Oranga Kaumatua: perceptions of health in older Maori people

Abstract: This paper explores some of the opportunities for Maori health uncovered by recent developments in the measurement and analysis of health-related behaviours. Presented is a case study, the findings of a survey incorporating Short Form 36™ (SF36TM) of more than 400 older Maori, many *considered kaumatuce. The case study is a window through which we* may *observe and understand health-related behaviour, the notion of cultural norms and social values, and how health states* may *be interpreted.*

Oranga *Kaumatua, finding health for "older Maori", is as much about what* may *be considered everyday (maori) as about what is unusual. The underlying difference or diversity in society* may *tell us what will most useful to measure.*

The findings identify important cross-links between health and other factors contributing to health, indicating that higher standards of health are strongly associated with active marae" participation, and cultural affiliation, home ownership, and higher incomes. Low income appears to be generally associated with poorer health, and it seems that older Maori may *have less opportunity to supplement their income compared with other New Zealanders in the same age groups.*

In this paper, the risks and protective behaviour of the participants covered the breadth of the social policy sector, and underline the need for long-term policy planning. Provision for Maori retirement is a matter that iwi"', hapu" and the State should consider. Older Maori will continue to rely heavily on State provision. High home ownership is less likely among the next generation of older Maori, and many will have known long periods of unemployment. Long hours of voluntary work (on marae or among whanau") are not atypical, and there may *be a case for recognising those efforts through a revised system of marae management. As dependency ratios change with a larger proportion of older people, policies should also be revised to assure that potential at both ends of the life cycle is fulfilled. (Pacific Health Dialog 2003, Vol.10 (2); Pg 79-86)*

John Waldon*

Introduction

Recent developments in the measurement and analysis of health-related behaviours have brought about new understandings regarding the application of health assessment tools such as SF36™, and have provided public health professionals with new ways of considering the people's health (Salmon, Waters, Wake, Hesketh, & Wright, 1999, 2000; Scott, Sarfati, Tobias, & Haslett, 2000; Silburn et al., 1996; Waters, Salmon, Wake, Hesketh, & Wright, 2000; Zubrick et al., 1995; Zubrick et al., 1997). These tools may also provide new ways to improve health (such as a determinants approach) and monitor changes.

The implications for determining self-assessed health status and the notion of risk behaviours will be discussed in this paper and reviewed at the conclusion. The case study is a window through which we may observe and understand health -related behaviour, the notion of cultural norms and social values, and how health states may be interpreted.

Understanding the world view of people very different from ourself can provide insight, not only into professional practice, but into personal world views.

Patton (1990) suggests a world view and competencies congruent with the context of the research that are important (Patton, 1990). Theory located in the Maori world that seeks to meet Maori needs is entirely sensible to Maori (Royal, 1998). This is especially consistent with contemporary Maori structures, and leads to the development of new approaches to health that make sense to Maori (Duhe, 1998).

Other academics (Jones, 1999; Reid & Robson, 1998) have considered Maori health issues, and Jones (1999) concluded that a different view of Maori was necessary when considering the manifestation of racism in the USA and New Zealand. Both works enable researchers to reconsider the notions of racism through a parallel analysis of the experiences of racism for Maori and African--American. While concluding her report, Jones identified that the whanau focus of Maori culture, although diverse, was a strength and to be relied on in times of need (Jones, 1999).

Te Pumanawa Hauora, Te Putahi-a-Toi School of Maori Studies, Massey University, Palmerston North, New Zealand.

This paper considers the health and well-being of a selected group of older Maori in a mixed-methods research project.

This article uses a case study from a research project to outline a range of issues relating to risk and protective behaviours. The paper's principle aims are to:

- discuss health-related behaviours,
- consider cultural norms and social values for a group of Maori, and
- describe preferences for health states.

The health and well being of older Maori were considered by public health professionals in a narrow setting, which in terms of Maori society is one often seen as very conservative. It could be argued that considering the needs of older Maori is a radical departure from a conservative public health world view.

The aims of the case study, *Oranga Kaumatua",* were to summarise information, and analyze and discuss a range of issues relating to older Maori.

The principle aims of the case study were to:

- gauge the economic circumstances of older Maori,
- ascertain their health status,
- measure the level of minor and major disability for older Maori, and identify policy implications for Maori and the Government.

The Maori population is youthful, with a median age 10 years younger than the total New Zealand population (Statistics New Zealand, 1998). Although youthful, the Maori population is also aging, due to a combination of increasing life expectancy and decreasing birth rates. Therefore, both the proportion and the numbers of older Maori will increase significantly over the next 20 to 30 years. During this time, older Maori will be confronted by many changes, including changes to whanau structures, the provision of health care, and the way in which government agencies provide for all its older citizens. Assumptions about the traditional role of older Maori in Maori society or in New Zealand society generally, will not fit for all Maori, and older Maori will be increasingly relied upon when traditional Maori resources are required. Accurate information about the range of actual situations of older Maori is essential for future health planning.

While for the purposes of the study older Maori have been defined as Maori men and women aged 60 years and over, this definition is not intended to be definitive. This paper recognises that older Maori do not live in isolation from other systems and developments. Policies and programmes emanating from government, iwi, and the communities in which they live influence the circumstances of older Maori.

Oranga Kaumatua is in part a description of the exploration of older Maori interaction with whanau (family) (Ministry of Maori Development, 1997). This approach is consistent with Government policy for Maori public health as outlined both in *He Matariki* (The Public Health Commission Rangapu Hauora Tumatanui, 1995) and, most recently, by *He Korowai Orange: The Maori Health Strategy Discussion Document* (Minister of Health, 2001), and takes a positive view towards ageing. Rather than presuming that illness, disability, or hardship are the key determinants of well-being in old age, the underlying philosophy is that older Maori are able to pursue fruitful lives and occupy valuable roles, largely because of their many years of experience.

Methods

Kaumatua were recruited through iwi and Maori community networks. , The sample selection is therefore biased towards older Maori who were more likely to participate in traditional or customary Maori society. In the sense of statistical generalisability to all older Maori, this case study falls short of being "representative". On the other hand, the sample size of 429 older Maori men and women makes the study one of the largest research projects involving older Maori. Study participants account for nearly 1.7% of all Maori aged 60 years and over. For this reason, the study is important because it considered the needs of a relatively large proportion of an age group who are important to contemporary Maori society.

Measuring Health-related Behaviours

The kaumatua questionnaire, the main information-gathering tool used, was designed to collect information on: demographic and cultural factors; whanau interaction; views on ageing; sickness and disability; health service utilisation; and lifestyle factors.

The Short Form 36 (SF36TM) was incorporated into the bilingual questionnaire to assess the health status of older Maori and to enable comparisons with other studies. SF36™ is a 36-item questionnaire that can be self-completed or delivered by an interviewer, and was developed during the Medical Outcomes Study (MOS) to measure generic health concepts relevant across age, disease and treatment groups (Medical Outcomes Trust,

1994). A version of SF36™ for Australia/New Zealand was developed at Newcastle University (Australia) by Janice Perkins, Rob Sanson-Fisher and colleagues. The Newcastle team employed two native-speakers of Australian-English to generate independent adoptions of SF36™ (US form), and an agreed-on version was completed (ibid) following the standard procedure developed by the International Quality of Life

Assessment (IQOLA) project (Aaronson et al., 1992). After the agreed-on version was reviewed using IQOLA criteria, translation undertaken and comparison was made by the U.S. IQOLA team for conceptual equivalence (Medical Outcomes Trust, 1994). The Australia/New Zealand version was used in New Zealand during the health needs assessment carried out by Midland Health Authority (Kokaua, Wheadon, & Sceats, 1995).

A bilingual version of SF36™ (Maori and English) was developed by the research team at Massey University (Ministry of Maori Development, 1997). A bilingual questionnaire and a set of show cards allowed participants the choice of interview in either Maori or English or, alternatively, a mixture of both. A small pilot was undertaken to test both the questionnaire and show cards. Based on feedback from the pilot interviews, the questionnaire and show cards were then modified. Interviews were conducted in the preferred language for each responder, that is, Maori and/or English.

The questions regarding cultural values and household composition used in the questionnaire, were developed and tested for the longitudinal study of Maori households Te *Hoe Nuku Roa* (Te Hoe Nuku Roa, 1999).

Recruitment

Regional hui were held to present details of the study to local communities, to provide opportunity for discussion, and to seek support and participation. All the 10 regions approached were keen to participate, and were invited to nominate a coordinator for their region. The coordinators played a key role in liaison between the research group at The School of Maori Studies, Massey University (Te Pumanawa Hauora), and the local community.

Interviewers

The first 10 regions approached readily agreed to take part in the research project after a hui in each region. Bilingual interviewers, nominated by their region, worked with regional coordinators (also from each region) to identify and recruit older Maori into the study. Many of the interviewers were 'peer interviewers' because kaumatua also took part in the research project as interviewers.

Regional coordinators, interviewers, Maori community groups and iwi were supplied with information brochures to distribute to local older Maori. The brochures provided details of the study and invited older Maori to participate in the research. Participants recruited for the study were interviewed face-to-face. These interviews took approximately one-and-a-half hours. A small gift of food was offered as koha" at the completion of the interview.

Questionnaire Management, Data Coding and Data Analysis

Completed questionnaires were coded, and data checked and input into the study's EPI INFO-version 6.04" database for analysis. Standard frequency analysis of each question was undertaken, and the tables produced were used to prepare the data information.

Results

The results of the 10 regions were reported in a customized report to the region.
This report compared the data gained from those interviewed in the region with the rest of the participants in the survey. There was some variation in the responses from the regions; however, variation in data in most cases was not statistically significant.

The Cultural Identity of Respondents

Almost all (98%) respondents identified their iwi and their hapu (85%). Most respondents (84%) were able to speak the Maori language and, when asked to identify their first language, 23% cited Maori, 37% cited English, and 40% cited both English and Maori. Older Maori responders identified a number of situations where they always spoke the Maori language: with other older Maori (42%), at marae (36%), at hui (31%), and around children (22%). These cultural identity responses were similar to the findings in Te Hoe Nuku Roa (ibid) and the Maori Language Survey (will get good ref, best so far is TPK ref unpublished material from unpublished Stats NZ 1996 Census tables).

Roles and Demands

Most (85%) respondents indicated their people thought of them as kuiaxi or korouaxii. When asked if they enjoyed their role as kaumatua, almost half (47%) of the respondents said 'always', and 29% said they enjoyed their role sometimes or often. A small group of respondents (4%) seldom or never enjoyed their role as kaumatua. Twenty percent either did not know or chose not to respond.

The majority of respondents (68%) were involved in marae activities, mostly in a supportive role. Older Maori often cited poor health as a reason for non-involvement in marae activities. Distance, lack of transport and loss of interest were less frequently cited.

Whanau Roles and Interaction

In general terms, older Maori were regularly involved in whanau matters. While most of the respondents (73%) had at least weekly contact with their whanau, 12% had less than 6 monthly contacts.

Whanau Reciprocity

Seventy-eight percent of respondents provided care for their whanau. Of those respondents, 90% cared for children, 80% cared for sick whanau members, 44% cared for disabled whanau members, and 46% for older whanau members.

The respondents were asked if they received care from whanau. Most respondents did, but seldom for long-term illness. Respondents were asked if their whanau assisted them in other ways. Of those that indicated "yes", assistance was most often in the form of accommodation, transport or financial matters.

Attitudes to Ageing

For most of the respondents, older age was seen as a time of increased opportunities to follow their own interests. When asked about sources of worry, the respondents most frequently indicated that they were not concerned about accommodation, independence, personal mobility, transport, leisure time, or marae. However, they were sometimes worried about health (29%), and one third of respondents were very concerned about financial matters.

Economic Position

The economic position of older Maori is determined by income from paid employment, accumulated resources, inherited wealth, assistance from whanau and access to social payments. In this study, only 13% of respondents were in paid employment, usually on a part-time basis. Most respondents (79%) received a social payment, and 29% received income from Maori land.

Income Levels

The majority of the respondents (68%) earned less than $20,000 per annum. Only thirty-six respondents (9%) had an income over $20,000 per annum. Ninety respondents (23%) did not know or chose not to specify their income.

Planning for Retirement

Respondents' financial arrangements for later years tended to depend on State provision. The majority of the respondents (84%) relied on Government Superannuation, 12% on savings, and 4 percent on private superannuation. Some respondents (8%) had no financial arrangements for their later years. The majority of the respondents (87%) did not have medical insurance.

Self-perceived Health Status

In this study, health was scored using the SF36TM schedule. This relatively brief health status-measuring instrument enables physical health, mental health, and social functioning to be assessed. As expected, older Maori experience decreasing mobility and physical agility with increasing age (Table 1). While physical functioning and overall health status decrease with age, and there is increasing bodily pain . Mental health and social functioning scores, did not appear to change significantly with age (Table 1).

Table 1. Self-assessed Health Score: Mean Component Score for Age Groups

Health Status Component (range 0 -100)	Under60 years	60-64 years	65 and over years
Physical functioning*	**46.1**	71.4	54.7
Role: physical *	55.4	**69.9**	59.3
Bodily pain *	63.4	84.0	75.6
Social functioning*	**57.1**	84.3	75.8
Role: emotional *	61.9	**76.8**	**78.5**
Mental health*	57.1	**81.5**	**79.3**
General Health*	50.2	69.1	63.8
Vitality *	40.0	66.8	60.9
Health transition**	2.8	2.6	2.8

** Transformed scores, range 0 -100. **Raw score, range 0 - 5.*

Self-reported Health Status

Most respondents reported at least "Good" general health. There was no significant difference in general health between older men and older women (Table 2).

Table 2. Self-perceived General Health

General Health(%)	Excellent	Very Good	Good	Fair	Poor
All respondents	13.7	27.1	26.2	27.6	**5.4**
Older men	12.7	30.4	24.1	27.8	5.1
Older women	14.3	24.8	27.8	27.4	5.6

The self-reported health status of older Maori was scored from responses to the SF36 [TM] section of the questionnaire. The general health status of the older people interviewed differed slightly between the sexes and is reported as a percentage of all respondents, all men and all women.

Self-assessment of Physical Functioning and Vitality

The values on Table 3 below are mean values. The standard error (SE) in brackets indicates the precision of the mean; the larger the SE, the more uncertain the mean and the higher the possibility of variation.

Table 3. SF36 [TM] Score for Physical Function, Vitality, and Health Transition

Health self-assessment components	under 60 years (SE)	60 to 64 years (SE)	65 to 69 years (SE)	70 to 74 years (SE)	75 years plus (SE)
Physical function	46.1 (7.9)	71.4 (2.7)	61.4 (3.2)	58.7 (3.0)	39.5 (3.7)
Vitality	40.0 (6.4)	66.8 (2.2)	62.1 (2.3)	63.3 (2.4)	57.7 (2.7)
Health transition	2.79 (0.28)	2.64 (0.11)	2.75 (0.11)	2.67 (0.11)	2.96 (0.12)

The health status of older Maori shows a decrease in component score for physical function and vitality as age increases. As age increased in this sample, older Maori were more likely to rate their own health as poorer than it was in the previous year, as indicated by the decrease in the 'health transition' component. Decrease in 'vitality' and 'physical function' between the under-60-years age group and the 60-to-64 age group is consistent with the higher proportion of this group reporting lower health scores (Table 3) and a higher proportion of self-reported disability. This group of people reported disability and were all eligible for state assistance.

Older people over the age of 60 experienced decreasing 'physical function' and 'vitality' consistent with trends indicated in Table 3, where there is a general trend of increased reporting of low and mid-health status amongst older men and older women from the age of 65.

Health risks and preventative care

The study measured the use of tobacco and alcohol by older Maori. Only 27% of older Maori smoked cigarettes regularly. However, 43% of older Maori who did not smoke had smoked at sometime in the past. A range of reasons was given for discontinuance, including cost, poor health and medical advice. Fewer than half (46%) of older Maori reported they drank alcohol: three percent of those who did were heavy drinkers, 59% were moderate drinkers, and 36% rarely drank.

The level of older women participation in health prevention programmes was sought. Thirty-seven percent had regular cervical smears, while an additional 25% had had at least one cervical smear previously. Similarly, 38% of kuia had had regular breast examinations, and a further 12% reported an examination sometime in the past.

Twenty-five percent of older men reported experiencing potential prostate-related problems, while 64% said they had not experienced these problems, and 10% did not know.

Discussion

SF36TM was utilised as the self-assessment tool. Twenty-seven percent of the respondents described their health as fair, and 6% as poor. Compared with the preceding 12 months, however, 19% had described their current health as worse than it had been. Twenty-eight percent thought there had been an improvement in their health, and half reported no change over the 12-month period. Older Maori seem to have an "optimistic" view of their own health when compared with self-reported levels of morbidity.

Health and Cultural Identity

The measure of cultural identity in this study incorporates levels of marae participation, the use of Maori language, access to Maori resources such as land, and involvement with whanau. Nearly 70% of older Maori in this study were active marae participants. When kaumatua activity on marae was compared with overall health scores, statistically significant differences were noted. Older Maori with the lowest health scores (i.e. the worst health) were less likely to have any current

involvement on marae when compared with older Maori showing high health status.

The role of kaumatua/kuia is very demanding on one's time and health. Long hours spent at tangihanga and marae meetings... (74-year-old respondent).

For the 30% who enjoyed ownership of Maori land, including financial benefits, there was no apparent correlation with health status. This cautions against any assumption that land will automatically cushion against poor health, although Maori landowners may be in a somewhat better position to cope with the costs of poor health than those whose income derives entirely from a social payment.

There was a relationship between self-assessed health status and Maori language use and competency. This relationship was strongly influenced by where the responders lived. The lower health status of those urban responders who spoke to reo Maori"' as their first language, may be a reflection of the lack of access to Maori language health information; or of the greater demands placed on them by virtue of their ability to speak Maori.

As guardians of to reo Maori, nga tikanga [iv] and nga iwi, hapu, and whanau, kuia and kaumatua have demands placed upon them which have no equivalent in Pakeha"society (74-year-old-respondent).

Positive Ageing

As already noted, two-thirds of responders had a positive attitude towards their own health, and considered they were regarded favorably by their people as kaumatua. Lower health status was evident in those older Maori who seldom or never enjoyed the kaumatua role, but otherwise health status did not impact significantly on perceived role satisfaction.

Conclusion

This case study represented the views of a sample of older Maori with a more traditional or conservative profile, and is therefore biased in favour of Maori who are integrated into either tribal society or urban Maori networks. On the other hand, the respondents represent almost 2% of the eligible Maori population and reflect wide regional as well as urban, rural and metropolitan mixes.

The age distribution of the sample yields proportionately more Maori in the older age groups (70 years and older, 45% of the sample), and this has balanced the small numbers expected from studies of older people. Not withstanding these limitations, it is nonetheless the largest study of its kind.

Self-assessed Health Status

Kaumatua present an optimistic assessment that is belied by actual morbidity and premature mortality. Data from the *Health Survey of New Zealand* (1995-1996) suggested older Maori considered health in terms different from the assumptions made by the designers of SF36™ (Scott et al., 2000). While the suitability of SF36™ seems assured from the response of the responders to the questionnaire, more work is required to be confident that the data collected thus far are a fair and accurate reflection of their health status. This work is underway and will be published in the near future.

Role of Kaumatua

Kaumatua is a functional term rather than an age term. Positive views of ageing are reported by older Maori and, regardless of occupation or retirement, there is active participation within Maori society. The role most older Maori adopt is active, in so far as contributions at both whanau and community levels are valued. In return, older Maori are afforded respect and assistance. Integral to this mutually beneficial relationship is the leadership role expected of kaumatua; it appears to be based less on chronological age than on the nature of the contribution.

The findings of this study confirm the importance of the marae and the whanau as areas where positive roles can develop for older Maori.

Cultural Identity

As expected, with the participant's high levels of involvement in Maori institutions such as the marae and whanau, the responders identify strongly as Maori, whose role is to carry their culture within their own communities. Almost all respondents were strongly in favour of increasing to reo Maori competency and use among younger members of the whanau. Demands placed on older Maori can often be traced to their competence with the language and expectations that they will teach others. Some older Maori feel burdened by the responsibilities that increase with age.

There was little indication in the study that older Maori are indifferent to the significance of a Maori identity - quite the reverse. For future planners, however, a major consideration will be the readiness of older Maori to step into the role of kaumatua, as the cultural custodians and marae leaders.

The key to the participation of these older Maori in

Maori society was their knowledge of the community and their acceptance by others. Urbanisation has created physical distance that may well act as a deterrent for some kaumatua to exercise this role unless other arrangements, such as hapu wananga"" in towns and cities, are included in iwi policies.

Whanau

Whanau relationships are typically close. There is some suggestion that high levels of reciprocity contribute to an intergenerational understanding, and provide a sense of satisfaction among older Maori.

At the same time, consideration must be given to strengthening whanau to avoid further fragmentation and alienation. Whanau circumstances are rapidly changing, and if in the future older Maori are to remain involved and to continue to play essentially positive roles, active policies for whanau development are needed.

Risk and Prevention

The roles that older Maori are expected to undertake are both a risk to their health and well-being and a benefit. The balance of risk and benefit is determined by the demands placed on this vital and skilled group of people. Older Maori face a variety of challenges but are also actively contributing to the life of their communities. The complex relationships with whanau and iwi, the shared intergenerational responsibilities, the interface with the health sector, economic concerns, and access to social services and the mainstream generally, have implications for Maori development.

Sectoral planning is unlikely to capture what is needed to guarantee older Maori a positive place in society and at the same time reduce the impact of age-related disabilities. Iwi have a definite policy and planning function at regional levels, and though few have seriously considered the specific needs and aspirations of the older members, they are in fact well placed to bring the strands of their communities together and weave the threads to moderate impact on older Maori and their whanau.

At the same time, there is an obvious and ongoing role for the State. The needs of current and future older Maori must be acknowledged in the development of Government policy. The focus must recognise the health needs of our older Maori, and the impact these needs have on the participation of kaumatua within Maori society. Kaumatua are crucial to the preservation of our taonga[xv]"" for future generations and, most important, we must look after our older Maori, for they are a taonga for us all! The risk to the health and well-being of Maori society is the premature loss of kaumatua. Preventative strategies must depart from the conservative current narrow public health focus and practice, and account for the social needs of older Maori. Strategies must encompass a positive view of ageing and an active involvement in a cultural context consistent with the role of the older Maori.

New policies that address the health and well-being of Maori and whanau reflect the changing demands on Government. Further research is required to provide evidence for the benefit, or gain, from changes of policy, as well as for the integration of health with other social policy as indicated in *He Korowai Oranga* (Minister of Health, 2001).

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References

Aaronson, N. K., Acquadro, C., et al. (1992). International quality of life assessment (IQOLA) project. *Quality of life research,* 1,349-351.

Dude, M. H. (1998). *Whaiora Maori health development* (2 ed.). Auckland: Oxford University Press.

Jones, C. (1999). Maori-Pakeha Health Disparities: Can Treaty Settlements reverse the Impacts of Racism?, *Ian Axford (New Zealand) Fellowships in Public Policy* (pp. 93). Wellington.

Kokaua, J., Wheadon, M., & Sceats, J. (1995). A discussion paper about the SF-36 as a health measure and its usefulness for measuring Maori well-being. Hamilton, New Zealand: Health and Disability Analysis Unit, Midland Health.

Medical Outcomes Trust. (1994). *SF-36 health survey:scoring manual for English-language adaptions:* Australia/New Zealand, Canada, United Kingdom (pp. iV, 59). Boston, MA.

Minister of Health. (2001). *He korowai oranga Maori health strategy. Discussion document.* Wellington: Minister of Health.

Ministry of Health. (1999). *Taking the pulse -The 1996/ 97 New Zealand Health Survey,* Wellington: Ministry of Health.

Ministry of Maori Development. (1997). *Oranga Kaumatua -the health and wellbeing of older Maori people, a report prepared for the Ministry of Health and Te Puni Kokiri by Te Pumanawa Hauora, Department of Maori Studies, Massey University, Palmerston North* (Research report). Wellington: Ministry of Maori Development Te Puni Kokiri.

Patton, M. Q. (1990). *Qualitative evaluation and research methods,* (2nd Edition ed.). Newbury Park: Sage Publications.

Reid, P., & Robson, B. (1998). *Dying to be Counted.* Paper presented at the Te Oru Rangahau Maori Research and Development Conference, Palmerston North.

Royal, T. A. C. (1998). Te ao marama a research paradigm. In T. P. Hauora (Ed.), *The Proceedings of Te Oru Rangahau Maori Research and Development Conference, July 7-9* (pp. 78-86). Palmerston North: Massey University.

Salmon, L., Waters, E., Wake, M., et al. (1999, July21-22). *The Australian authorised adaption of the child health questionnaire* (CHO 50): *how does it rate?* Paper presented at the Health Outcomes: Integrating the elements, The Rydges Lakeside, Canberra.

Salmon, L., Waters, E., Wake, M., et al. (2000, July 21-22). *Measuring health outcomes: integration with hospital-based clinical guality activities.* Paper presented at the Health Outcomes: Best Bets Best Buys, The Rydges Lakeside, Canberra.

Scott, K. M., Sarfati, D., Tobias, M. I., & Haslett, S. J. (2000). A challenge to the cross-cultural validity of the SF-36 health survey: factor structure in Maori, Pacific and New Zealand European ethnic groups. *Social Science in Medicine ,* 51 (11), 1655-1664.

Silburn, S. R., Zubrick, S. R., Garton, A., Gurrin, L., Burton, P., Dalby, R., Carlton, J., Shepherd, C., & Lawrence, D. (1996). *Family and Community Health.* Perth, Western Australia: Australian Bureau of Statistics and the TVW Institute for Child Health Research.

Statistics New Zealand. (1998). *New Zealand Life Tables 1995-97 -Life Expectancy Continues to Improve [press release].* Wellington: Department of Statistics.

Te Hoe Nuku Roa. (1999). Te Hoe Nuku Roa Source Document: Baseline History, *Maori Profiles Research Project* (pp. iii, 146). Palmerston North.

The Public Health Commission Rangapu Hauora Tumatanui. (1995). He *Matariki: A Strategic Plan for Maori Public Health He Kaupapa Whainga Roa Mo Te Hauora Tumutanui Maori: The Public Health Commission's Advise to the Minister of Health 1994-1995* (0-478-08528-1). Wellington: Public Health Commission Rangapu Hauora Tumatanui.

Waters, E., Salmon, L., Wake, M., et al. (2000). The child health questionnaire in Australia: reliability, validity and population means. *Australian and New Zealand Journal of Public Health, 24(2),* 207-210.

Zubrick, S. R., Silburn, S. R., Garton, A., et al. (1995). *Developing health and wellbeing in the nineties,* Perth, Western Australia: Australian Bureau of Statistics and the TVW Institute for Child Health Research.

Zubrick, S. R., Silburn, S. R., Gurrin, L., et al. (1997). *Education, Health and Competence,* Perth, Western Australia: *Australian Bureau of Statistics* and the TVW Institute for Child Health Research.

Freedom from desire leads to inward peace
Lao — Tyu, 16th Century BC