difficult

c). Do you limit your alcohol intake during one session?

Always 1 2 3 4 5 6 7 Never

5). Driving:

a). Generally do you consider staying under the speed limit when driving to
be

Good 1 2 3 4 5 6 7 Bad

b). Personally do you consider staying under the speed limit for you, when
driving to be

Easy 1 2 3 4 5 6 7 Difficult

c). Do you stay under the speed limit when driving?

Always 1 2 3 4 5 6 7 Never

UTILIZATION OF PAKEHA MEDICINE

Directions: Please answer all of the following eight questions concerning Maori
and Pakeha health systems.

(1). How often do you use a General Practitioner?
   a) Regularly
   b) Often
   c) Sometimes
   d) Never

(2). When do you or would you use a General Practitioner?
   a) For all types of problems
   b) For spiritual problems
   c) Only for emotional or physical problems
   d) Only when other forms of treatment have not worked
   e) Not at all/Haven't tried one

(3). Do you feel General Practitioners provide you with adequate treatment?
   a) yes
   b) to an extent
   c) no
   d) don't know

(4). Do you have a problem with access to a General Practitioner?
   a) yes geographic, financial difficulties
   b) yes social/cultural difficulties
   c) yes combination of the above
   d) no difficulties

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UTILISATION OF MAORI MEDICINE

(1). How often do you use a Tohunga?
- a) regularly
- b) often
- c) sometimes
- d) never

(2). When do you or would you use a Tohunga?
- a) for all types of problem
- b) for spiritual problems
- c) only for emotional or physical problems
- d) only when other forms of treatment have not worked
- e) not at all/ Haven't tried one

(3). Do you feel a Tohunga provides you, or would provide you with adequate treatment?
- a) yes
- b) to an extent
- c) no
- d) don't know

(4). Do you have a problem with access to a Tohunga?
- a) yes geographic, financial difficulties
- b) yes social/cultural difficulties
- c) yes combination of the above
- d) no difficulties

CONCLUSION

I would like to thank you for participating in this study, and I would like to ask you to write down any comments or criticisms you may have about this particular study below, which may help future research in this area.

MAORITANGA SCORING KEY

Knowledge questions one through three and Behaviour questions one through six:
$a = 4$ $b = 3$ $c = 2$ $d = 1$ $e = 0$.

Personal identity: Question one $a = 2$ $b = 1$ $c = 0$.
Question two $a = 2$ $b = 0$.
Question three and four $a = 3$ $b = 2$ $c = 1$ $d = 0$.
Question five $a = 4$ $b = 3$ $c = 2$ $d = 1$ $e = 0$.
Question six each yes = 1 each no = 0.

Social identity: Question one through five $a = 2$ $b = 1$ $c = 0$.

Cultural identity: Question one, two, three, four, six, eight: $a = 2$ $b = 1$ $c = 0$.
Question five and seven $a = 3$ $b = 2$ $c = 1$ $d = 0$.