The Health Knowledge, Attitudes and Practices of the Residents of MidCentral District Health Board 2003

MidCentral Health
Public Health Service

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Acknowledgement

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Content

Executive Summary

Overview

The 2003 Knowledge, Attitude and Practice (KAP) survey follows a similar survey undertaken by Public Health Services in 2000. A total of 1344 adult residents (aged over 15) in the MidCentral District Health Board (MDHB) region were sampled, telephone interviews being conducted to gather the information. This report provides an overview of the 2003 survey results and trends over the three-year period.

The 2003 KAP survey shows positive results in most health areas compared with the 2000 survey. Differences were found between gender and among age groups in both protective and risk factors related to health. Consistent with other reports, this survey provides further evidence that Maori bear disproportionate risk parameters in a range of health areas. Where comparable, the prevalence of health status and health related factors among the adult residents of MDHB is generally similar to the New Zealand population.

Key results for each sector are:

- **Self-rated health**: The majority of MDHB adults rated their health as good, very good or excellent. The rating remains stable compared with the 2000 report and is close to the National Health Survey. No difference was detected for the rating levels between Maori and non-Maori and among different geographic areas.

- **Nutrition**: The majority of adult respondents did not eat fast food frequently. Young people, males and Maori had a higher consumption of fast food. A small percentage of people ate fast food very frequently. About two thirds of adults ate two or more servings of fruit and half of them ate three or more servings of vegetables per day. Fruit consumption has increased compared with the 2000 KAP; but a gap between the recommended consumption of fruit/vegetable still exists especially for males and Maori.

- **Physical activity**: There is an increase in moderate physical activity in 2003. About two thirds of MDHB adults were physically active, slightly lower than that of New Zealand as a whole. Housework was the most frequently reported activity. Lack of time was the top cited barrier preventing people from taking exercise.

- **Alcohol**: No change was found in the frequency of consuming alcohol in the three year period with about one in five adults drinking three times or more weekly. However, more adults reported that they became intoxicated in the 2003 survey than 2000. Young people, males and Maori were the high risk group for intoxication. Own home was the most frequently cited place for drinking.

• **Cannabis**: Cannabis use remained similar to 2000 with less than one tenth of respondents having tried it in the last 12 months. Young people, males and Maori were more likely to use cannabis.

• **Smoking**: The prevalence of current smokers among MDHB adult residents in the 2003 survey (22.1%) was similar to 2000 and also to national rates. Young people and Maori had higher rates of smoking. Bars, clubs and restaurants were the most frequently cited places where non-smokers were exposed to second hand smoking. The majority supported the suggestion that smoking should be restricted in restaurants, bars and clubs.

• **Injury and poisoning**: Similar to the National Health Survey and 2000 KAP result, about one quarter of adult respondents reported having injuries/poisonings that required medical treatment in the previous year. Injury/poisoning in the 16-24 age group appears to have decreased while in the 75+ year old group appears to have increased over the 2000 levels, but no statistical significance was reached. Fall and sport/games were still the leading causes for the injuries.

• **Sexual health**: Young adults had an enhanced awareness of the risk of getting HIV/AIDS and of the protection from sexually transmitted diseases resulting from condom use. The lower awareness of the risk of HIV/AIDS among males and the underestimate of the protection of condoms in females is of concern.

• **Oral health**: There has been an increase in visiting dentists among MDHB adults with a significantly higher rate for young people in the 2003 survey. More than half of adult residents agreed that fluoridation of drinking water can prevent tooth decay and supported fluoridation of public water supplies in the district.

• **Food safety**: Food safety knowledge regarding meat storage in the fridge and cooking chicken shows an improvement in 2003 compared with the 2000 survey. Females had a better knowledge than males.

• **School health**: More parents believed schools are safe and healthy places in the 2003 survey than in 2000. There was an increased awareness among the parents of the range of health promotion programmes at schools in the region.

• **Communicable diseases**: About two thirds of MDHB adults were aware of how to reduce the risk of meningococcal disease, which is significantly higher than 2000. Knowledge was higher in females than males. Attitudes towards immunisation were improved in 2003. Maori and non-Maori showed similar attitude levels toward immunisation.

• **Public health services**: There were marked increases in awareness about the range of services MidCentral Public Health Services provided. More people reported feeling well informed about the services and knowing how to contact them. No difference was found between Maori and non-Maori or among different geographic areas in the region in this respect.

• **Recommendations for future surveys**: Future telephone interview surveys would need to consider the coverage of landline phone, cellphone users, and residents without telephones in order to enhance sample representation. Efforts to include non-English speakers would also increase sample coverage. To better analysis socio-economic determinants on health, education, as a more stable socio-economic indicator, should be gathered in future surveys. Agreeing regular intervals for future surveys would improve detection of changes in population health status.

Introduction

Background

Health surveys on knowledge, attitudes and practices (KAP) provide information on people's health related behaviours and impact factors. They can be used as a measure of population health status and related factors and provide information for shaping health service delivery to meet population need. They also enable comparison of differences in investigated factors between population groups and trace their changes over time.

New Zealand has had three such surveys conducted nationally (the Household Health Survey 1992/93, and the 1996/97 and 2002/03 New Zealand Health Surveys). While a wealth of useful information was ascertained, the extrapolation of this information for the evaluation and planning of future services at a regional and local level has always presented a challenge for service providers.

MidCentral Health's Public Health Service (MCHPHS) conducted and published an initial KAP Survey of its regional population in 2000. The aims of this exercise were to establish a local data base enabling services to be evidence based and planned according to need; and to assist with evaluation of existing services. This initial survey was a benchmark, with the intention of repeating it 2-3 yearly to track changes in knowledge, attitudes and practices over time.

The KAP survey was conducted again in 2003. While the methodology was slightly refined, the structure and questions used in the questionnaire was retained as much as possible, enabling comparisons between the present and the past, and hopefully, future KAP surveys.

The 2000 KAP survey was restricted to the MidCentral District Health Board region. The present survey was extended to include residents of the Whanganui District Health Board region. However the two data sets were analysed separately.

Aims of the survey

To ascertain the health knowledge, attitudes and practices of the residents aged 15 years and over in the MidCentral District Health Board (MDHB) area.

Survey objectives

- To measure the knowledge, attitudes and practices of residents in the MidCentral District Health Board area focusing on programmes/services provided by the Public Health Services, MidCentral Health.
- To observe the distributions of investigated health factors among population groups.
- To compare findings with those of the 2000 KAP Survey and identify changes over the last three years.
- To compare local findings with comparable regional and national findings.
- To inform the planning processes of MidCentral Public Health Services and the MidCentral District Health Board.
- To gather relevant information to inform the health promotion planning process of Primary Health Organisations.
- To enhance the questionnaire design and quality study skills within Public Health Services.

Methodology

Ethical Approval

MCHPHS was given approval from the Manawatu Whanganui Ethics Committee to carry out the survey.

Sampling

The population for the 2003 Health Knowledge, Attitudes and Practices Survey was defined as the usually resident, non-institutionalised, civilian population of private households in the region covered by MidCentral District Health Board, over the age of 15. The sampling frame was all households in Palmerston North City, the Manawatu, Horowhenua, Tararua and part of the Kapiti Districts that had a landline phone number. These five areas were used as strata in the sampling process and the populations in each area were sampled relative to the census population.

In addition to this sample of the general population, an additional sampling process, oversampling of respondents identifying themselves as Maori, was employed to enable separate analysis of the responses of this group

Conducting the survey

Digipoll, a commercial market research firm, carried out the interviewing for the phone survey and the data entry, from their fully supervised interviewing facility in Hamilton. Random Digit Dialling (RDD), using an auto-dial random sampling system specifically designed for the New Zealand telephone system, was employed which meant that houses with unlisted phone numbers were included in the sample. The phone surveys were conducted during late May to the end of June 2003.

Interviewing staff were trained and briefed for this survey. Anonymity of responses was assured to respondents in the questionnaire introduction, and in keeping with ethical requirements no records of respondent details, such as phone numbers, names or address, were kept by Digipoll or MCHPHS.

A respondent selection technique was used, which asked for the next person in the household to have a birthday to answer the questionnaire. Without this procedure, bias might have been introduced as different groups of respondents, e.g. males or females, or those of different ages in the household, may be more or less likely to answer the phone, and this will affect the representativeness of the sample. Up to 5 call-backs were made to the same number across different times of day and different days, before the phone number was replaced in the sample.

A random sample was chosen from listed and unlisted private telephone numbers in the area covered by MDHB. A question was asked to select the person with the next birthday in the household.

Additional Maori residents were interviewed to fulfil the requirement of a separate sample of Maori respondents. The following screening question was used to select respondents identifying themselves as Maori: "*Are you of Maori descent*?" Only those who identified themselves as Maori, and who agreed to take part, formed part of the over-sample.

The total general sample size was 1009. The Maori sample size was 439 that included 335 of oversampling plus 104 extracted from general sample who self-reported as Maori. The final non-Maori sample was 905 after excluding the 104 general Maori respondents.

Analysis

Statistical Analysis

The statistical analysis was carried out using SPSS 11.0 (SPSS Inc, Chicago Illinois). Parametric tests were used with the assumption that the sample was randomly selected from the population and that each subgroup was independent. In this report, two major analyses were conducted: frequency distributions and comparisons of differences between groups

using chi-square. Comparisons were made between gender, year and district, and by age and ethnicity where necessary. Considering the sample size and the length of report, analysis was only conducted between Maori and non-Maori when comparing within ethnicity. Statistical analysis was not applied when comparing regional with national data due to uncertainty around the consistency of methodology used. The source of national data used for comparison in this report is the National Health Survey report (MoH 2003g). When making comparisons, some subgroups under a variable were combined in order to increase power of test or to allow comparison to national data. Where statistical significance is reached, a symbol of ** when $p<0.01$ or * when $p<0.05$ is indicated on the right of the paired/clustered groups for a table or in the legend for a graph, except for mixed graphs where the symbol is beside indicated labels. Respondents who were unable or unwilling to give an answer to a question were excluded when calculating the proportions and making comparisons unless where categorical responses were appropriate. In most questions, the non-response was less than 5%. Where it was markedly high, the number of samples were given and margins of error were changed accordingly.

Margins of error – 95% confidence intervals

The survey sample was used to estimate the margin of error, or 95% confidence intervals for the population. These mean that there is 95% confidence that the percentage in the population lies between the sample estimate ± margin of error. For example, if the estimated proportion from the total sample is 30% and the margin of error is ±2.8%, the range of 95% confidence interval is 30%-2.8% ~ 30%+2.8%, i.e. 27.2 ~32.8%.

When comparing between sample groups, if the two ranges of 95% confidence intervals of each proportion overlap, we cannot say there is a statistically significant difference. For example, the proportion of respondents who rated their health as good is 28.0% in the 2003 KAP survey and in 2000 is 25.3%. The 95% confidence interval of the former is 25.2-30.8% and the latter 22.7-27.9%. The two ranges of confidence intervals overlap, thus there is no statistically significant difference.

In this report, the 95% confidence intervals for the sample proportions are indicated with error bars within the graphs, or displayed under/beside the proportions within the tables or in the text. The calculation of margin of error is illustrated in the appendix of the report.

In most cases, the statistical significances indicated in this report came from the results of chi-square test that only implies the significant differences between/among sets of different groups. The margin of error used in this report is a guide to estimate the confidence intervals for each individual proportion.

Sample weighting

Women were over-represented and young people under-represented in the sample, when compared with the MDHB population. As age and gender are two key influences on health and health related behaviours, these two factors have been weighted in the sample to adjust to the standard population structure of the 2001 census. This weighting has also been applied to the Maori sample and 2000 KAP sample using the same standard population. The weighting is applied uniquely to each respondent of the samples. Therefore, when making comparisons between Maori and non-Maori, and between 2003 and 2000 sample results, age and gender confounding is removed. However, when comparison was made between gender within 2003 sample, only age weighting was applied to the sample; when comparison was made among age groups within 2003 sample, only gender weighting was applied.

Household size

This survey collected information on the household size of each respondent. People in a smaller household have more probability of being selected for the sample. However, because age and gender, the two important confounding factors have been adjusted to the standard population, and household size has not been reported to be a significant confounding factor, weighting for household size was not utilised in the present analysis. An analysis by household size may be generated in future reports.

Ethnic grouping

The classification of ethnic group was in accordance with the standard adopted by Ministry of Health in the Health Survey Report (MoH 1999), originating from Statistics New Zealand. The ethnicity was coded based on the ethnic group claimed by respondents when only one ethnic group was given. When more than one were indicated, the priority rule for coding a specific ethnic group was: Maori > Pacific > Asian > other.

Bias

As illustrated above, efforts were made to ensure that the sample was representative of the population. This included use of random digit dialling, 5 callbacks stipulated, and asking the person with the next birthday to answer the questionnaire. However, households without a landline telephone number were not covered in this sample, which may have introduced some bias.

Due to language barriers, residents with difficulty in understanding English were less likely to be selected; accordingly there may also be a modest ethnic bias.

Where possible, the changes to the methodology and survey instrument were minimised between the two surveys. The wording of the questions employed in this survey was the

same as that for the KAP 2000 survey. The only changes to the original questionnaire were to add questions on new topics, or delete questions deemed no longer appropriate. Because the two data collections were conducted by different companies, when comparing the results bias may occur due to the possibility of slight differences in questionnaire administration methodologies.

Response Rate

The response rate was calculated by dividing the final sample size by the total number of phone calls made which were responded to by an adult resident. The response rate is 36.4% (1344/3695). Table 1 lists the details of reasons for non-response and calculation.

Table 1: Response rate calculation

Call Status	Number of Calls
Total eligible calls	**3695**
Refusal	2153
Unable to attend appointments	29
Language Barrier	38
Illness	31
Hearing Problem	76
Complainer/Protestor	24
Participants	**1344**

Demographic Characteristics of the Sample

Table 2 demonstrates the demographic characteristics of the total sample of this survey compared with MDHB population. The table indicates that there is a female excess. This female bias has been widely reported by most surveys. It has also been reported that surveys related to community and health issues attract more female respondents than male (internal communication). The proportion of young respondents appears lower than corresponding population levels. This finding differs from the KAP 2000 survey where young people comprised a slightly higher proportion of the sample than of the population. The fewer young adults responding to this telephone survey may be related to the rapidly increased cellphone usage and the sharp growth in young people's ownership within the past two years. This may reduce the number of young people who install home phones (landlines) and also may decrease the probability of young people picking up the phone call at home where a landline is present. Income levels among the sample were slightly higher than those for the corresponding population. Several considerations may explain the discrepancy. First, there is a two-year gap between census and the survey during which the economy in New Zealand expanded remarkably. Second, there were a considerable number of respondents who declined to disclose their income. Finally, the telephone interview did not include residents without a landline telephone who were possibly of lower income status.

The age and gender components of the Maori sample are displayed in Table 3. As with the total sample, there is a female bias and fewer young people compared to the population distribution. The reasons for these discrepancies are likely to be similar to those noted above with respect to the total population. The Maori population has a younger age structure than does the total population, further accentuating the bias.

After weights for age-gender were applied, the structures of both the total and Maori samples become closer to the MDHB population, see Tables 2 and 3.

Table 2: 2003 MidCentral KAP Survey: Demographic characteristics of the total sample

	Observed Number	Observed proportion of Sample %	Weighted proportion of sample%	Proportion of Census %*
Gender				
Male	364	36.1	48.0	47.8
Female	645	63.9	52.0	52.2
Age group				
16-24	107	10.6	17.6	17.2
25-44	354	35.1	35.8	36.5
45-64	322	31.9	28.3	28.6
65-74	134	13.3	9.8	9.6
75+	86	8.5	8.5	8.1
Ethnicity				
European/Pakeha	841	83.3	81.6	79.2
Maori	104	10.3	11.1	11.9
Pacific	11	1.1	1.4	1.6
Asian	24	2.4	2.9	3.5
Other	11	1.1	1.2	0.3
Not Specified	18	1.8	1.7	3.4
Personal income				
0-$10,000	176	17.4	18.0	25.8
$10,001 - $20,000	211	20.9	19.5	25.3
$20,001 - $30,000	156	15.5	15.4	15.7
$30,001 - $40,000	115	11.4	12.1	10.5
$40,001+	199	19.7	21.2	13.2
Undisclosed	152	15.1	13.8	9.5
Area Strata				
Palmerston North City	461	45.7	48.1	46
Manawatu District	180	17.8	18.0	18
Tararua District	120	11.9	11.0	12
Horowhenua District	198	19.6	18.0	19
Otaki	50	5.0	4.8	5

* *Source of data: Ministry of Health, based on Statistics New Zealand 2001 Census*

Table 3: 2003 MidCentral KAP Survey: Demographic characteristics of the Maori sample

	Observed Number	Observed proportion of Sample %	Proportion of Census (Maori) %*	Weighted proportion of sample%**	Proportion of Census %*
Gender					
Male	141	32.1	47.9	47.7	47.8
Female	298	67.9	52.1	52.3	52.2
Age group					
16-24	58	13.3	27.6	17.4	17.2
25-44	219	50.3	46.6	36.6	36.5
45-64	119	27.4	20.5	29.2	28.6
65-74	27	6.2	4.0	9.2	9.6
75+	12	2.8	1.4	7.7	8.1

* *Source of data: Ministry of Health, based on Statistics New Zealand 2001 Census*

*** Weighting based on census proportion of total population*

Self-Rated Health

Questions:

-In general you would say your health is…

- *(If fair/poor) why is that?*

In this survey, 87.5% (85.5-89.5%) of respondents reported their health as good, very good or excellent (Table 4). The figure is close to the National Health Survey in 2003 where nine out of ten adults rated their health in the same categories (MoH 2003g) and also close to the rate reported for the KAP 2000 survey (90.3%, 88.5-92.1%). When comparing the detailed levels with the 2000 survey, the difference between the two sets of ratings reaches statistical significance. The percentage of respondents rating their own health as *very good* in 2003 appears a little lower than 2000, but those rating their health as *good* or *fair* appears higher (Figure 1). Maori show a similar self-rating of health to the non-Maori group (Figure 2).

Table 4: Self rated health status, 2003 KAP survey

Health Status	Number	Percentage %	Cumulative Percentage %
Excellent	232	23.1 (20.5 - 25.7)	23.1 (20.5 - 25.7)
Very Good	364	36.3 (33.3 - 28.7)	59.4 (56.4-62.4)
Good	281	28 (25.2 - 30.8)	87.5 (85.5 - 89.5)
Fair	97	9.6 (7.8 - 11.4)	97.1 (96.1 - 98.1)
Poor	29	2.9 (1.9 - 3.9)	100
Total	1002	100	

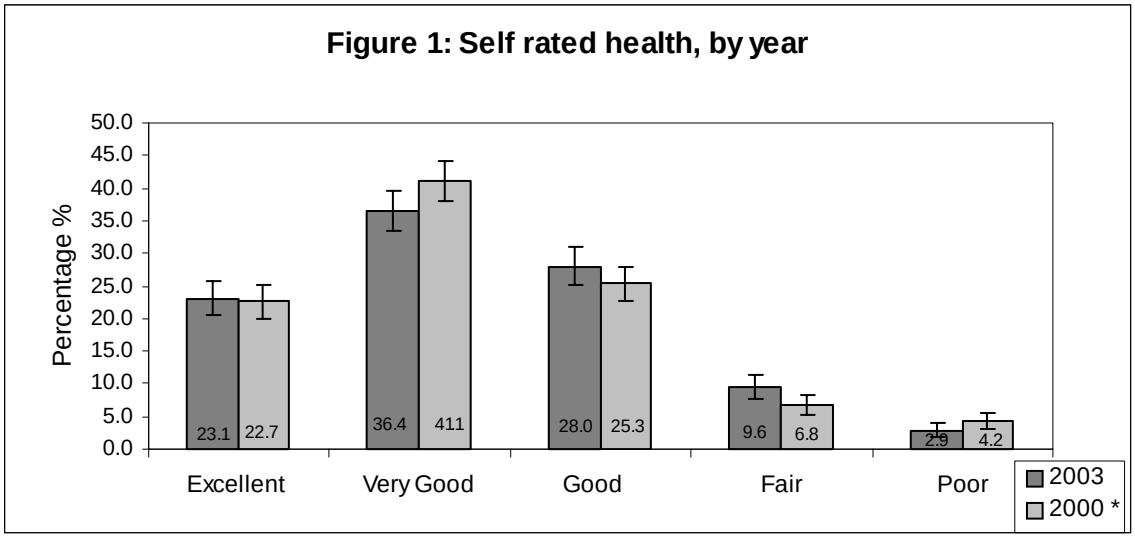


Figure 1: Self rated health, by year
Percentage %
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
23.1
22.7
36.4
411
28.0
25.3
9.6
6.8
2.9
4.2
Excellent
Very Good
Good
Fair
Poor
2003
2000 *

** p<0.016*

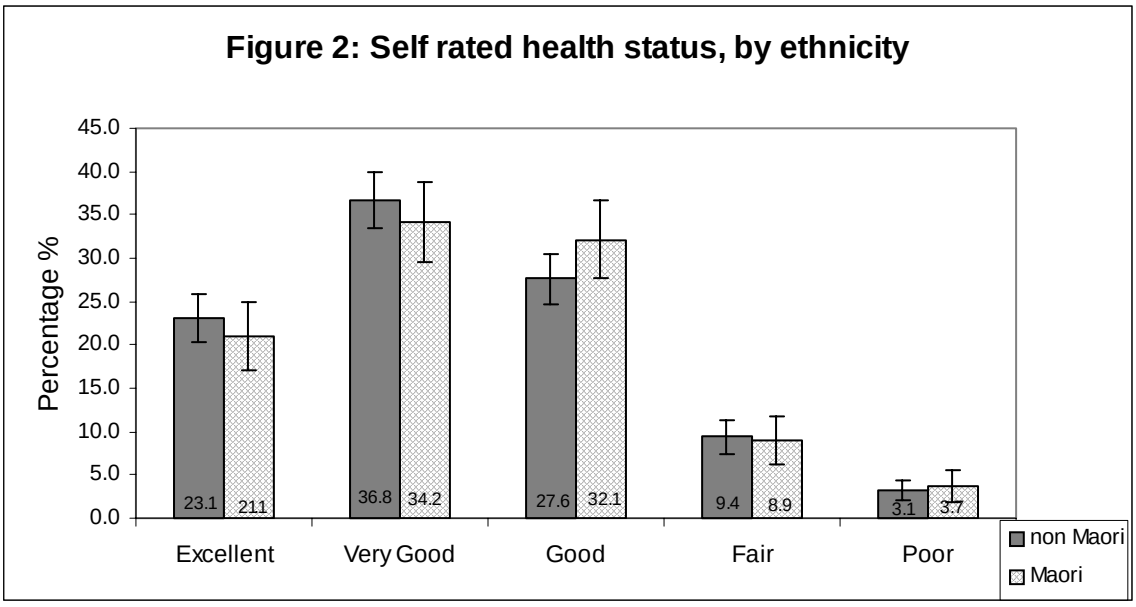
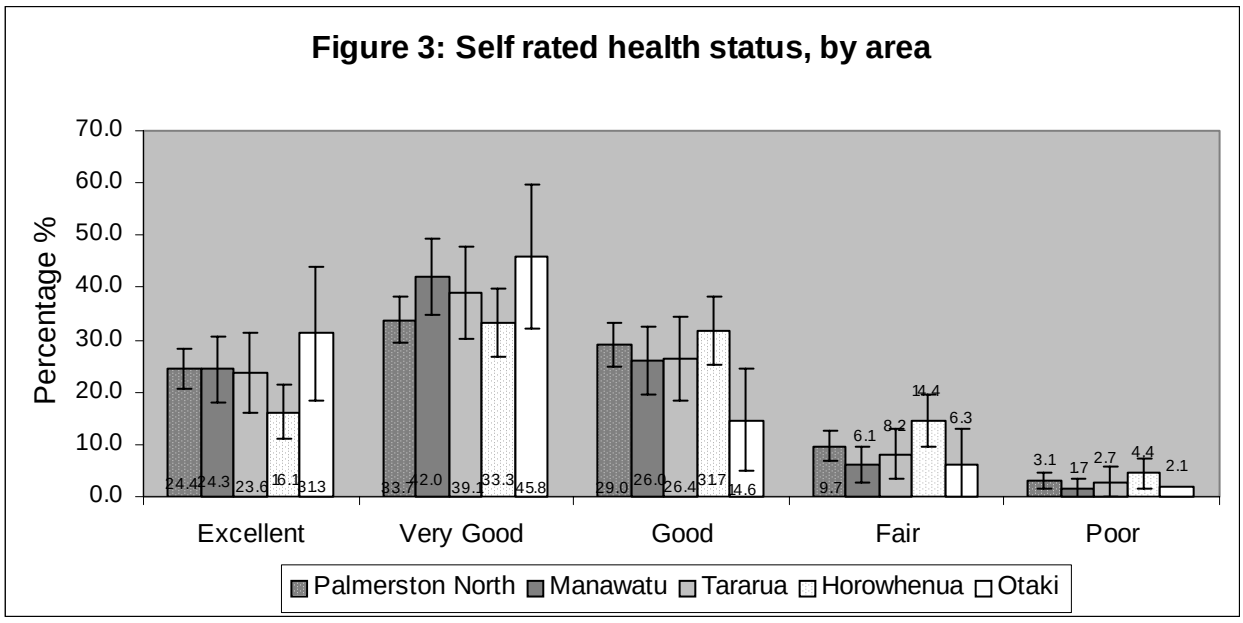


Figure 2: Self rated health status, by ethnicity
Percentage %
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
23.1
211
36.8
34.2
27.6
32.1
9.4
8.9
3.1
3.7
Excellent
Very Good
Good
Fair
Poor
non Maori
Maori



Comparing the self rated health status among different areas in the MidCentral region, no significant difference is detected, as shown in Figure 3. However, Horowhenua appears to have a slightly lower percentage rating *excellent* compared to all the other areas.

Nutrition

Questions:

-How many times a week do you have fast food e.g., McDonalds, KFC, Fish & Chips?
-Thinking of how much fruit you ate yesterday, where 1 serving is equal to a medium apple or half a large banana. Approximately how many servings of fruit would you have eaten yesterday?
-Thinking of vegetable servings you ate yesterday, where 1 serving is equal to ½ cup of mixed vegetables or 1 cup of salad, approximately how many servings of vegetables would you have eaten yesterday?

Fast Food Consumption

The majority of respondents (85.1%) reported eating fast food no more than once per week (Table 5). Females ate fast food less often than males. Maori consumed fast food more frequently than non-Maori. The frequency of eating fast food shows an inverse relationship with age, younger respondents consuming fast food more frequently than older age groups, see Table 6.

Table 5: Fast food consumption by gender, ethnicity

Number of times consumed	Percentage %				
	Male	**Female****	**non Maori**	**Maori ****	**Total**
once a week or less	79.9 (75.8 - 84.0)	89.7 (87.3 - 92.1)	86.7 (84.5 - 88.9)	79.1 (75.3 - 82.9)	85.1 (82.9 - 87.3)
2-3 times a week	16.8 (12.9 - 20.7)	8.3 (6.2 - 10.4)	11.4 (9.3 - 13.5)	17.9 (14.3 - 21.5)	12.3 (10.3 - 14.3)
4 times a week or more	3.3 (1.5 - 5.1)	2.1 (1.0 - 3.2)	1.9 (1.0 - 2.8)	3.0 (1.4 - 4.6)	2.6 (1.6- 3.6)

*** p<0.000*

Table 6: Fast food consumption by age

Number of times consumed	Percentage %				
	16-24 yr	**25-44 yr**	**45-64 yr**	**65-74 yr**	**75+ yr ****
once a week or less	67.0 (58.0 - 76.0)	82.1 (78.1 - 86.1)	92.4 (89.5 - 95.3)	97.0 --	98.9 --
2-3 times a week	22.0 (14.1 - 29.9)	16.4 (12.5 - 20.3)	7.3 (4.4 - 10.2)	3.0 --	1.1 --
4 times a week or more	11.0 (5.0 - 17.0)	1.4 (0.2 - 2.6)	0.3 --	0 --	0 --

*** p<0.000*

Fruit and Vegetable Consumption

Table 7 shows that about two thirds of respondents from the 2003 survey ate two or more servings of fruit (66.4%, 63.5-69.3%) and two or more servings of vegetables (71.8%, 69.0-74.6%) daily. Almost half of the respondents consumed three or more servings vegetables daily (45.8%, 42.7-48.9%). Compared with the KAP 2000 survey, fruit consumption of three or more servings daily has shown a significant increase while vegetable consumption remains similar.

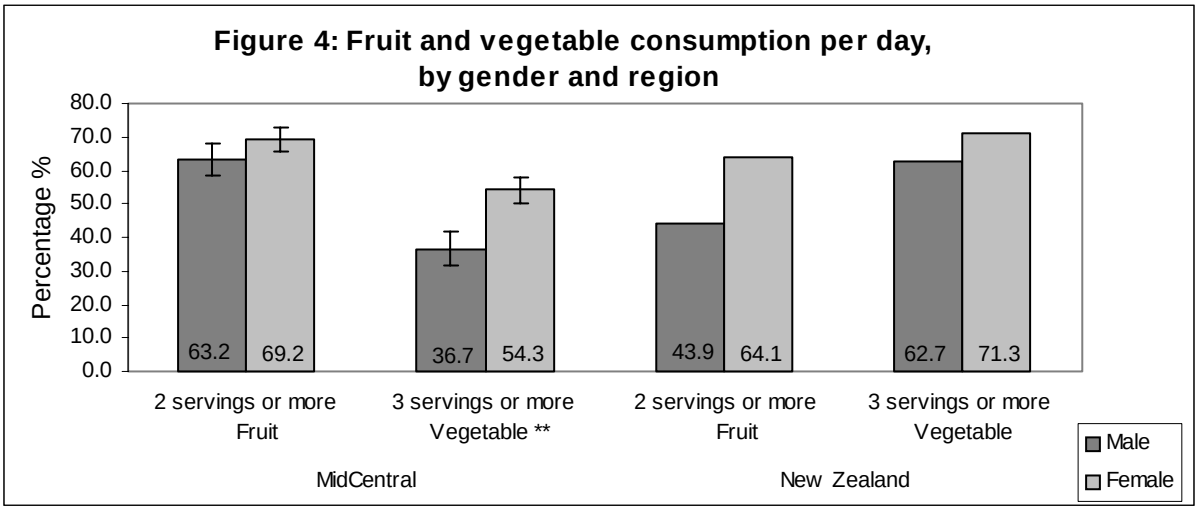
Consistent with national survey results, females ate more vegetables than males and have a slightly increased fruit consumption compared to males. Overall, the proportion of people consuming two or more servings of fruit per day was higher for the MDHB region than is the case nationally while fewer people consumed three or more servings of vegetables, see Figure 4.

Maori had a similar consumption of fruit per day to non-Maori, while they ate fewer servings of vegetables than do non-Maori, see Figure 5.

Table 7: Fruit and vegetable consumption daily, by year

Times per day	Fruit		Vegetable	
	2003 %	2000 % **	2003 %	2000 %
3 or more servings	39.7 (36.7 - 42.7)	31.1 (28.3 - 33.9)	45.8 (42.7 - 48.9)	46.8 (43.8 - 49.8)
2 servings	26.7 (24.0 - 29.4)	29.8 (27.0 - 32.6)	26.0 (23.3 - 28.7)	25.0 (22.4 - 27.4)
1 serving	17.4 (15.1 - 19.7)	19.3 (16.9 - 21.7)	20.6 (18.1 - 23.1)	18.8 (16.4 - 21.2)
Less than 1 serving	11 (9.1 - 12.9)	14.3 (12.2 - 16.4)	6.4 (4.9 - 7.9)	7.8 (6.2 - 9.4)
I don't eat fruit	5.2 (3.8 - 6.6)	5.4 (4.0 - 6.8)	1.2 (0.5 - 1.9)	1.6 (0.8 - 2.4)

*** p<0.002*



*** p<0.000*

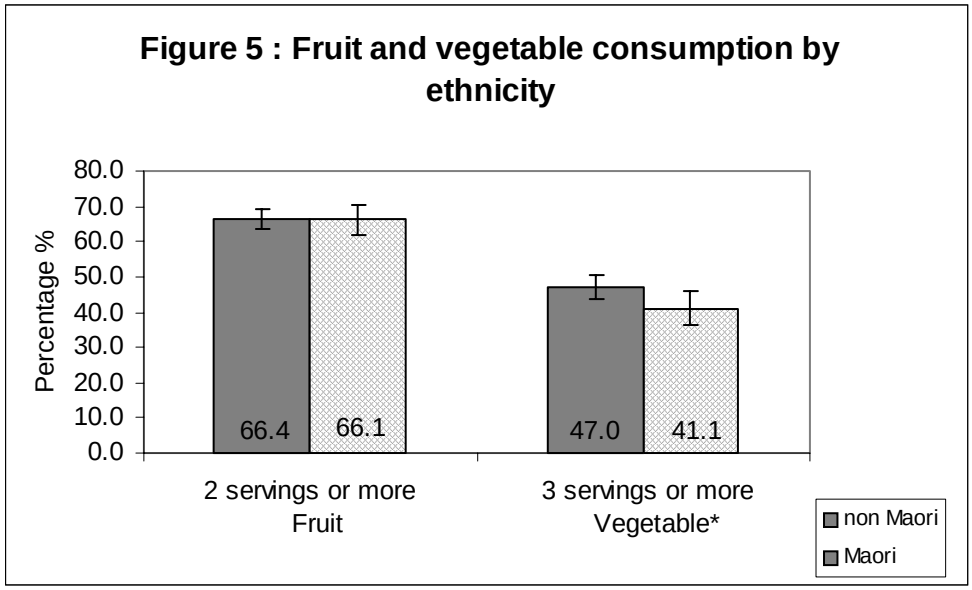


Figure 5 : Fruit and vegetable consumption by ethnicity
Percentage %
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
66.4
66.1
47.0
41.1
2 servings or more Fruit
3 servings or more Vegetable*
non Maori
Maori

** p<0.05*

Physical Activity

Questions:

-Think of exercise, how many times in the last 7 days did you go?…
-Approximately how many minutes or hours did you?…
-What stops you from getting more exercise?…

The pattern of physical activity has shown a significant change from 2000 to 2003, see Table 8. The level of activity reported in 2003 is more toward moderate. There are fewer people who stay sedentary (4.1%) and who are involved in highly active exercises (44.8%), but more people undertake relatively active and inactive exercises (25.6% and 25.5% respectively) in 2003. However, the overall proportion of people who are physically active (include relatively active and highly active) remained similar in 2003 to 2000, 70.5% and 71.5% respectively. Housework, walking and gardening remained the three most frequently cited activities, with housework now topping the list. See Table 9.

Table 8: Physical activity level, by year

Levels	2003 %	2000 % **
Sedentary	4.1 (2.9 - 5.3)	10.6 (8.7 - 12.5)
Relatively inactive	25.5 (22.8 - 28.2)	18.0 (15.7 - 20.3)
Relatively active	25.6 (22.8 - 28.2)	20.8 (18.4 - 23.4)
Highly active	44.8 (41.7 - 47.9)	50.7 (47.7 - 53.7)

*** p<0.000*
Note: The detail of categorisations listed in the table is explained in the Discussion chapter.

Table 9: Most frequently cited physical activities, by year

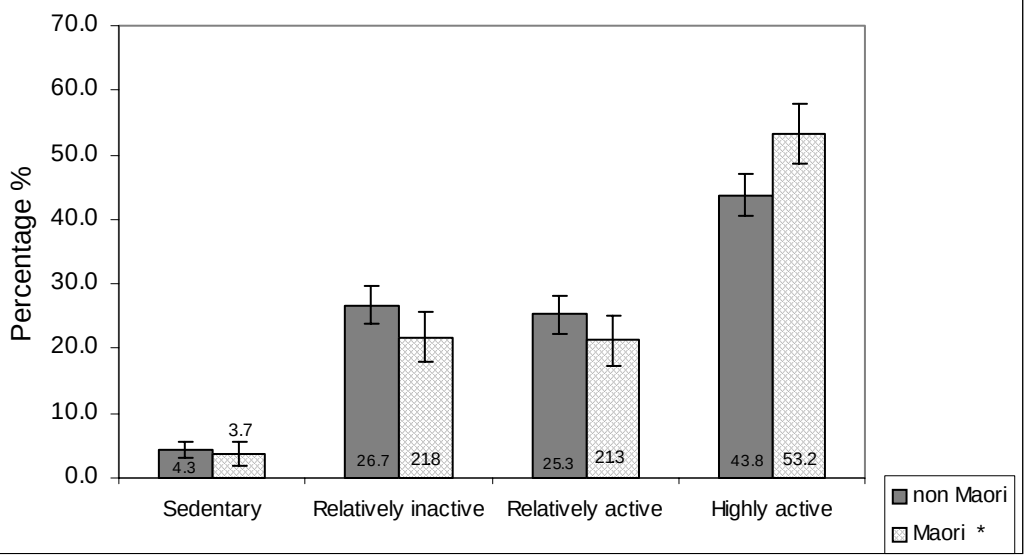
	2003 %	2000 %
Housework	80.2	56.1
Walking	69.4	59.3
Gardening	48.1	27.6

The physical activity levels show a difference between Maori and non-Maori, see Figure 6. Maori are more involved in vigorous exercise (53.2%, 48.5-57.9%) than non-Maori (43.8%, 40.6-47.0%).

The proportion of people who are physically active in the MDHB region (70.4%, 67.6-73.2%) is slightly lower than that of the total population in New Zealand (73.9%, 72.4-75.4%).

About one in three people claimed that lack of time stopped them from taking exercise. Work commitment and family and children are also cited as major barriers. Table 10 lists those barriers claimed by respondents. It is interesting that fewer than 2% of respondents perceived lack of access to facilities as a barrier to exercise. About one quarter of people indicated barriers outside those listed.

Figure 6: Physical activity level, by ethnicity



** p<0.015*

Table 10: Perceived barriers stopping exercise

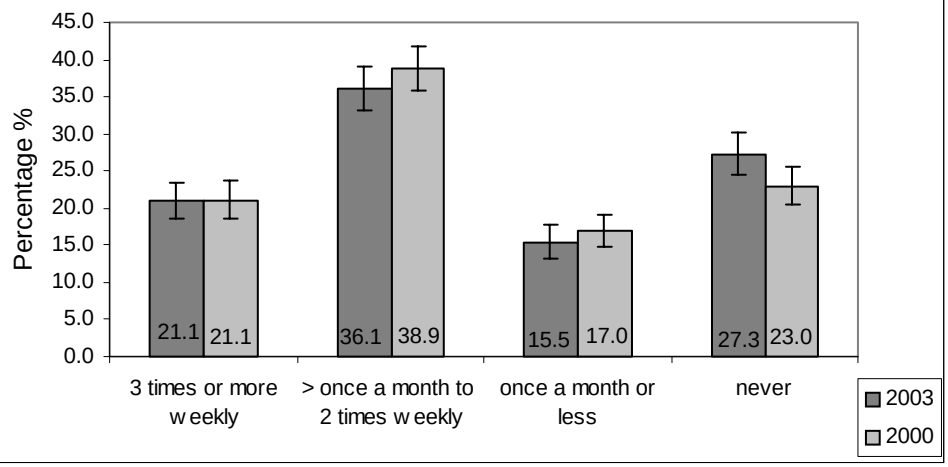
Barrier	Percentage %
Lack of time	34.3
Other	28.7
Work commitments	17.5
Family and children	11.8
Injury or disability	10.8
No motivation	10.7
Poor health	8.3
Lack of access to facilities	1.7
Feel inadequate	1.0
Cost	0.6
Lack of knowledge of opportunities	0.3
Fear of failure	0.1

Alcohol

Questions:

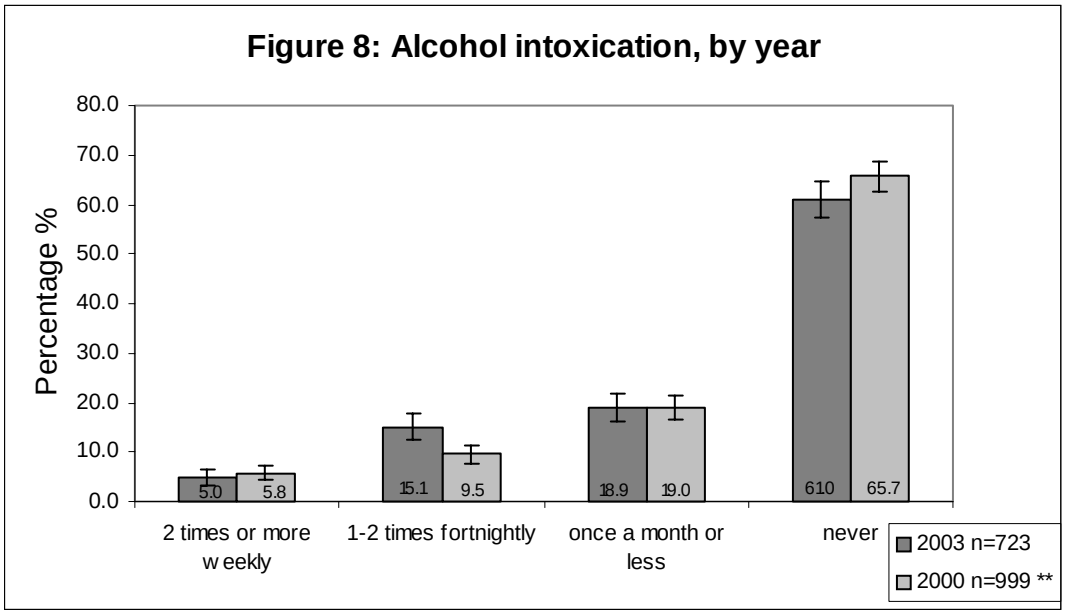
-Thinking now of alcohol, how often in a usual week do you drink alcohol?…
-How often in a usual week, do you drink enough alcohol to feel drunk?…
-What places do you usually drink alcohol?…

Figure 7: Alcohol consumption, by year



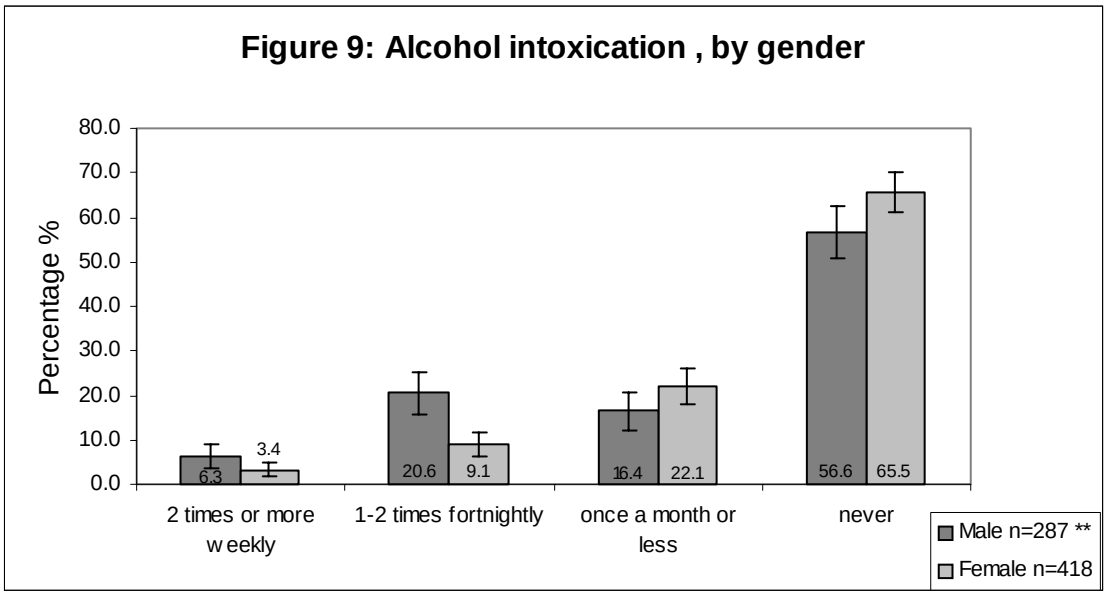
The survey shows that about one out five respondents drink alcohol three or more times weekly (21.1%, 18.6-23.6%); while there are still about one quarter who never drink alcohol (27.3%, 24.5-30.1%). Compared with the 2000 KAP result, the different levels of alcohol consumption remains similar (Figure 7).

Figure 8 provides the alcohol intoxication rates from this survey and also the comparison with the KAP 2000. There are still about 5% (3.4-6.6%) of people who become intoxicated two or more times per week. More people become intoxicated 1-2 times fortnightly in 2003 (15.1%, 12.5-17.7%).



***p<0.005*

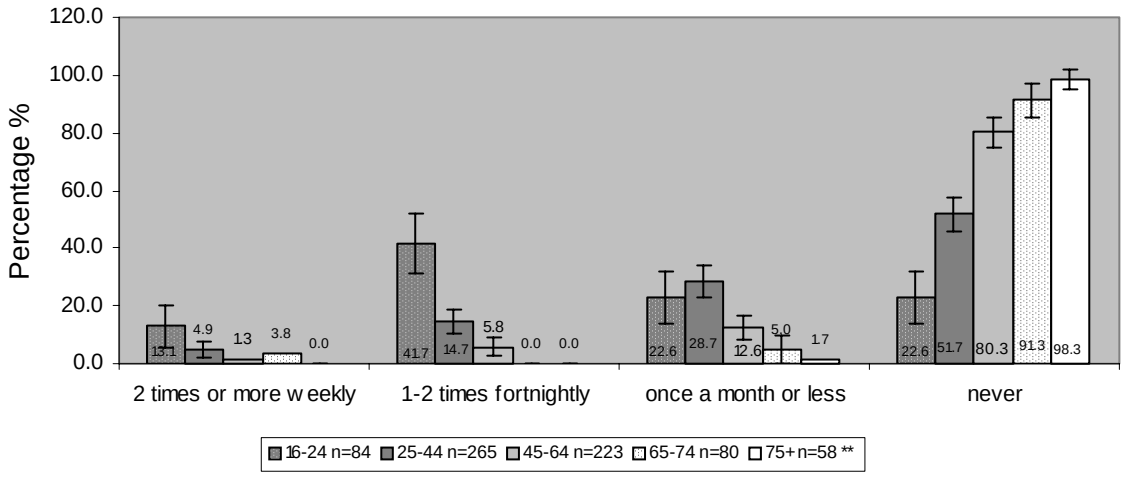
Males have a significantly higher rate of excessive alcohol consumption than females, for example, 20.6% (15.9-25.3%) of males get intoxicated 1-2 times fortnightly versus 9.1% (6.3-11.9%) of females. A higher proportion of females report never becoming intoxicated (65.5%, 61.7-70.1%), see Figure 9.



*** p<0.000*

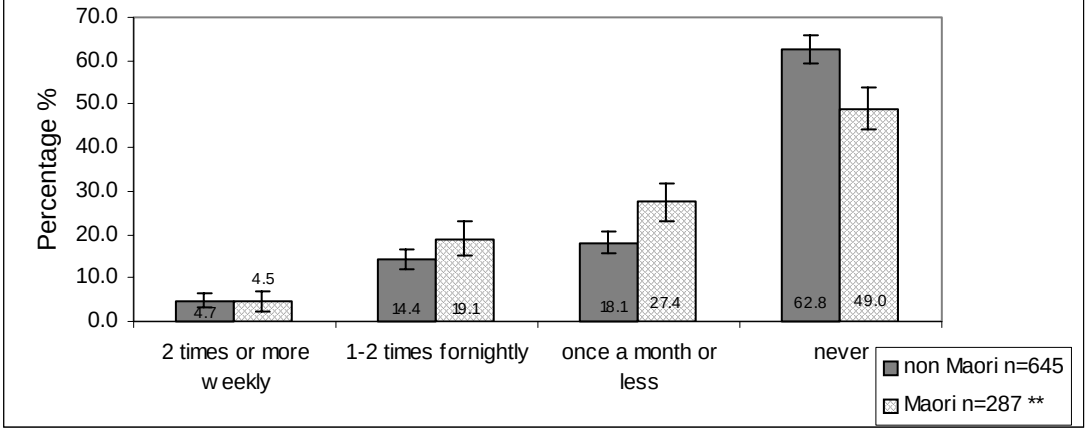
Frequency of alcohol intoxication is inversely proportional to age, with the highest frequency amongst those aged 16-24 (Figure 10). For example, the rate of getting drunk at least monthly (but less than twice per week) for 16- 24 year old respondents (41.7%) is about double that of next age group (25 to 44 years) and more than four times that of those aged 45-64. Maori have a higher proportion of getting intoxicated than non-Maori, see Figure 11.

Figure 10: alcohol intoxication, by age



*** p<0.000*

Figure 11: Alcohol intoxication, by ethnicity



***p<0.001*

Tables 12.1& 2 list the places respondents usually drink alcohol. The top rankings are essentially unchanged from those in KAP 2000. Own home is still the most frequently cited place for alcohol consumption. Pub/bars/hotel and others' home show a slight decrease in frequency but are still at the top on the list in 2003.

Table 12.1: Most frequently cited venue for alcohol consumption, 2003

Place	Percentage %
Own home	72.2
Pubs, hotels, bars	8.3
Others home	6.6
Other	4.2
Sports clubs	3.2
Restaurants	3.2
Nightclubs	1.1
Work places	1.0

Table 12.2: Most frequently cited venue for alcohol consumption, 2000

Place	Percentage %
Own home	64.5
Pubs, hotels, bars	14.4
Others home	10.3
Other	1.6
Sports clubs	2.9
Restaurants	3.4
Nightclubs	0.6
Work places	2.4

Cannabis

Questions:

...please stop me when I indicate, how often have you ever used cannabis?

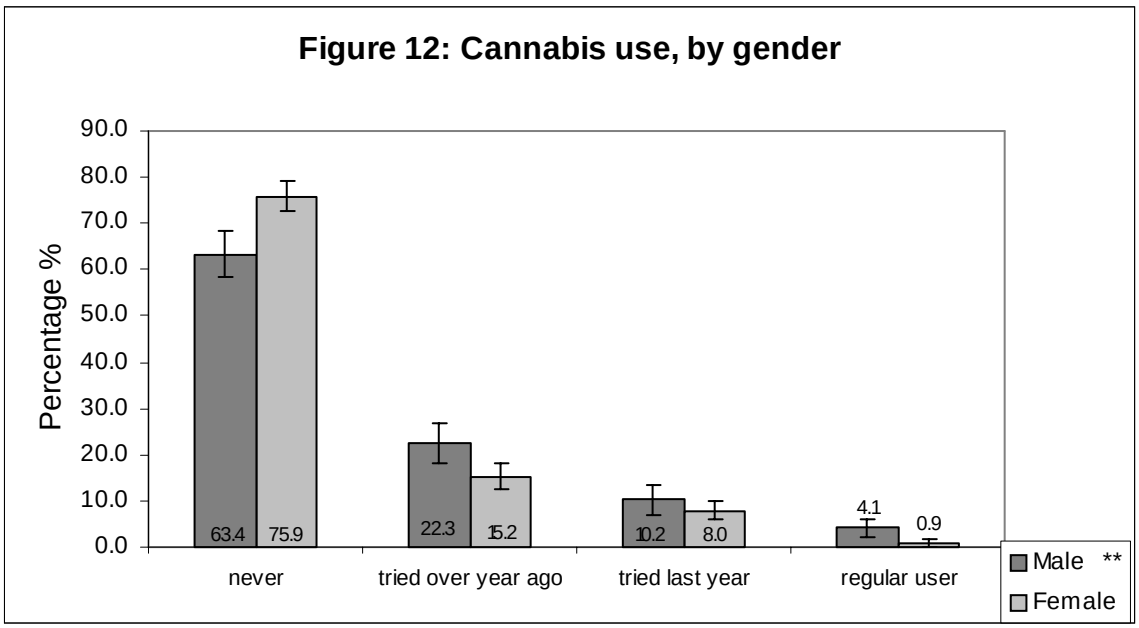
Compared with the KAP 2000 result, cannabis use remains similar in all levels of user. Fewer than one in ten people have tried cannabis in the last 12 months, and more than 70% have never tried the drug.

Table 13: Cannabis use, by year

level	2003%	2000%
never	71.3 (68.5 - 74.1)	72.9 (70.2 - 75.6)
tried over year ago	17.7 (15.3 - 20.1)	15.9 (13.3 - 18.1)
tried last year	8.8 (6.1 - 10.5)	8.5 (6.8 - 10.2)
regular user	2.2 (1.3 - 3.1)	2.7 (1.7 - 3.7)

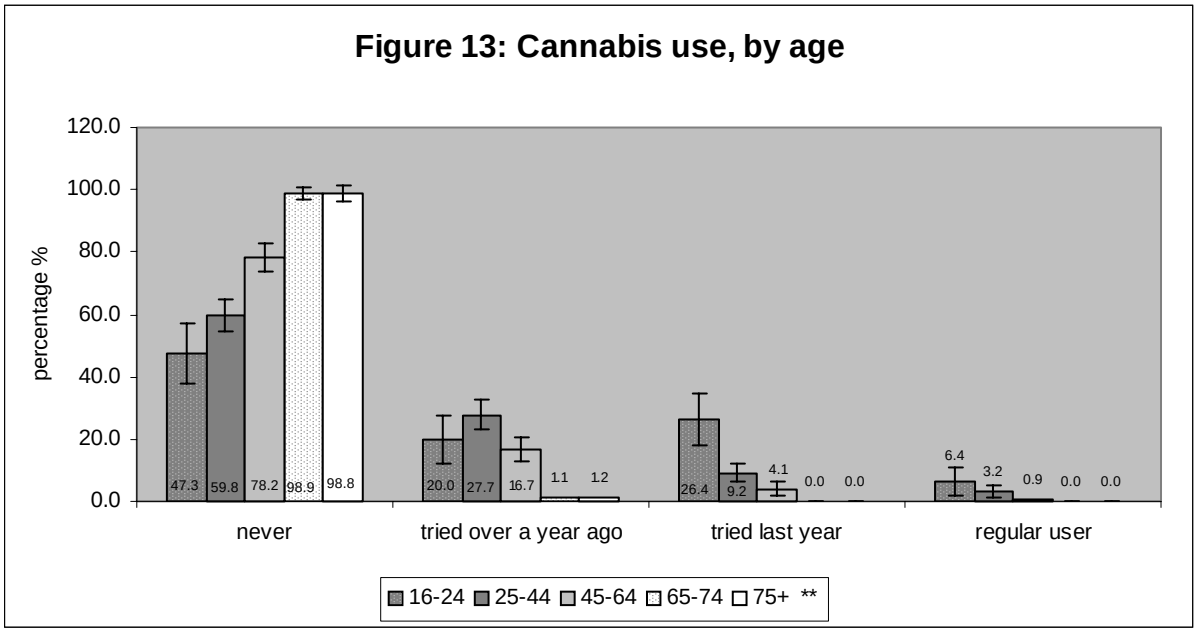
Males are more likely to use cannabis than females. More females have never used cannabis than males (75.9%, 72.6-79.2%, and 63.4%, 58.4-69.4%, respectively). There is a significantly higher rate of regular users among males than females, see Figure 12.

Figure 12: Cannabis use, by gender



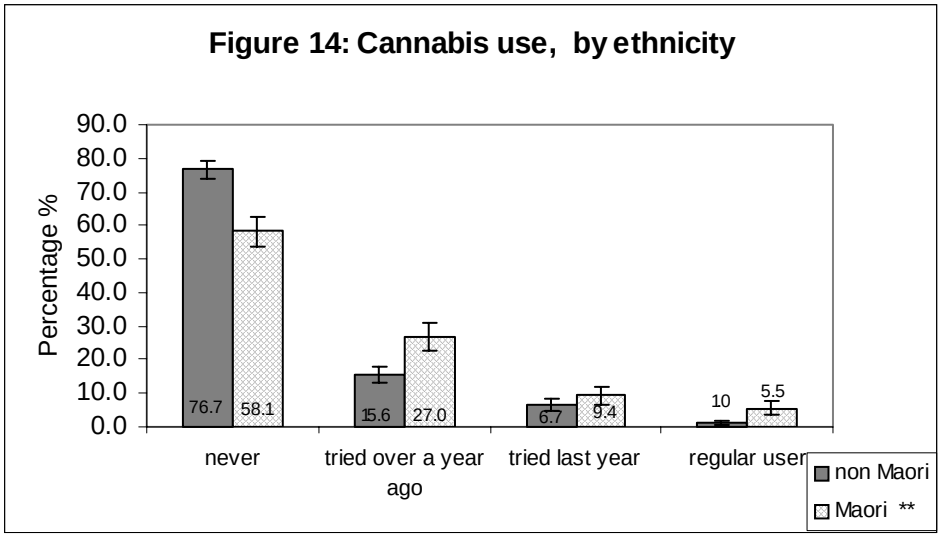
***p<0.000*

Figure 13 gives the percentage of cannabis use by age. Age group 16-24 has a higher rate of use than all the other age groups; 6.4% (1.8-11.0%) are regular cannabis users and 26.4% (18.0-34.8%) used in the last year.



** *P<0.000*

Maori respondents show a significant difference from the non-Maori group in cannabis use. The percentage of regular users among Maori is 5.5% (3.3-7.7%) and non-Maori is 1.0% (0.4-1.6%), while 58.1% (53.4-62.8%) of Maori do not use cannabis versus 76.7% (73.9-79.5%) of non-Maori, Figure 14.



** *P<0.01*

Smoking

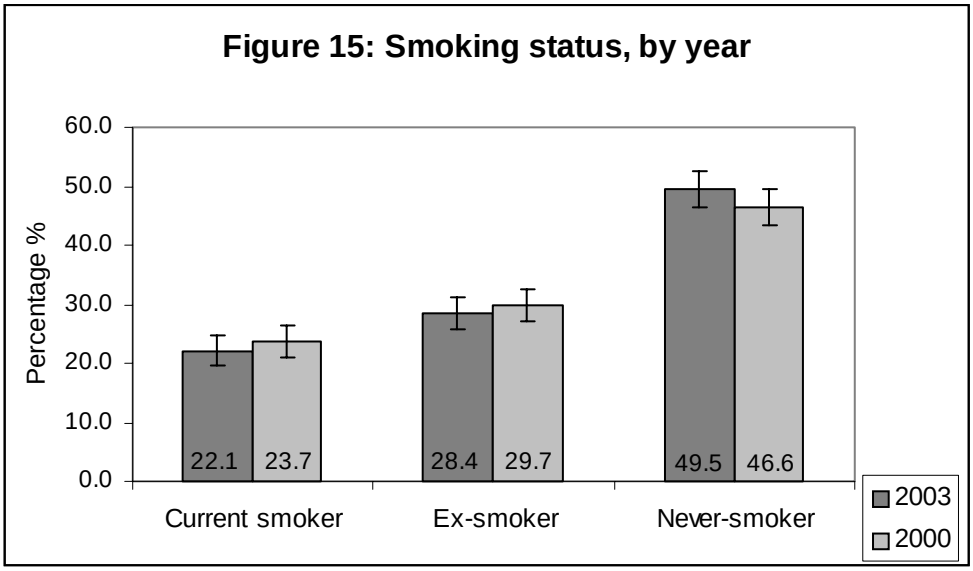
Questions:

- *In relation to tobacco smoking, which of the following statements best describes you?*
- *…I have been exposed to other people's tobacco smoke within the last month…*
- *Do you think people should be able to smoke anywhere they want, only in set places or not at all in the following places?……*

Figure 15 displays comparisons between 2003 and 2000 in smoking status of respondents. There is no significant difference between the two survey results, although the proportion of never-smokers shows a slight increase in 2003.

The percentage of current smokers in MidCentral, 22.1% (19.5-24.7%), is similar to the result of the 2002/03 survey of the whole New Zealand population, 22.3%.

Figure 15: Smoking status, by year



Males show a slightly lower rate of never smoking (45.3%, 40.2-50.4%) than females (53.2%, 49.5-56.9%), although the difference does not reach statistical significance (Figure 16).

The 25-44 age group has the highest rate of current smokers, followed by the 16-24 (young) group. Nearly one out of four young people is a current smoker, see Figure 17.

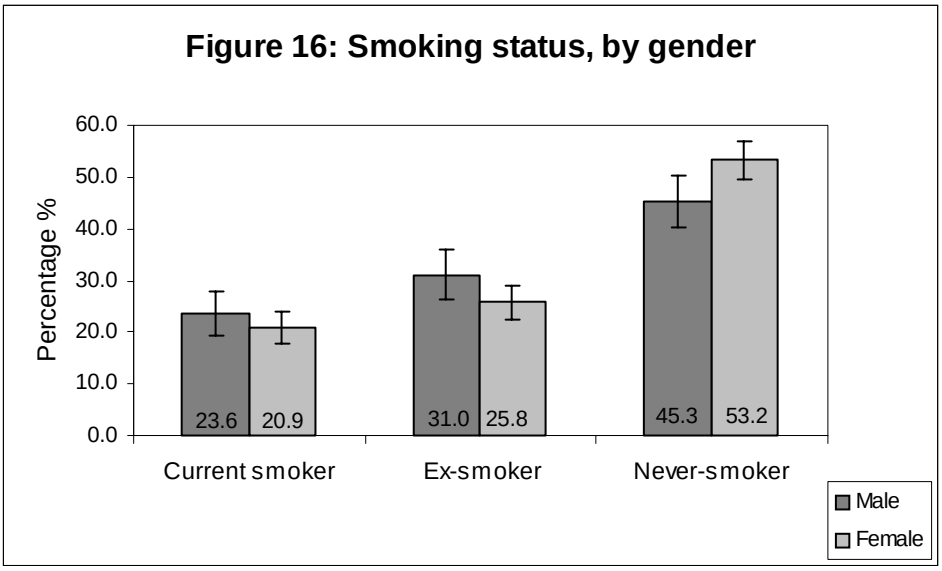


Figure 16: Smoking status, by gender
Percentage %
60.0
50.0
40.0
30.0
20.0
10.0
0.0
23.6
20.9
31.0
25.8
45.3
53.2
Current smoker
Ex-smoker
Never-smoker
Male
Female

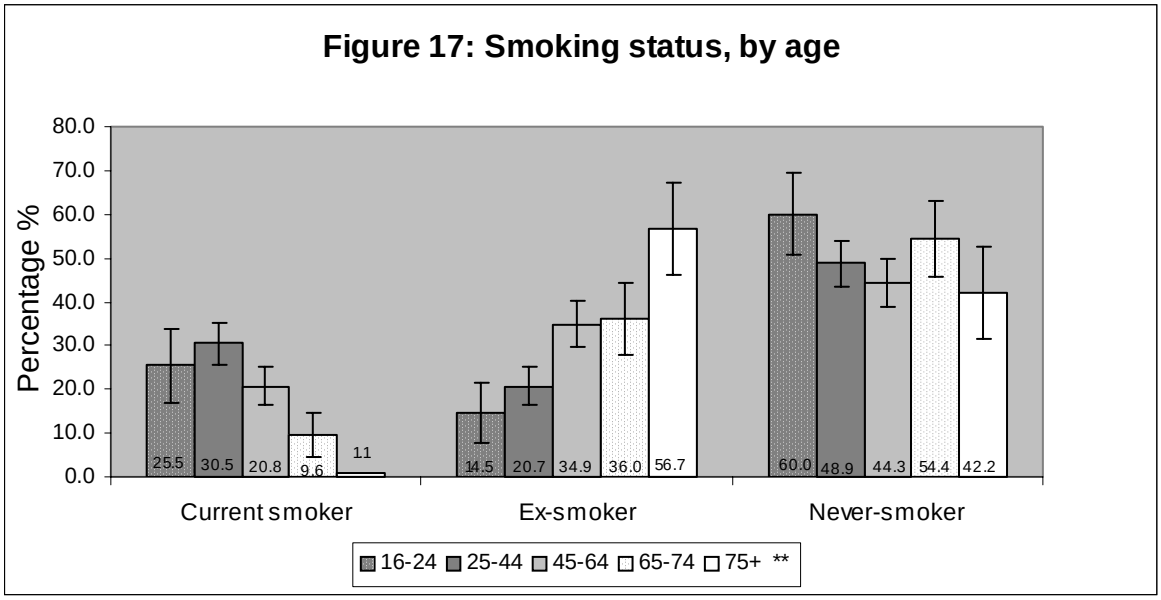


Figure 17: Smoking status, by age
Percentage %
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
25.5
30.5
20.8
9.6
11
14.5
20.7
34.9
36.0
56.7
60.0
48.9
44.3
54.4
42.2
Current smoker
Ex-smoker
Never-smoker
16-24
25-44
45-64
65-74
75+ **

*** p<0.000*

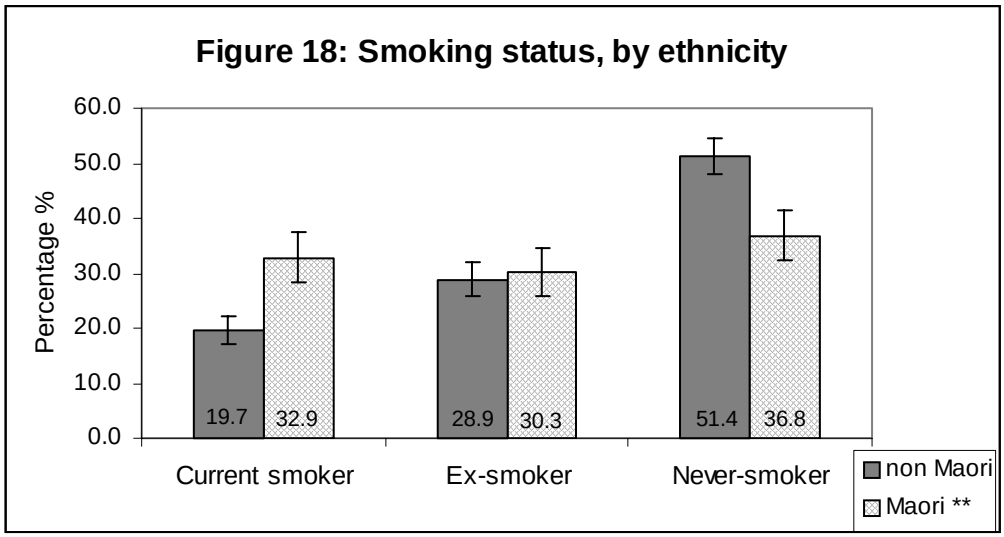


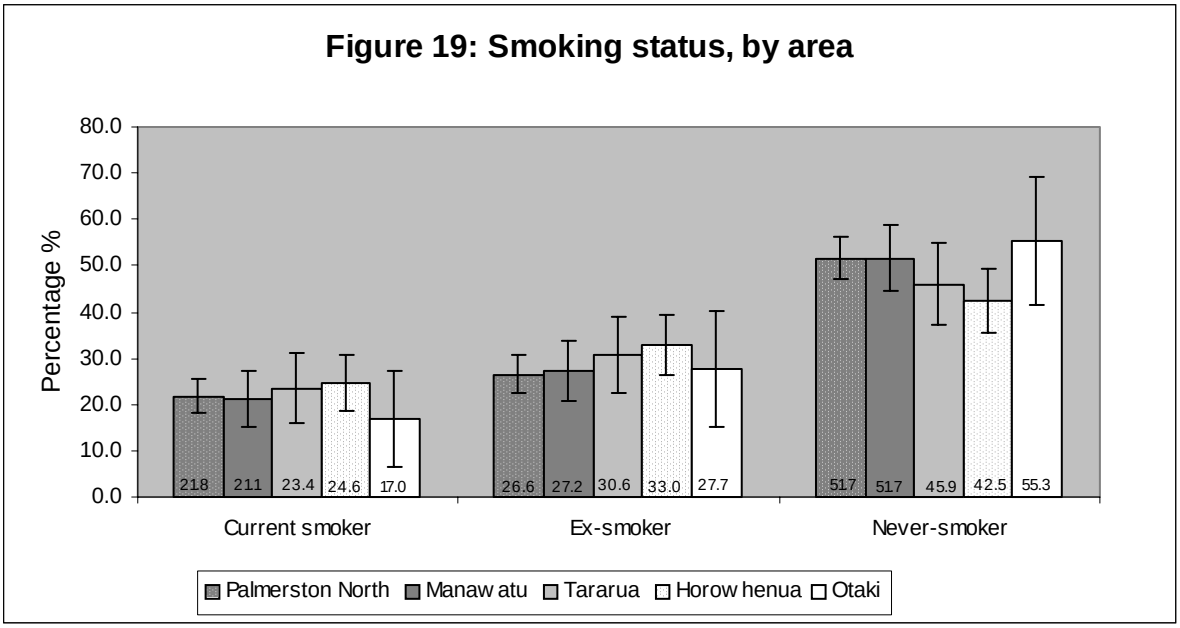
Figure 18: Smoking status, by ethnicity
Percentage %
60.0
50.0
40.0
30.0
20.0
10.0
0.0
19.7
32.9
28.9
30.3
51.4
36.8
Current smoker
Ex-smoker
Never-smoker
non Maori
Maori **

*** p< 0.000*

As shown in Figure 18, Maori have a significant higher smoking rate than non-Maori, 32.9%(28.5-37.3%) and 19.7% (17.1-22.3%) respectively.

Figure 19 demonstrates the distribution of smoking status in different geographical areas. There is no significant difference among areas. However, Horowhenua shows a slightly higher current and ex-smoker rates compared with other areas.

Figure 19: Smoking status, by area



For never smokers or ex-smokers, other's home, bar/nightclub and café/restaurant are still the most frequently cited places of exposure to smoking but the proportions of the latter two have dropped compared with 2000, workplace and private vehicles having moved up the list, see Table 14.1-2. While the types of premises in which non-smokers are exposed remain ranked in similar order, the actual level of exposure has decreased since 2000. This effect is most dramatic with respect to exposure in other people's homes, which has fallen from 49.0% in 2000 to 27.5% in 2003. Exposures in cafes/restaurants, bars/nightclubs, and in sport venues have decreased also.

Figure 20 shows the respondents' attitudes towards where smoking should be permitted. Almost all agreed that schools and workplaces should not allow smoking at all or smoking in set areas only (both percentages are 99.2%). More than half (56.5%) believed that people should not smoke in restaurants and 41.7% believed people should smoke only in set areas. 32.7% of respondents feel that smoking should not be permitted anywhere within hotels or bars/club, while a further 55.0% that smoking should be allowed in set areas only. Corresponding figures for nightclubs is 40.9% and 43.4%. About one third of respondents (32.3%) stated that people should be able to smoke anywhere at home.

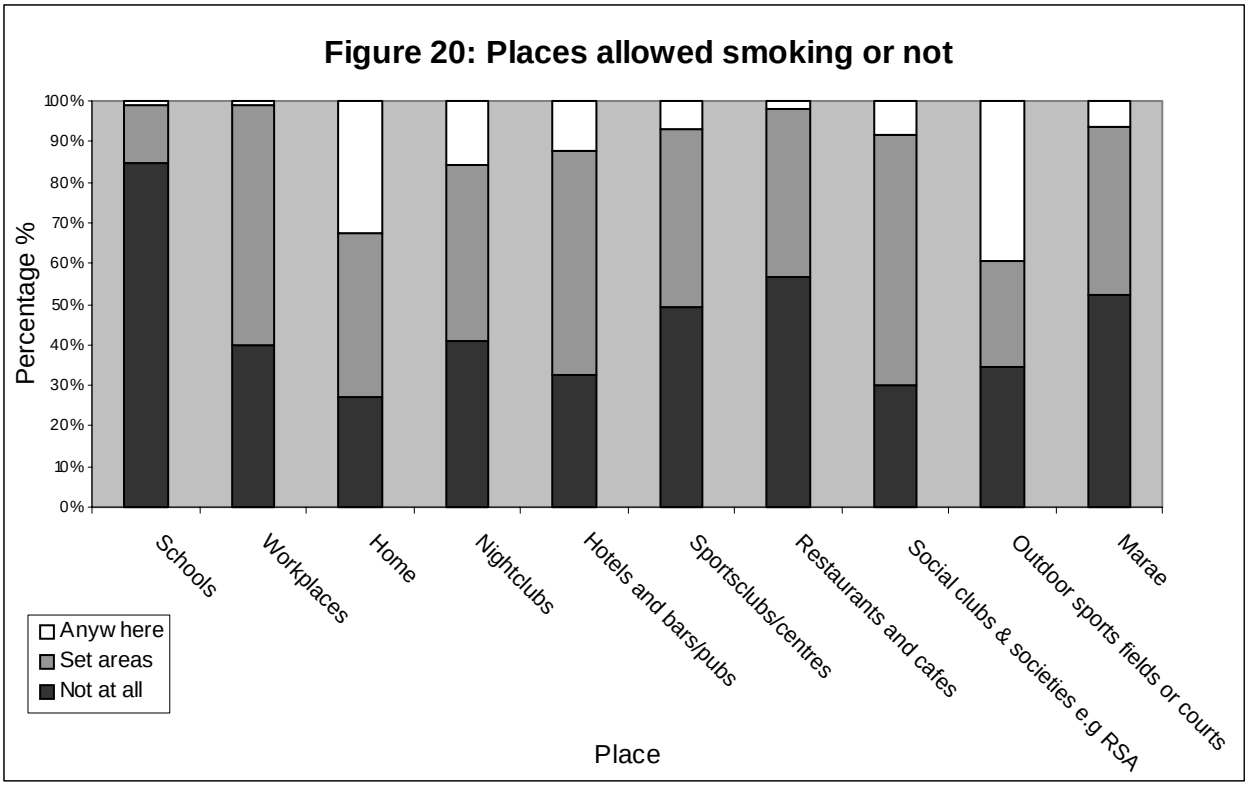
Table 14.1: Places where non smokers were exposed to second hand smoking, 2003

Place	Percentage % 2003
Other's home	27.5
Bar/nightclub	26.3
Café/restaurant	23.2
Own home	16.8
Workplace	16.4
Private vehicle	13.0
Sports venue	11.9
Other	9.1
Work vehicle	4.0

Table 14.1: Places where non smokers were exposed to second hand smoking, 2000

Place	Percentage % 2000
Other's home	49.0
Café/restaurant	32.4
Bar/nightclub	31.6
Own home	18
Sports venue	16.8
Workplace	15.6
Private vehicle	14
Other	7.9
Work vehicle	3.2

Figure 20: Places allowed smoking or not

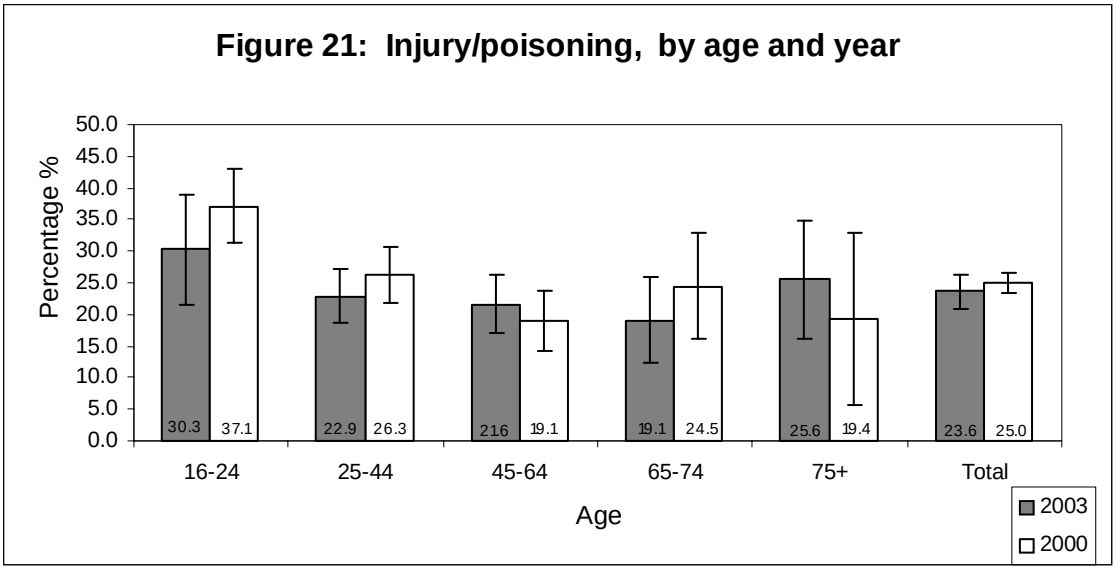


Injury and Poisoning

Question: - Thinking back over the last 12 months have you had an injury or poisoning for which you received medical treatment? ….
- What type of accident resulted in your injury or poisoning?…
- Which type of medical professional gave the medical treatment? …

The total percentage of respondents who had been injured/poisoned during the past year is 23.6% (21.0-26.2%), which is not significantly different from 2000, 25.0% (23.5-26.5%). There is no difference in age distribution between the two survey results. However, as indicated in Figure 21, the youngest age group shows a slightly lower rate of injury/poisoning than 2000; There is slightly fewer people with injury/poisoning in age group 65-74 but more in the 75 and over group in 2003.

Figure 21: Injury/poisoning, by age and year



Among the 238 affected individuals with injuries/poisonings, falls, sport/games and other are still the three most frequent causes, see Figure 22. However there is a higher frequency of other in 2003. Exploring these, the claims from the respondents vary but work related injury, sprain, animal related injury, and back injury and lifting are most frequently cited. There are no reports of assault/fight as the cause of injury in this survey.

Similar to the 2000 survey, GP/family doctor is still the most frequent source for people seeking treatment for their injury/poisoning, followed by Accident and Emergency hospital staff in 2003. No respondent reported using a pharmacist or Maori traditional practitioner. The frequencies of people using those medical sources in 2003 is almost the same as 2000, although Maori traditional practitioner and complementary health practitioner were not included in 2000 KAP survey, see Table 15.1-2.

Figure 22: Causes of injury/poisoning by year

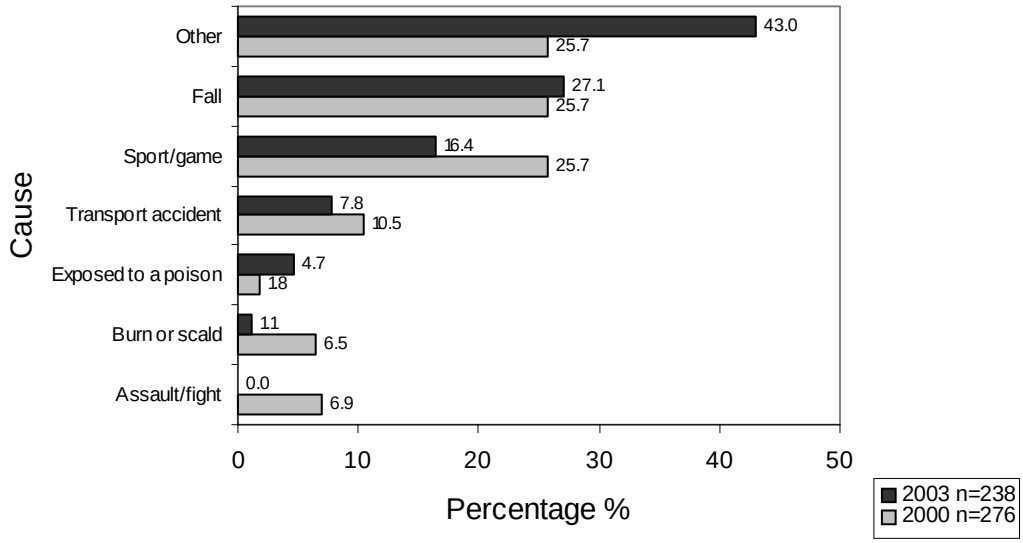


Table 15.1: Source of medical treatment for injury/poisoning in 2003

Source of medical treatment	Percentage % n=238
GP or family doctor (not at a hospital)	62.4
A&E hospital staff	22.3
Physiotherapist	17.3
Other	12.8
St Johns Ambulance/ First Aid	1.9
Nurse (not at a hospital)	1.8
Complementary Health Practitioner	0.9
Pharmacist/ Chemist	0.0
Maori Traditional Practitioner	0.0

Table 15.2: Source of medical treatment for injury/poisoning in 2000

Source of medical treatment	Percentage % n=276
GP or family doctor (not at a hospital)	54.7
A&E hospital staff	34.1
Physiotherapist	14.9
Other	9.1
St Johns Ambulance/ First Aid	7.6
Pharmacist	4
Nurse (not at a hospital)	2.2

Sexual Health

Questions:

- *Where would you advise someone to go if they thought they had put themselves at risk of getting a sexually transmitted infection?...*
- *As far as you are aware, is the risk of getting HIV/AIDS in New Zealand less or more than it was 10 years ago?…*
- *Please indicate whether you agree or disagree with this statement,…*

Tables 16.1-2 list the services identified by respondents for those seeking help for sexually transmitted infections. The services have the same rankings in 2003 as 2000, GP/doctor and Sexual Health Service still being the most frequent places advised. There is a slightly increased awareness of the Family Planning Association service, which is surprising as the FPA ceased its clinical services in the Manawatu between the two surveys.

Table 16.1: Preferred services for sexually transmitted infections in 2003

Service	Percentage %
GP/Doctor	47.1
Sexual Health Service (STD Clinic)	37.9
Other	8.5
Family Planning Association	4.0
Public Health Nurse Youth Clinic	2.4
Maori Health Provider	0.1

Table 16.2: Preferred services for sexually transmitted infections in 2000

Service	Percentage %
GP/Doctor	45.8
Sexual Health Service (STD Clinic)	45.6
Other	3.2
Family Planning Association	2.6
Public Health Nurse Youth Clinic	2.4
Maori Health Provider	0.4

About two out of three people believed that the risk of getting HIV/AIDS is about the same/more than 10 years ago (66.8%, 63.9-69.7%), see Figure 23. There are no changes in the perceived risks in 2003 compared with 2000, see Figure 23.

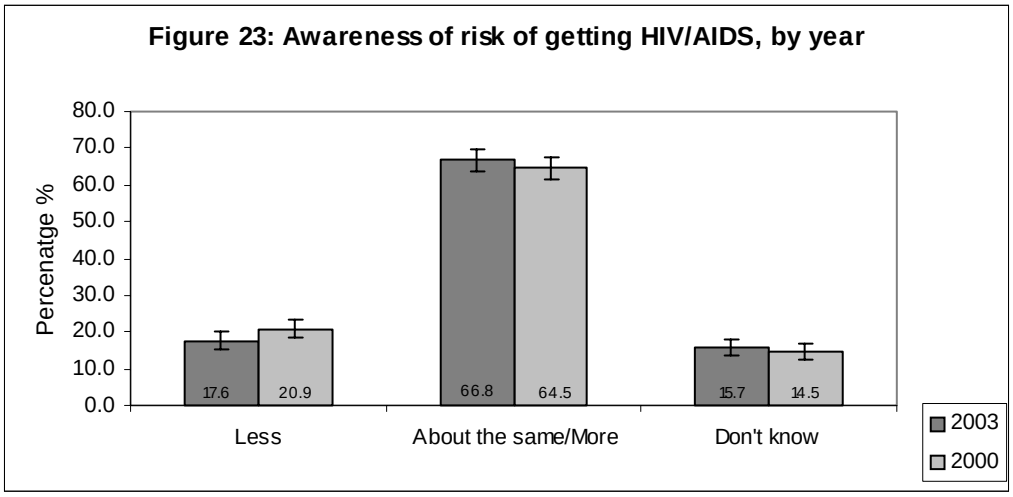
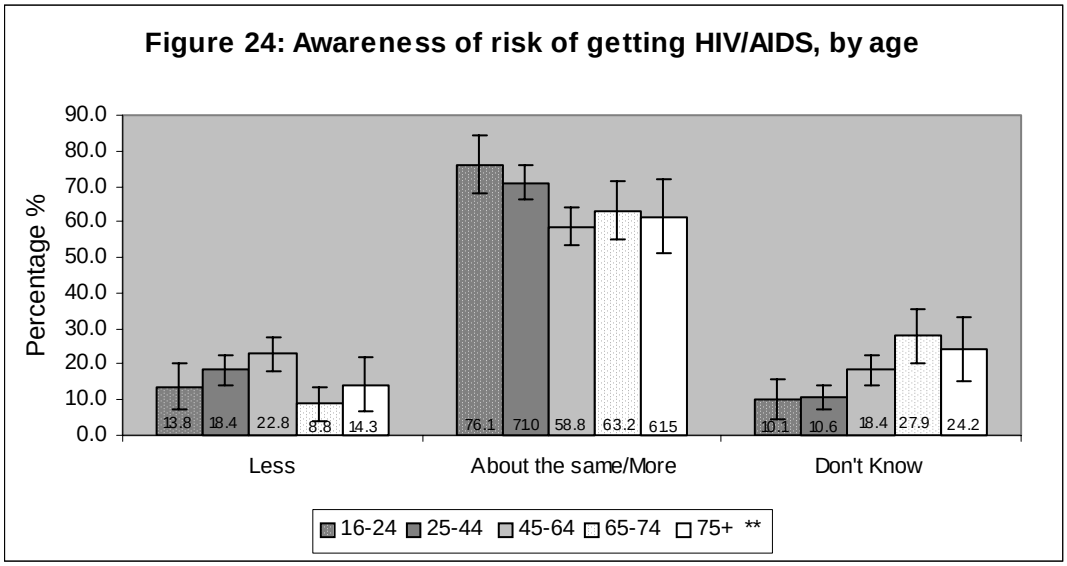
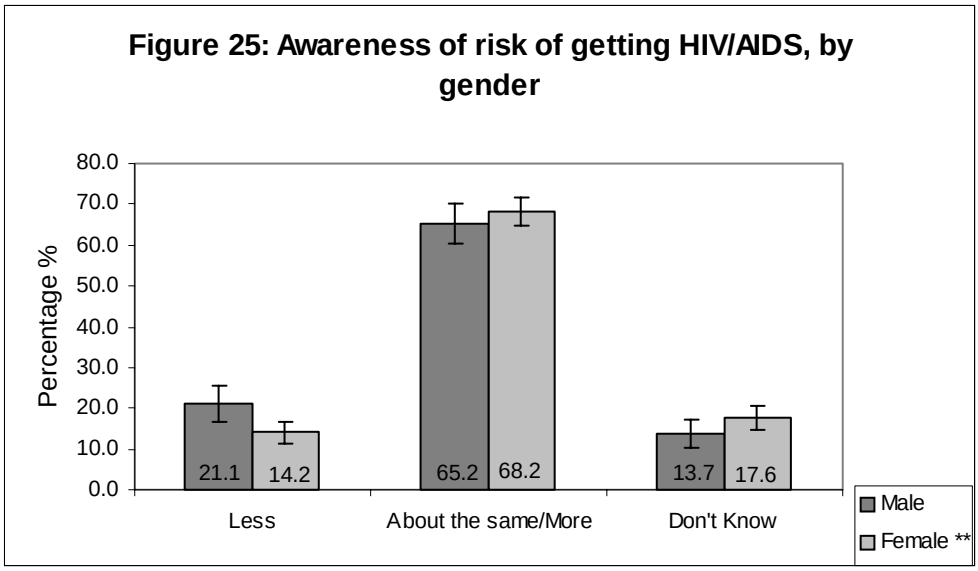


Figure 24 shows the awareness of the risk in different age groups. There are significant differences of understanding, with more younger groups (age 16-24 and 25-44) believing the risk is the same or more (76.1%, 67.9.2-84.3% and 71.0%, 66.2-75.8% respectively). Interestingly, age group 65-74 has the lowest rate of perceiving less risk and highest rate of not knowing about the risk of contracting HIV/AIDS, 8.8% (4.0-13.6) and 27.9% (20.2-35.6%) respectively.



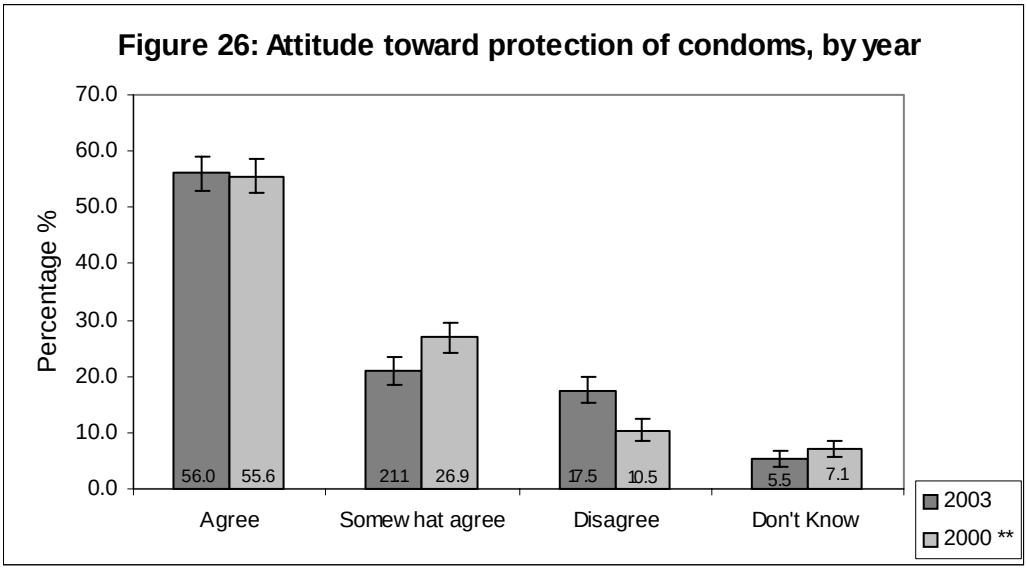
***p<0.000*

As indicated in Figure 25, there are similar percentages of male and female respondents who perceived the risk of getting infected with HIV/AIDS is the same/more than 10 years ago. But more males believed the risk is less (21.1%, 16.9-25.3%).



***p<0.01*

Compared with the 2000 KAP, there are similar percentages of respondents who agreed that condoms can protect from sexually transmitted infection in 2003, 56.0% (52.9-59.1%); but more people did not believe they provide protection, 17.5% (15.2-19.8%). See Figure 26.

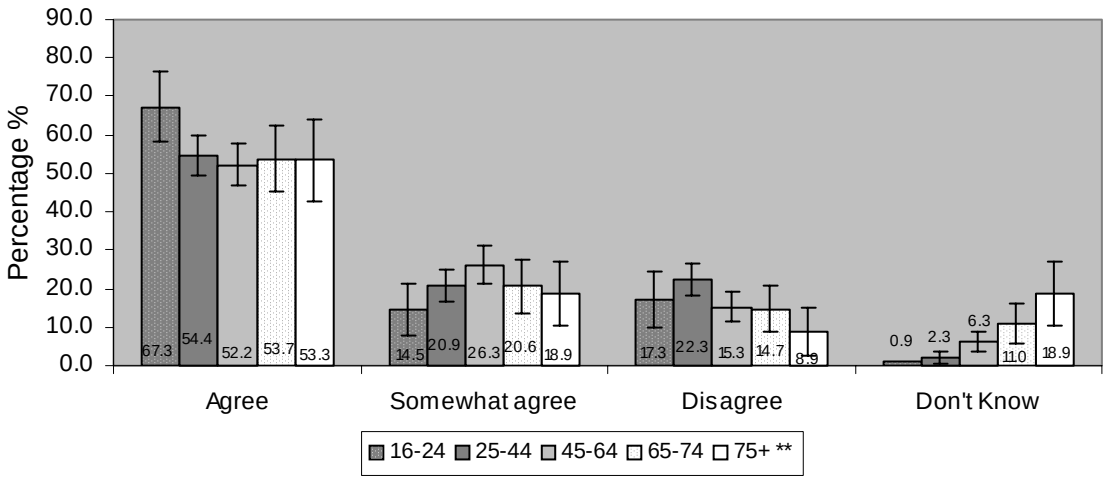


***P<0.000*

There are significant differences in the attitude among different age groups. The 16-24 age group has a high percentage (67.3%, 58.3-76.3%) agreeing that condoms are protective while all the other age groups have similarly lower rates with this attitude. However the 25-44 age group has the highest percentage that did not believe condoms can protect from infection, 22.3% (17.9-26.7%). The percentage of respondents not knowing the answer increases with age, shown in Figure 27.

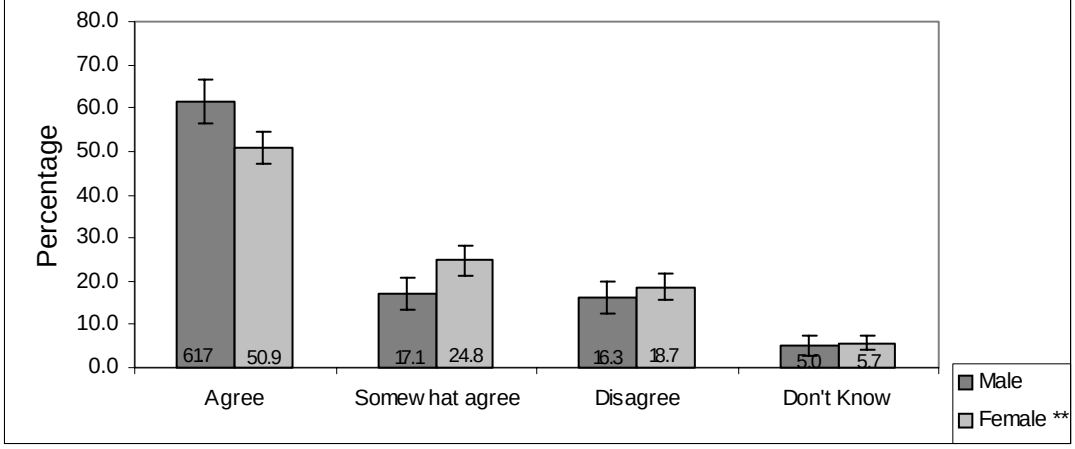
As shown in Figure 28, male and female respondents have different attitudes toward the protection of condoms with more males agreeing on their protective value (61.7%, 56.7-66.7%).

Figure 27: Attitude toward the protection of condoms, by age



***p<0.000*

Figure 28: Attitude toward the protection of condom, by gender



*** p<0.007*

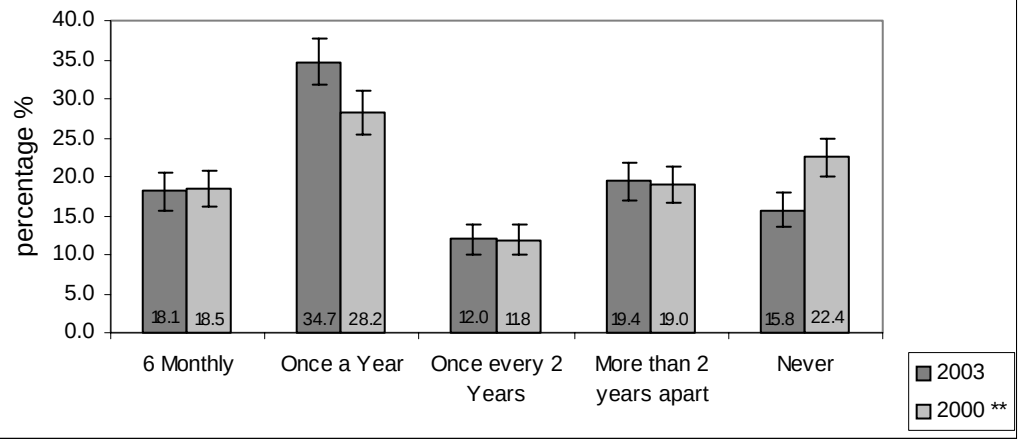
Oral Health

Questions:

- *How often do you visit the dentist?…*
- *What is your main reason for not going to a dentist more regularly?…*
- *Do you think fluoridation of drinking water helps prevent tooth decay?…*
- *Would you support fluoridation of public water supplies in the district?…*

Figure 29 demonstrates the frequencies of respondents reporting visiting a dentist in 2003 and the difference from 2000. About half of respondents visited a dentist once a year or more in the 2003 survey (52.8%, 49.7-55.9%). It shows that people go to dentists more often than before.

Figure 29: Frequency of visits to the dentist, by year

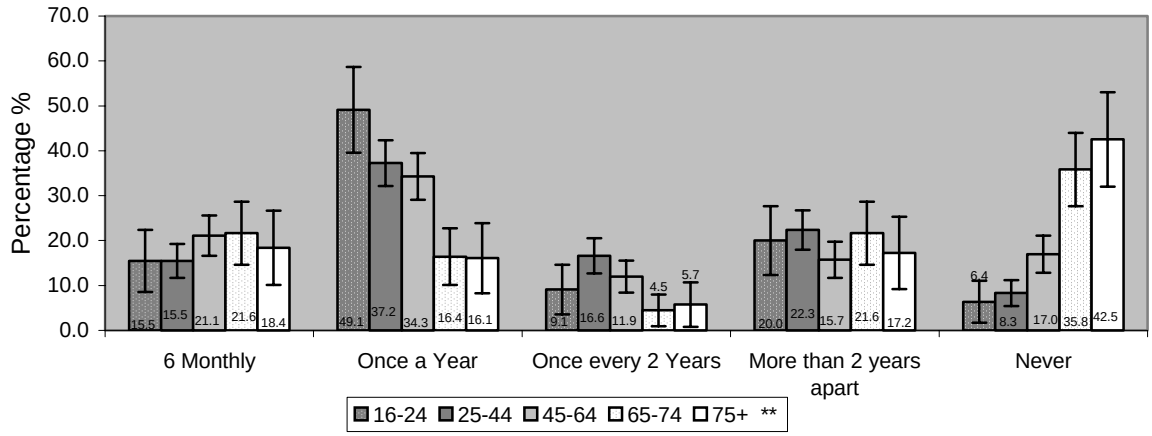


*** p<0.001*

Comparing age groups, the youngest group (16-24) shows the highest proportion of (49.1%, 39.6-58.7%) visiting dentists once a year, see Figure 30.

As indicated in Figure 29, there are about one third of respondents who visited dentists more than 2 years apart or never, 35.2% (32.2-38.2%). The main reasons they gave for not going to a dentist are illustrated in Table 17.1-2. No problem with teeth and cost are the two major reasons, apart from *other,* given for not visiting dentists frequently in both surveys; but worrying about cost has dropped down to second. There was a high non-response rate for this question in the 2000 survey. This may reduce the representativeness of the information shown in Table 17.2.

Figure 30: Frequency of visits to the dentists, by age



*** p<0.000*

Table 17.1: Reasons for not going to the dentist in 2003

Reason	Percentage % n=347
Other	42.1
No problems with my teeth	25.4
Cost	23.6
Fear	6.6
Effort/ Time	2.0
Travel/ access	0.3

Table 17.2: Reasons for not going to the dentist in 2000

Reason	Percentage % n=256
Cost	55.5
No problems with my teeth	21.9
Fear	11.7
Other	6.6
Effort/ Time	3.9
Travel/ access	0.4

Figure 31 displays the different attitudes toward the protection of tooth decay by drinking fluoridated water. More than half of respondents believed that fluoridation of drinking water could prevent tooth decay, 59.2% (56.2-62.2%). A similar pattern is shown when asking respondents whether they supported fluoridation of public water in the district, see Figure 32.

Figure 31: Attitude toward drinking fluoridated water to prevent tooth decay

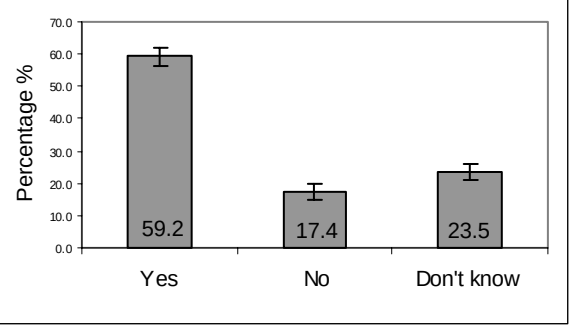
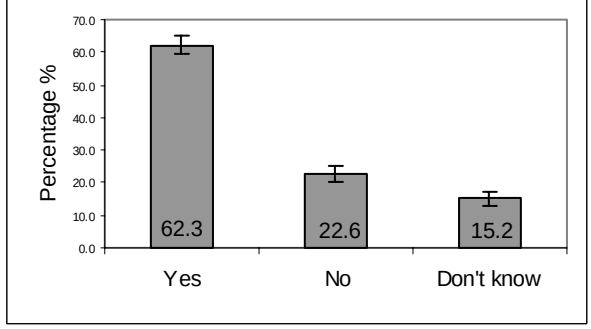


Figure 32: Support for fluoridation of public water supplies in the district



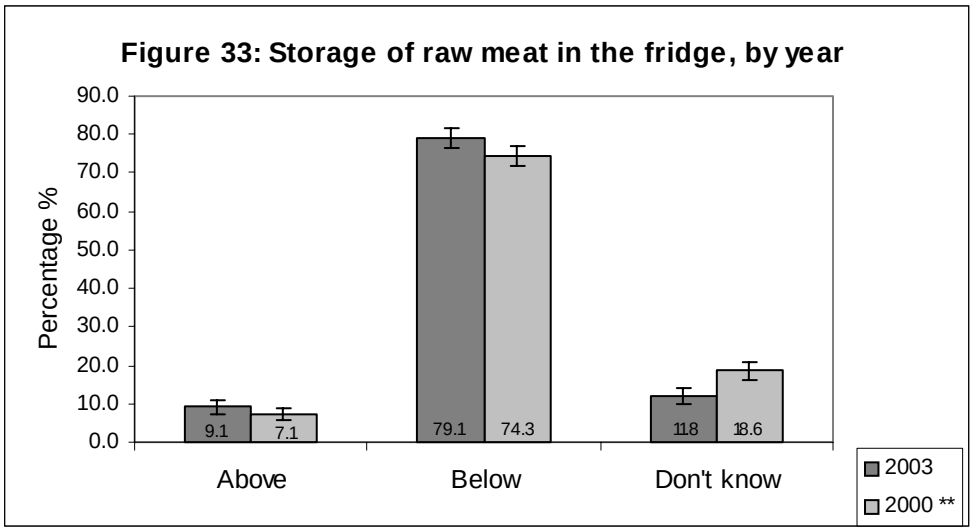
Food Safety

Questions:

-Do you believe raw meat should be stored above or below all cooked food in the fridge?…

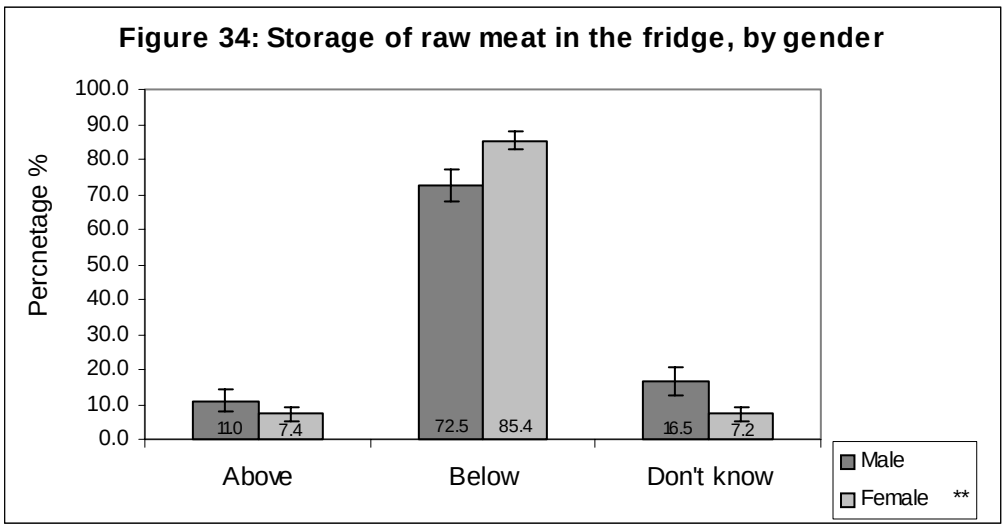
-Please indicate whether you agree or disagree with the following statement:…

Raw meat should be stored below cooked food in the fridge to prevent contamination of cooked foods. Compared with the 2000 KAP survey, the percentage of people who understood this advice about raw meat is a little higher. Disappointingly about one in ten people still professed that raw meat should be stored above. See Figure 33.



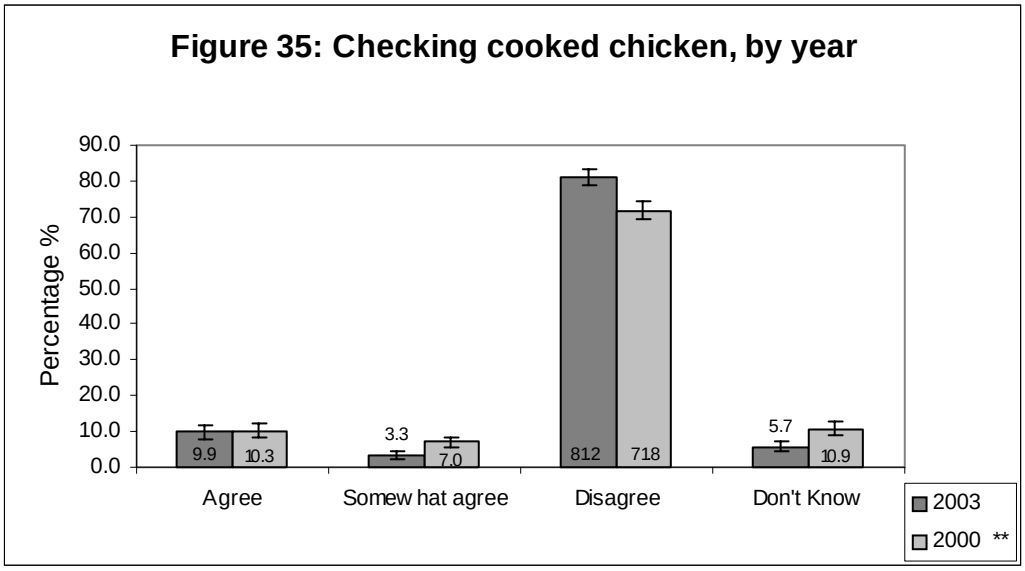
*** p<0.000*

As shown in Figure 34, female respondents have a higher knowledge of correct storage than males.



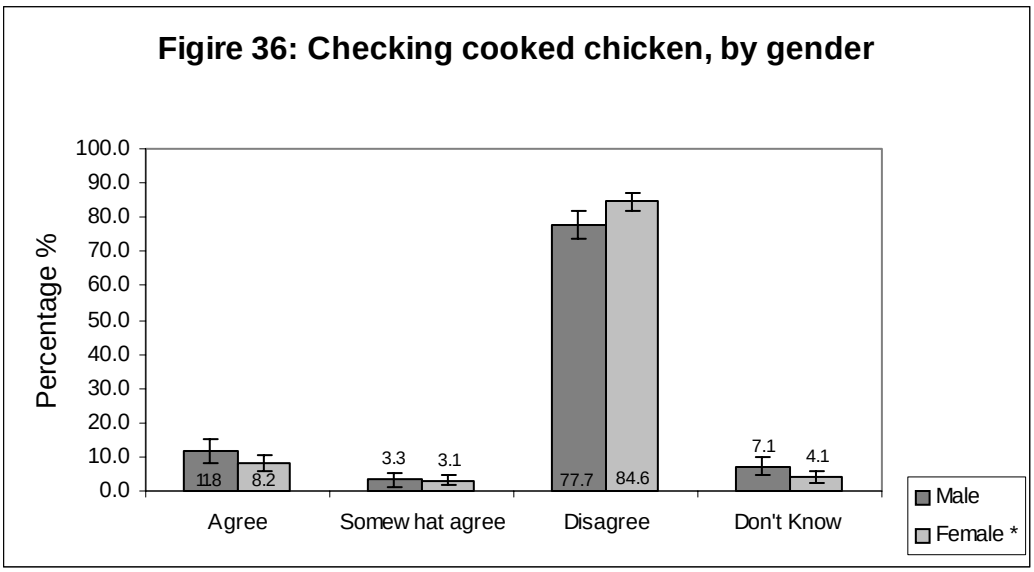
*** p<0.000*

The right answer for the best way of checking whether roast chicken is cooked is to check that the meat is no longer pink and that the juice running from it is clear. Compared with 2000, the percentage of respondents giving this answer increased to 81.2% (78.8-83.6%), see Figure 35.



***p<0.000*

Similar to the knowledge status of storing raw meat, females understood better than males how to check roast chicken is cooked, see Figure 36.



**P<0.033*

School Health

Questions:

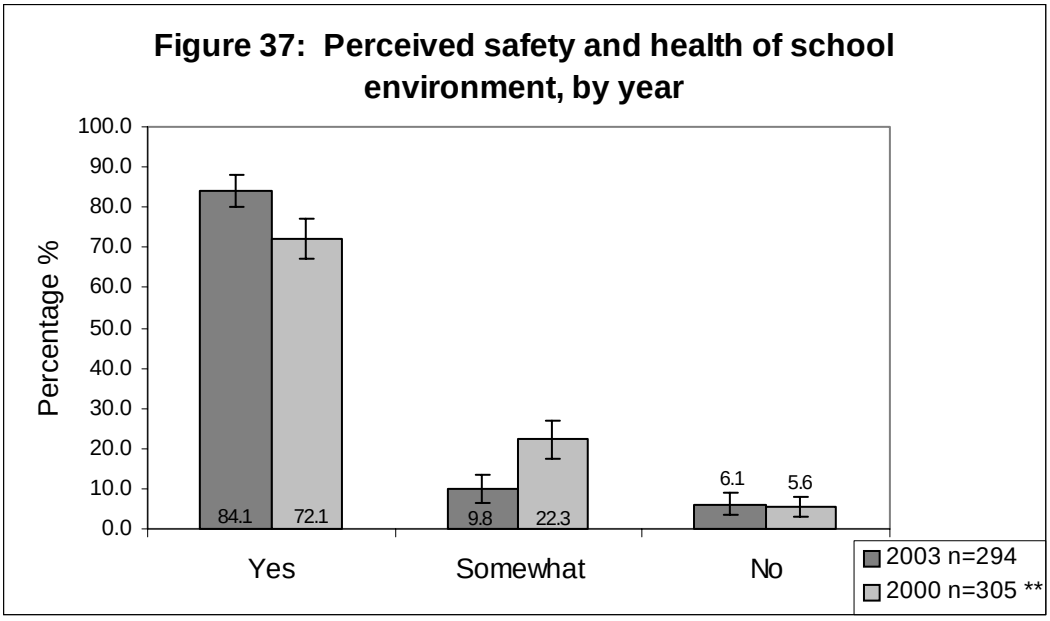
-Do you have school-aged children?

-Thinking of the schools your children attend, do you believe they are generally safe and healthy places? …

-Please indicate if you have been aware of the following classroom health education programmes at your children's school?…

296 of respondents reported having school aged children in the 2003 KAP survey. The majority of those perceived school as a safe and healthy place (84.1%, 79.7-88.3%), which is higher than 2000 (72.1%, 67.1-77.1%), shown on Figure 37.

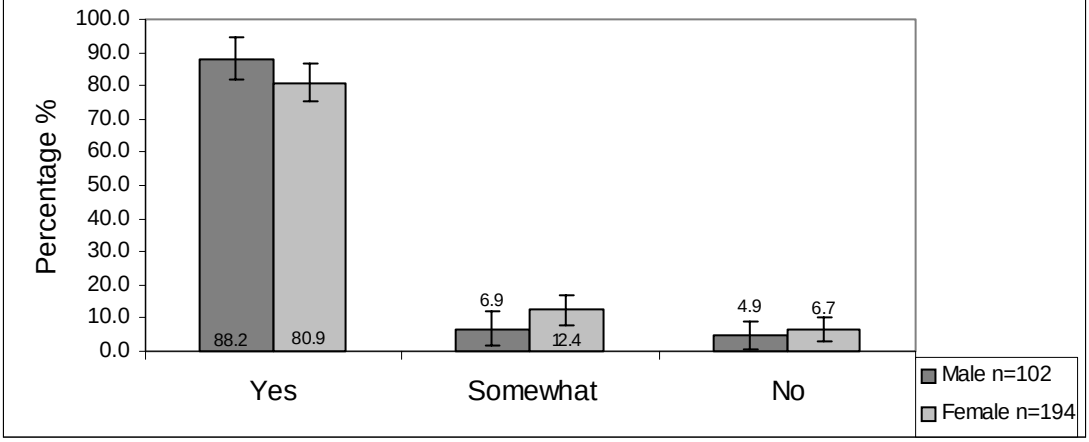
Figure 37: Perceived safety and health of school environment, by year



*** p<0.000*

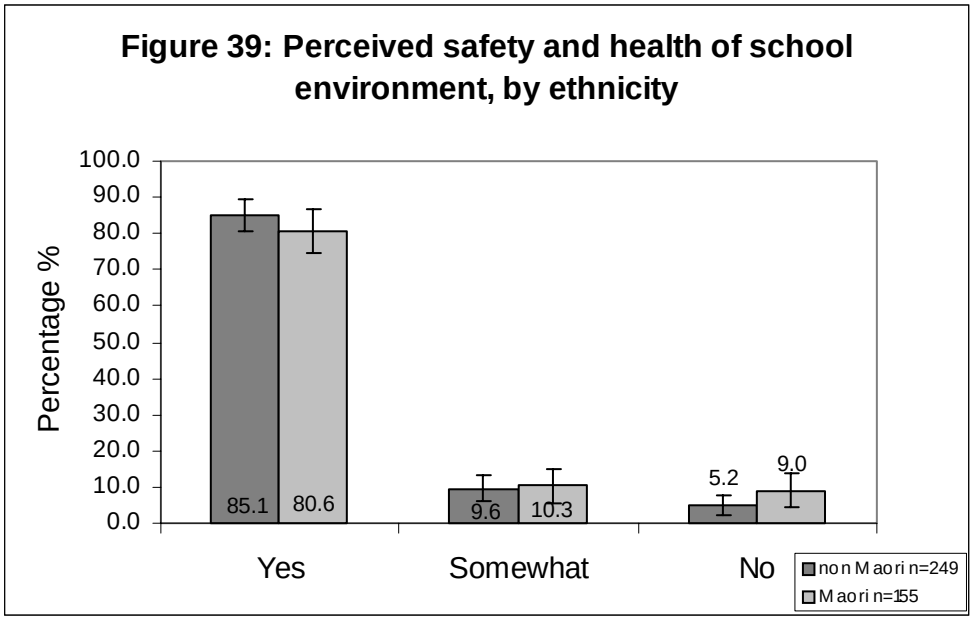
As shown in Figure 38, no significant difference is found between males and females regarding the perceived safety and health of school.

Figure 38: Perceived safety and health of school environment, by gender



The beliefs about schools show no difference between Maori and non-Maori respondents, refer to Figure 39.

Figure 39: Perceived safety and health of school environment, by ethnicity



As illustrated in Table 18.1-2, respondents in 2003 were more aware of all the listed health education programmes at school than 2000. For example, about 93.4% (90.6-96.2%) of parents in 2003 were aware of exercise and fitness programme, compared with 82.6% (78.4-86.8%) in 2000. The percentage of parents who were aware of drug and alcohol programme shows an increase from 57.2%(51.7-62.7%) in 2000 to 67.7% (62.4-73.0%) in 2003. The most recognised programmes among parents in 2003 are still exercise & fitness, road safety, and food & nutrition.

Table 18.1: Awareness of health education programmes at school, 2003

Topic	Percentage % n=298
Exercise & Fitness	93.4
Road Safety	89.2
Food & Nutrition	88.3
Skin Cancer Prevention	80.0
Drug & Alcohol	67.7
Smoking Education	62.8
Sexuality	60.9
Injury & Accident Prevention	53.4
Mental Health	32.1

Table 18.2: Awareness of health education programmes at school, 2000

Topic	Percentage % n=311
Exercise & Fitness	82.6
Road Safety	78.8
Food & Nutrition	76.5
Skin Cancer Prevention	77.8
Drug & Alcohol	57.2
Smoking Education	52.4
Sexuality	50.2
Injury & Accident Prevention	40.8
Mental Health	23.8

Communicable Diseases

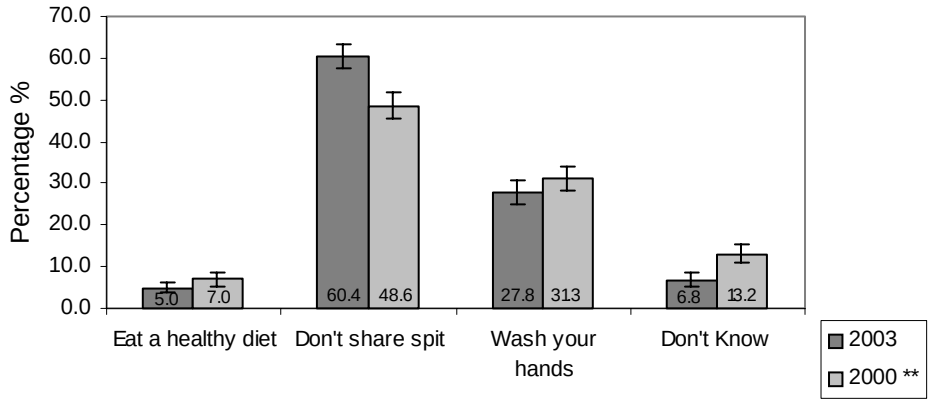
Questions:

-In 2002 there were 552 cases of meningitis and 19 deaths from this disease. Which of the following best describes a way to prevent meningococcal disease?…

-Please indicate whether you agree with the following statement, "I believe immunisation is a safe and effective way to prevent some important diseases?…

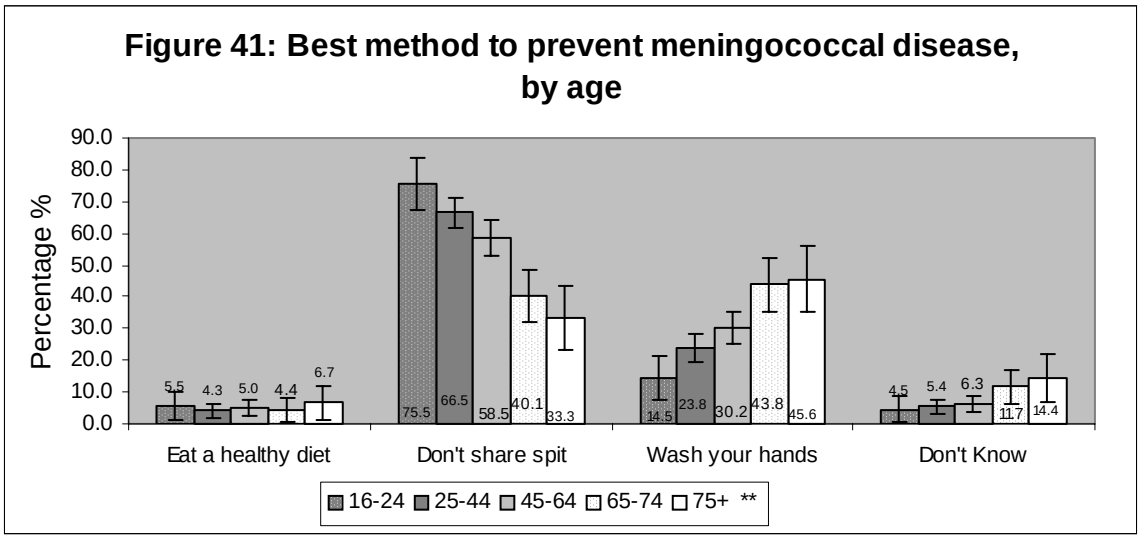
The best way to prevent meningococcal disease is not to share spit. A significantly higher percentage of people (60.4%, 57.4-63.4%) in 2003 understood the knowledge correctly compared to 2000 (48.6%, 45.6-51.6%), see Figure 40.

Figure 40: Best method to prevent meningococcal disease, by year



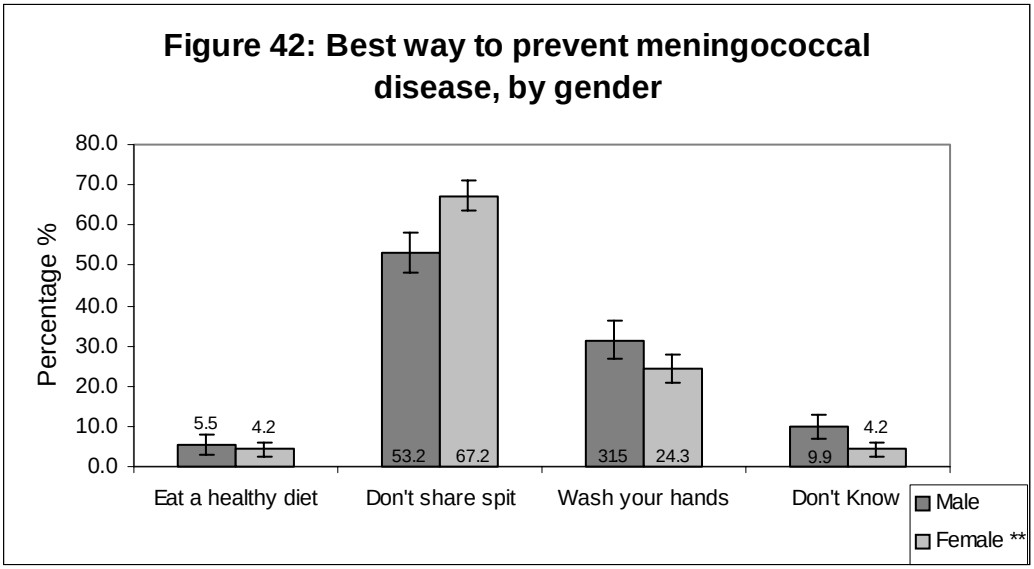
*** P<0.000*

Among different age groups, Figure 41 shows the younger age groups to be most knowledgeable.



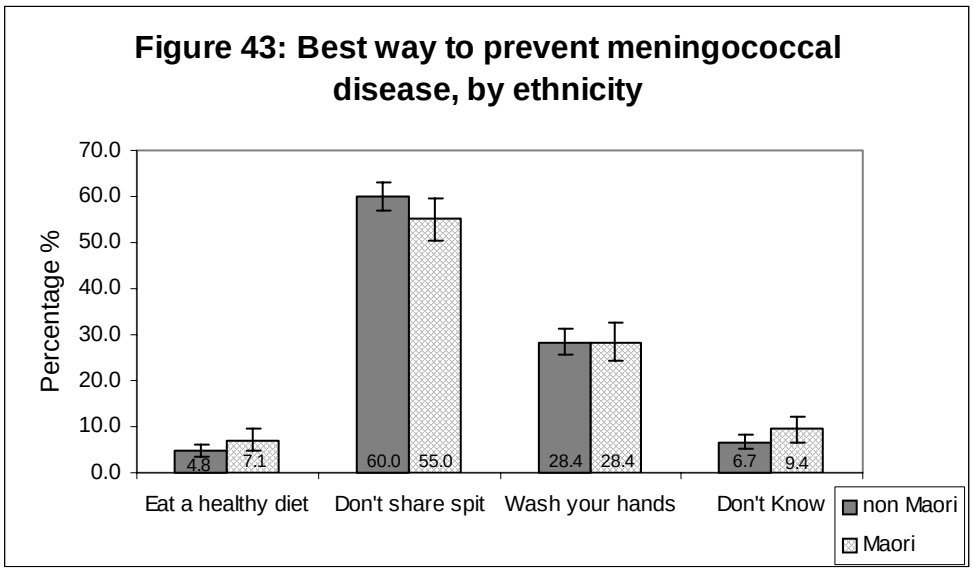
** *p<0.000*

Figure 42 shows that females had a better understanding of the preventive method than males. About two thirds of females provided the right answer (67.2%, 63.6-70.8%) while only about half of males did (53.2%, 48.0-58.4%).

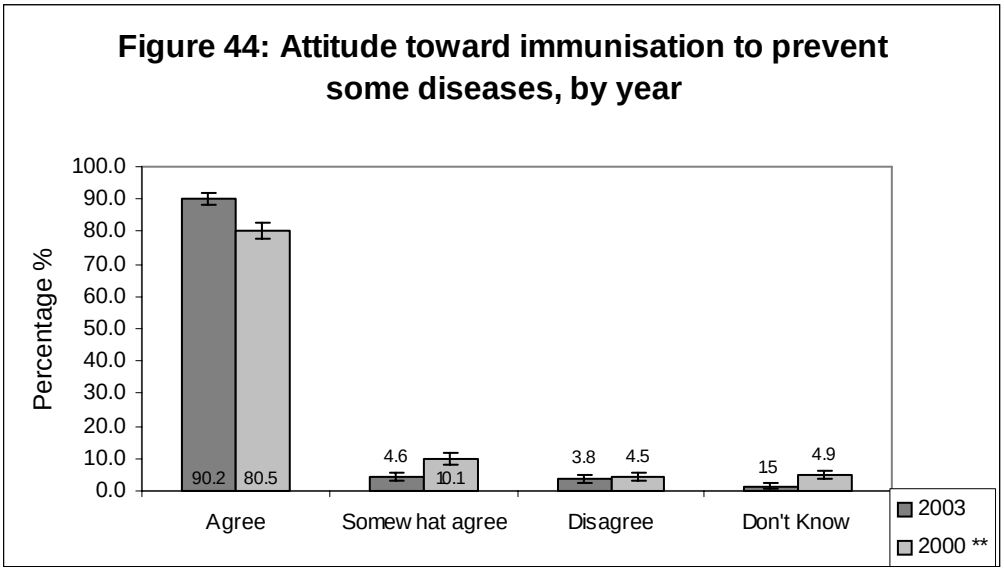


** *p<0.000*

The knowledge about the prevention shows no difference between Maori and non-Maori. See Figure 43.



The 2003 attitude toward the value of immunisation for the prevention of some important diseases has improved compared with 2000, as displayed in Figure 44. The overwhelming majority of respondents believe that immunisation is a safe and effective way to prevent diseases, 90.2% (88.4-92.0%), compared to 2000, 80.5% (78.1-82.9%).



*** p<0.000*

There are no differences in attitudes toward immunisation between male and female, or Maori and non-Maori, indicated in Figure 45 and Figure 46 respectively.

Figure 45: Attitude toward immunisation to prevent some disease, by gender

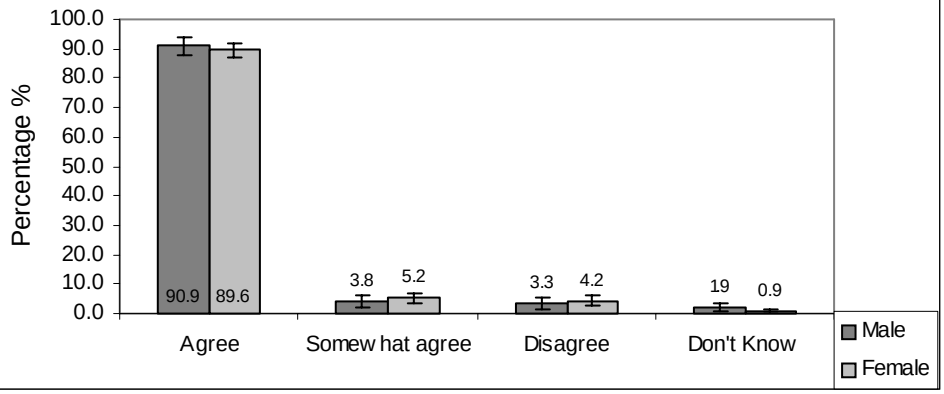
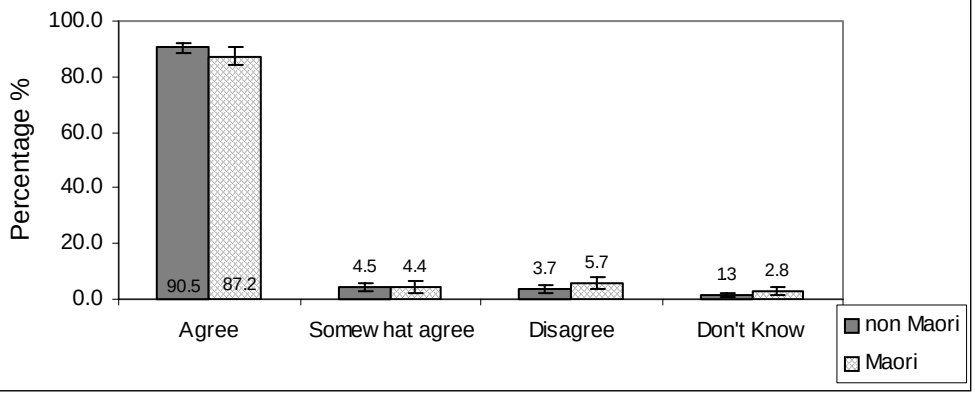


Figure 46: Attitude toward immunisation to prevent some diseases, by ethnicity



Public Health Services

Questions:

-As far as you are aware, does Public Health provide the following services?…….

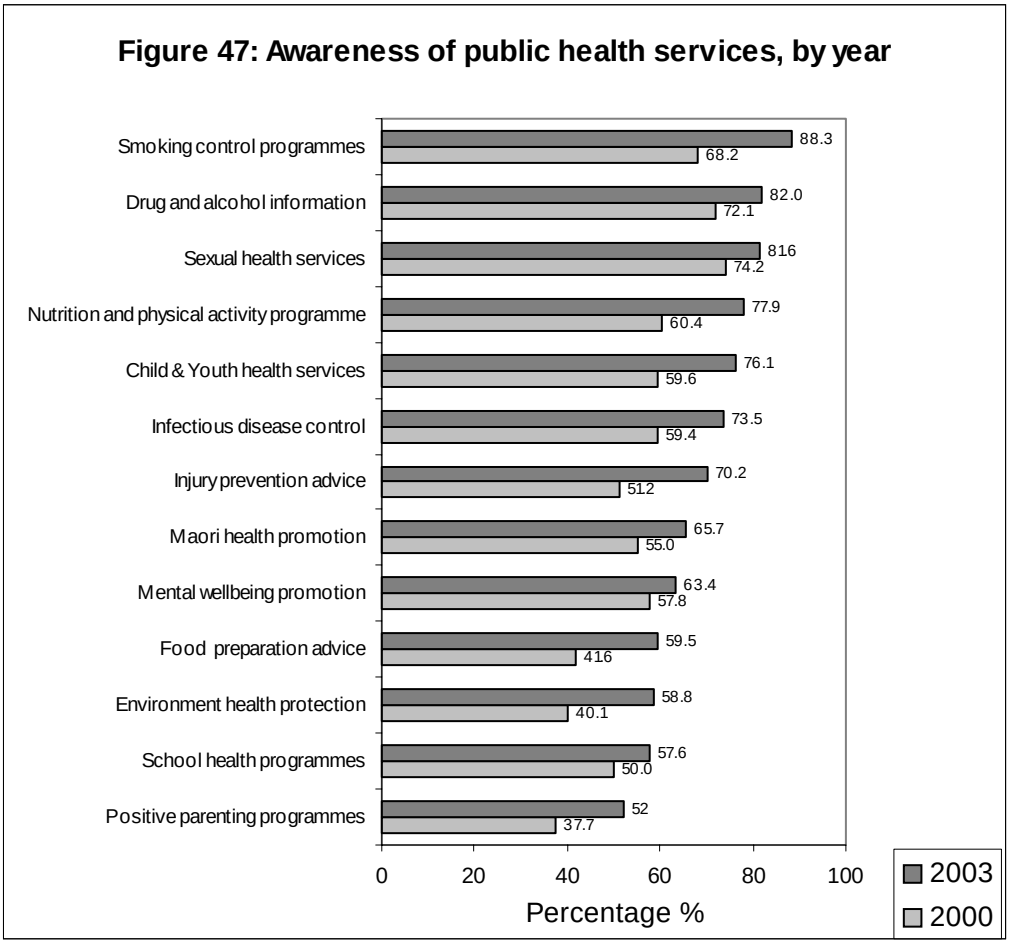
-Please indicate with Yes or No, if you agree to the following,

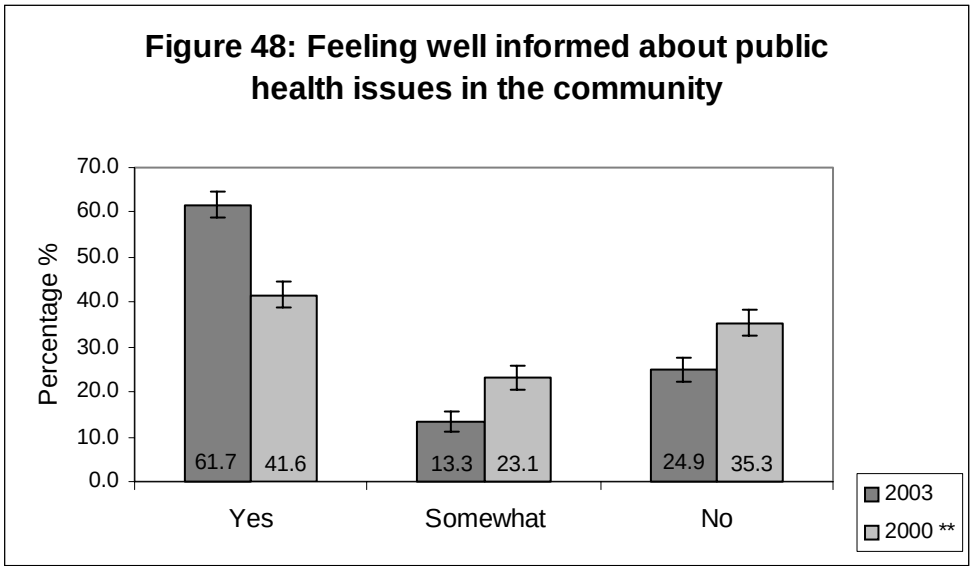
I feel well informed about public health issues in my community.

I am aware how to contact the services provided by Public Health.

Figure 47 demonstrates that the awareness of various public health services provided is higher among the respondents in 2003 than 2000. For example, there are 88.3% (86.3-90.3%) of respondents who were aware of the smoking control programmes in 2003 survey, compared 68.2% (65.4-71.0%) in 2000. More respondents, 65.7% (62.8-68.6%), acknowledged the Maori health promotion programme in 2003 than 2000, 55.0% (52.0-58.0%). All the listed public health services were recognised by more than half of the respondents in 2003 survey.

Figure 47: Awareness of public health services, by year

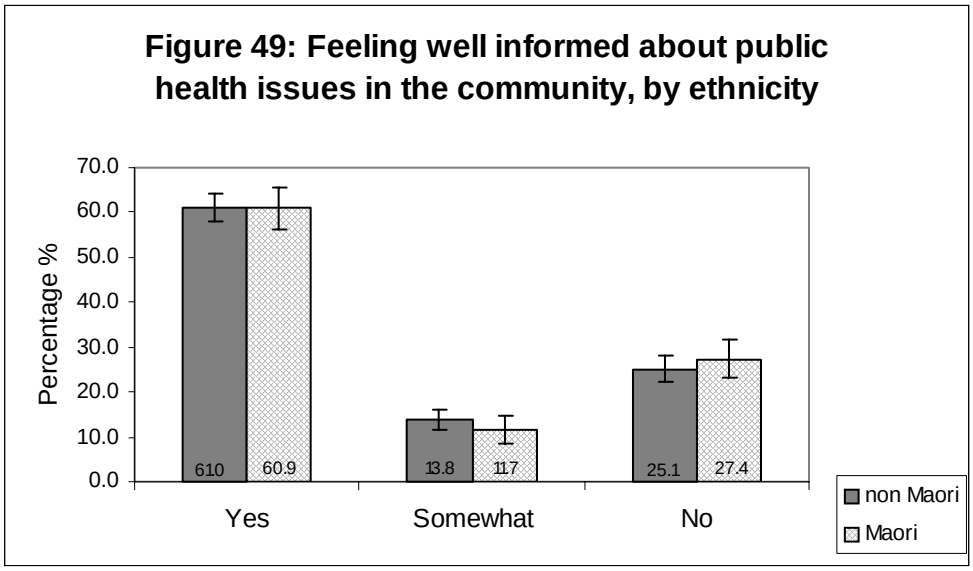


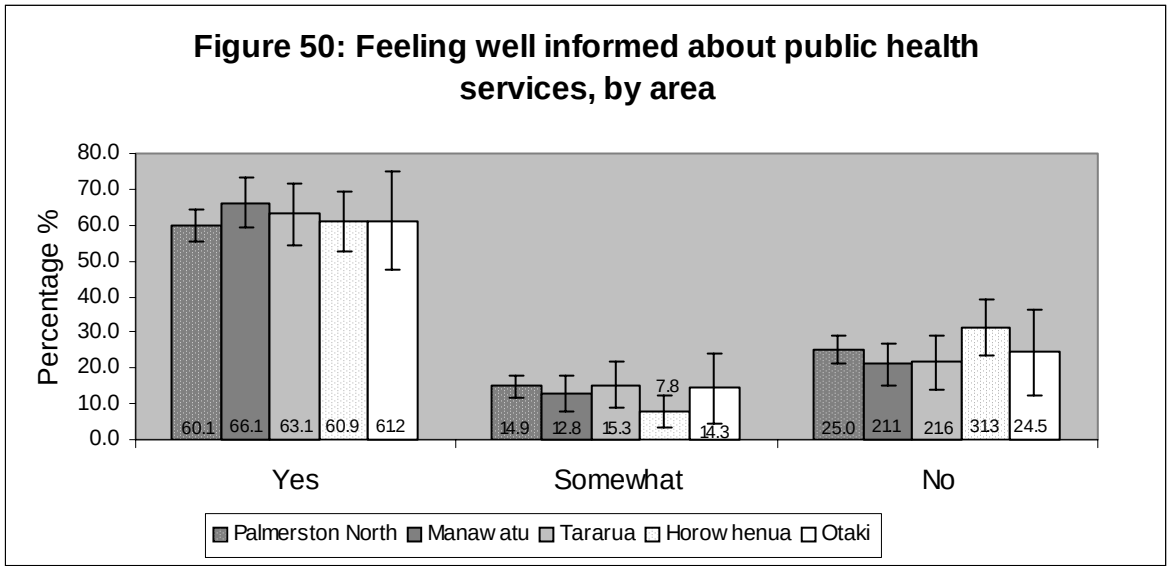


** *p<0.000*

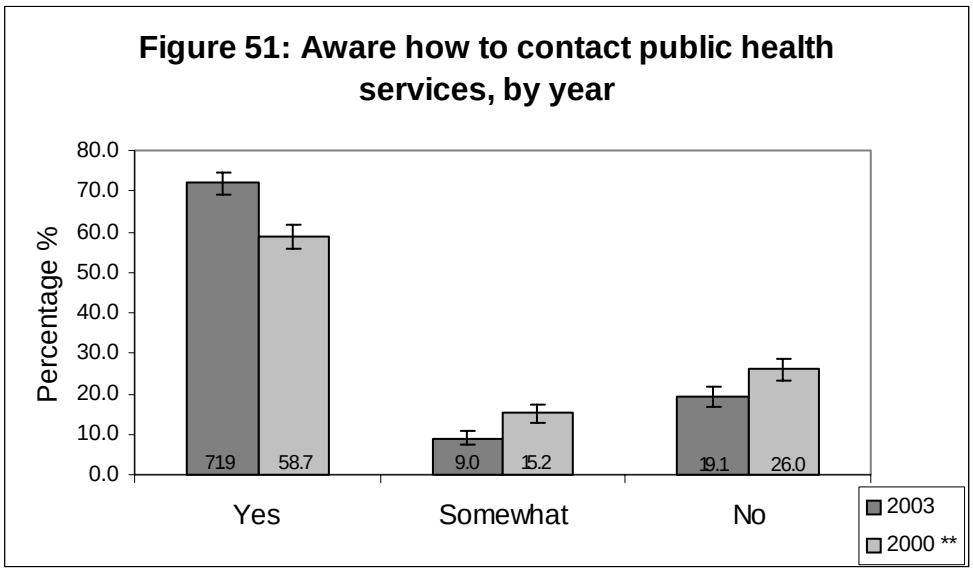
From the 2003 KAP survey, there were about three in five people who felt well informed about public health issues, 61.7% (58.7-64.7%), which is significantly higher than 2000, 41.6% (38.6-44.6%), as indicated in Figure 48.

There are no differences between Maori and non-Maori, see Figure 49, nor in different areas in the region, see Figure 50.





Consistent with the results of feeling well informed, there are also more respondents in the 2003 KAP who reported knowing how to contact public health services, 71.9% (69.2-74.7%) compared to 58.7% (55.7-61.7%) in 2000. See Figure 51.



** *p<0.000*

Maori and non-Maori reported similar status of knowing how to contact the services, Figure 52. There are no differences displayed of the awareness among different areas in the region, see Figure 53.

Figure 52: Aware how to contact public health services, by ethnicity

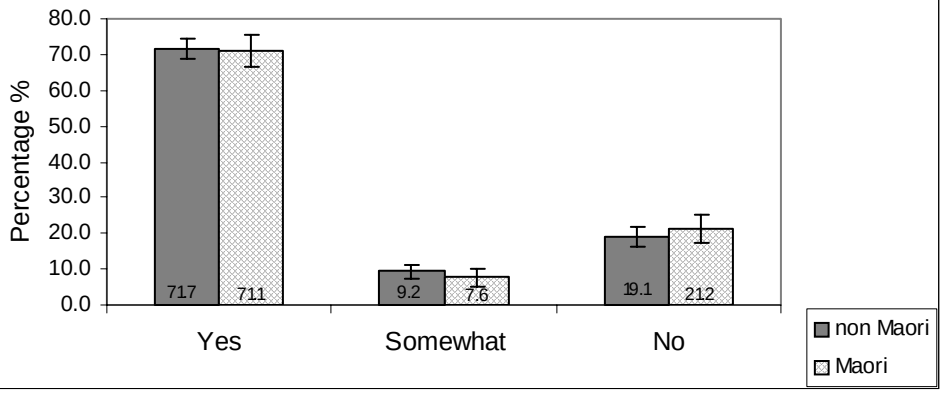
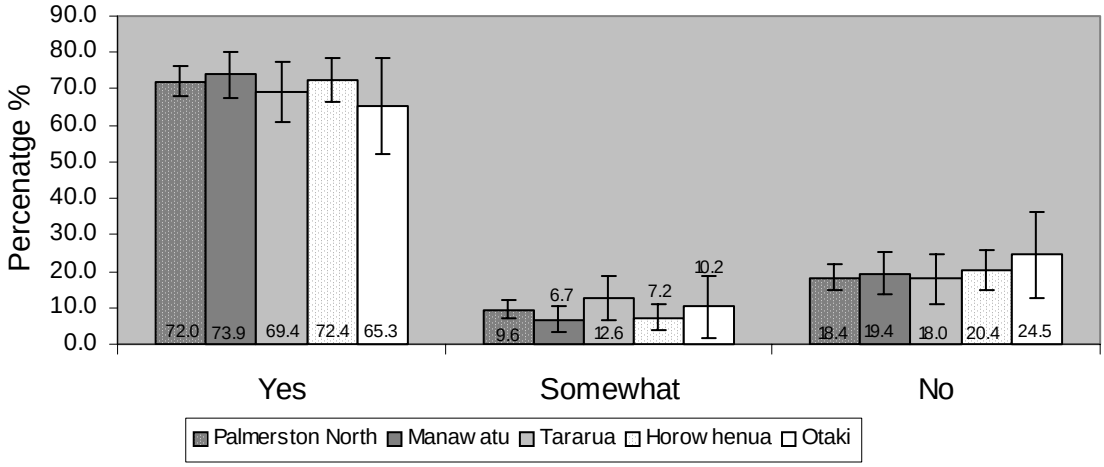


Figure 53: Aware how to contact public health services, by area



Discussion

Self rated health status

Self-rated health status is judged by the individual. It has been used as one of the measurements for health status in public surveys. It basically reflects individual physical health status but also mirrors people's perception, experience, and culture related to health. The 2003 KAP result shows that the majority of MidCentral Health residents rated their own health as good, very good or excellent. This rating is around the average level of the whole of New Zealand and has remained stable among MidCentral Health residents since 2000. Interestingly similar proportions of residents rated their health as *excellent* but *very good*, *good* and *fair* ratings fluctuated. This may reflect an actual health status effect or people judging their health somewhat more moderately.

As indicated in the previous chapters and also reported elsewhere (MoH 1999 and MidCentral DHB 2001), Maori bear higher prevalences of many heath risk factors and diseases. But this KAP survey shows Maori to have a similar self-rating of their health to non-Maori. This may imply that the uneven distributions of risk factors and diseases may not have influenced general self-health rating. It may also reflect the limitation of the objective judgement not mirroring actual health status.

The New Zealand Index of Deprivation 1996 (NZDep96) provides a profile for measuring socio-economic deprivation using a collection of indications for small geographic areas. There is evidence that socio-economic deprivation has an inverse correlation with various health parameters, such as decreasing life expectancy with increasing deprivation scale (MoH, 1999). Although this survey result does not display statistically significant differences in self rated health status over the different geographic areas in the MDHB region, Horowhenua has relatively fewer people rating their health status optimistically, an area where there is a greater deprivation compared with all the other areas.

Nutrition

Many fast foods are deep fried food with high fat, high salt, high calories and lack of fresh vegetables. These are believed to be health risks for obesity, cancer and cardiovascular diseases. The survey has given a positive result with the majority of residents not consuming fast food more frequently than once a week. However a small proportion of adults ate fast food most days a week. It has been a widely recognised problem that young people more frequently choose fast food. This result confirms this concern.

Five servings per day with at least two servings of fruit and three servings of vegetables is a component of a healthy eating pattern that has been strongly recommended in the national Food and Nutrition Guideline since 1991 (MoH 2003). The 5-plus-a-day programme initiated

by the National Heart Foundation has further raised public awareness of the health benefits of vegetables and fruit. This KAP result reveals that the proportions of residents who daily consume three servings or more of vegetables and two servings or more of fruit remain stable. Fruit consumption of three servings or more per day significantly increased in 2003. This increase may indicate more people choosing healthy eating. However it may also be related to the different times when the two surveys were conducted. The 2003 KAP interview was conducted during late autumn and early winter (May to June) when the price for fruit had not yet climbed, but the 2000 survey was conducted during winter (June to July). The lower price may have encouraged more people to buy fruit during the time when the 2003 survey was conducted. The different timing may also explain the lower vegetable consumption in MidCentral than the whole nation. The price for vegetables was relatively high during late May to June 2003, compared with a whole year that the national survey usually lasts.

Males have a higher consumption of fast food but lower consumption of vegetables than females, which is probably related to their lack of concern over healthy eating and reluctance to spend time cooking. The same problem with higher fast food and lower vegetable consumption occurred in Maori as well.

Physical Activities

The measurement for physical activity used was based on the categorisation adopted by the New Zealand Health Survey 1999 (MoH 1999), listed in the following table:

Table 19: Categories of levels of physical activity

Physically inactive	Sedentary	No sports/activities in the previous seven days
	Relatively inactive	Took part in some leisure-time physical activity in the previous seven days, but less than 2.5 hours in total
Physically active	Relatively active	Took part in at least 2.5 hours, but less than 5 hours of leisure-time physical activity in the previous seven days
	Highly active	Took part in 5 hours or more of leisure-time physical activity in the previous seven days

It has been acknowledged that regular physical exercise can benefit health. Regular moderate physical activity can reduce the risks and incidence of many chronic diseases such as diabetes and coronary heart disease (Manson 1994 and Sherman 1999). Vigorous exercise can benefit even more (National Health Committee 1998), however this is achievable for only a small proportion of people. While about the same proportion of residents still undertake active physical exercise compared with 2000, more people have started taking on exercise from no activity at all. This may indicate the influence of the various health programmes aiming at promoting physical activities run by MidCentral Public Health Services, for example, the Men's Health Promotion and Hikoi 2001 (PHS 2001 and 2002).

Housework has become the most common type of physical activity among the MidCentral residents, which enables people to incorporate physical activities into their daily lives-the major target of the Hikoi 2001 health promotion programmes. However, there was still a proportion of respondents claiming lack of time as the barrier to taking exercise in the 2003 survey, a thrust for future health promotion programmes.

Alcohol and Cannabis

Although a small and moderate alcohol intake may reduce the risk of coronary heart disease and ischaemic stroke among middle and old aged men (Anderson 1996), heavy drinking is harmful to physical and mental health both in short and long term (MoH 1999). The survey result gives a warning that the proportion of residents who drink until drunk, although not high, has increased during the past three years. Males and Maori are the vulnerable groups drinking until intoxicated frequently.

The increased alcohol consumption among young people has raised concern world-wide (WHO 2003). This survey presents further evidence of the problem with a significantly higher rate of 16-24 age group becoming intoxicated at least once a month.

Young people, males and Maori are the high-risk groups who are more likely to use cannabis. A number of studies (WHO 1997) have demonstrated the harmful influence of cannabis on normal mental functions, particularly for young people who are more likely to develop mental disorders in later life if they use cannabis when younger (Patton 2002).

Smoking

Tobacco smoking is a leading risk factor for a number of preventable diseases and is responsible for approximately 15 percent of all deaths in New Zealand (MoH 2000). Second hand smoking has also been recognised to be a substantial hazard (MoH 2001a).

Young people and Maori have high current-smoking rates. About one quarter of young people aged 16-24 are a current smoker, which is the second among all age groups. Around one third of Maori are current smokers versus only about one fifth of non-Maori. It has been reported that smoking is associated with socio-economic deprivation with the more deprived having the higher smoking rate (Howden-Chapman 1999). In this report, although no significant difference was found among different areas in the region, Horowhenua, with the most deprived areas, shows a trend of higher smoking rates.

It is pleasing to see that exposure to second hand smoke has decreased in many venues, including sport clubs, bars, restaurants and other people's homes. This may reflect a change in attitude towards smoking indoors. As part of tobacco control campaigns, new smokefree legislation is being implemented to reduce second hand smoking. While exposure has reduced, this survey clearly shows that bars, clubs and restaurants are still the commonest places where non-smokers are exposed to second hand smoking. The survey demonstrates

that the majority of residents support restaurants, bars and clubs as either smoke free or only to permit smoking in set areas.

Injury and Poisoning

Injuries place a substantial burden on the community. It is estimated that about one in twelve GP consultations are for injury related conditions (MoH 1999). There were more than 66,000 injury/poisoning related admissions to New Zealand public hospitals during 1997 (NZHIS 1998). The survey shows, similar to 2000, there is about one quarter (23.6%, 21.0-26.2%) of respondents who reported having an injury that required medical treatment in the region. The figure is close to the result of the 1996/7 New Zealand Health Survey (26.8%, 25.4-28.2%). However the hospitalisation rate for all causes injuries in MidCentral has been reported significantly lower than New Zealand (MidCentral DHB 2001). This may imply fewer residents who suffered injury were admitted to hospital in MidCentral than the New Zealand average, but may also reflect data collection issues.

Falls were reported to be the leading cause for injures in the 2003 survey, followed by sport/games which shows a large decrease compared to 2000 survey. The result is consistent with the national reports (NZHIS 1998 and MoH 1999). It is noticeable that a number of respondents in the 2003 survey claimed their injuries to be caused by animals.

Sexual Health

While the rate of AIDS notified in New Zealand has been relatively stable in recent years, there were 107 people who were diagnosed HIV positive in 2002, the highest number for over a decade (MoH 2003b &c). This survey confirms that there are still about two thirds of residents who were aware that the risk of getting HIV/AIDS is the same or more than 10 years ago with young people most alert. More males underestimated the risk of getting HIV/AIDS. Unprotected sex between men continues to be the highest risk behaviour for HIV transmission within New Zealand. More than three quarters of HIV cases in New Zealand have been transmitted through unprotected sex between men (MoH 2003b). This survey result gives cause for concern.

On a more positive note, the survey shows a high proportion of young people agreed the protection condoms give from sexually transmitted infection, indicating the value of sexual health education programmes for young people. However, there are an increased proportion of residents who did not accept the efficacy of condoms and a decreased proportion of females convinced of the protection in 2003 than 2000. Sexually transmitted diseases have increased dramatically in the past few years in New Zealand and young females are the high-risk group (MidCentral DHB 2001). This survey highlights the continuing effort needed on public health intervention to enhance the awareness of sexually transmitted diseases and to encourage protective sexual behaviour in general, and among gay men and young females in particular.

Similar to 2000, GP/doctor and sexual health service are the places most people would seek treatment for sexually transmitted infections.

Oral Health

One of the priorities of the New Zealand Health Strategy is emphasising adolescents' oral health service access through re-establishment of a nationwide dental health system for children and adolescents (MoH 2000). This survey shows that there are an increased number of adults visiting dentists, particularly among the 16-24 age group. The increased number may be due to better access to dental health services, but it may also demonstrate an increase of severe dental diseases as an issue over the three years period. The issue of cost as one of the claimed barriers for not going to dentists dropped remarkably. This may be related to the possibility of a higher income bias of the sample. Further study is needed to explore this issue.

Fluoridated drinking water is a cost effective public health intervention that improves oral health and produces significant savings in dental treatment cost, especially for those in socio –economically disadvantaged groups. However it has become a controversial topic for health professionals, decision makers, and public (MoH 2003d, Winstanley 2001). The responses from the survey give valuable information for the process of decision making. More than half of the adults in the MidCentral region agreed fluoridation of drinking water can prevent tooth decay and supported fluoridation of public water supplies in the district.

Food Safety

Food-borne illness has increased in New Zealand over the past decade. Since 2000 New Zealand has also experienced a rapid increase in salmonellosis. Data from surveillance suggests that at least 12 percent of notified food-born illnesses are due to unsafe domestic food handling (MoH 2003a). In response, the New Zealand Foodsafe Partnership was formed comprising food industry, consumer groups, public health services, Ministry of Health, and New Zealand Food Safety Authority. Public health services play a key role in promoting food safety messages to the public by undertaking a number of activities in the community (MoH 2003d). This KAP survey provides evidence of enhanced food safety knowledge of residents at home with females, who usually take the dominant role in cooking for the family, having greater knowledge than males.

School Health

As part of the New Zealand Youth Health Strategy, promoting safer and healthier schools has been highlighted as helping to achieve a safer and more supportive environment for young people (MoH 2002). Under this goal, a Health Promoting School Programme is being developed in MidCentral. Together with the newly amended Health and Physical Education Curriculum, a series of health promotion programmes targeting health problems of young

people are delivered in the school setting. The survey shows more parents to believe school to be a safe and healthy place than in 2000. Parent's knowledge of health promotion programmes at school has increased.

Communicable Diseases

Meningococcal disease has been epidemic in New Zealand for over thirteen years. Several well publicised deaths of the disease, particularly involving young people, in recent years has heightened the awareness of the media and the public. This survey confirms the improvement of preventive knowledge of the disease, particularly among young people, which may be largely influenced by the increased awareness. Also this demonstrates the effort made to promote preventive message by public health professionals. Gender is reported to take the same risk of contracting meningococcal disease but Maori bear a disproportionate burden of the disease (MoH 2003e). The survey found significantly fewer men understood the preventive knowledge than women. However Maori and non-Maori levels of knowledge are similar.

Immunisation is a public health intervention that has had the greatest impact on protecting individuals and benefiting the whole community. Immunisation coverage at early age in New Zealand is low compared with other developed countries (MoH 2003f). This survey demonstrates that an increased proportion of adults agreed about the reliability of immunisation in preventing diseases, which provides a positive environment for enhancing immunisation coverage, particularly for the launching of the national immunisation register and the meningococcal vaccine programme in the near future.

Public Health Services

The result reveals an enhanced awareness of public health services across all the programmes and a marked increase in residents who feel well informed about public health issues in the community and knowledge of the way in which to contact the services. The New Zealand Health Strategy puts public health services as a top priority, aiming at achieving targeted population health objectives (MoH 2002). Under the strategy, Public Health Services have delivered a broad range of services in disease prevention, health promotion and health protection programmes with strengthening community participation, multi-agency collaboration and Maori service delivery (PHS 2001 & 2002). Maori and other socio-economic disadvantaged groups have been reported as disproportionately having difficulty in accessing and utilising health services (MoH 1999 & 2000). This survey shows no difference in the awareness of public health services and their access between Maori and non-Maori, or among areas with different deprivation status. This implies that the effort made on improving equality in service delivery is beginning to bear fruit. Also it demonstrates that the public are beginning to move away from their former beliefs in public health services being delivered by the "Health Department" to identifying with MidCentral Health Public Health Services.

Methodology

Cellphones have become more and more widely used and would reduce equal access to landline telephones at home, especially among young people. This survey used landline telephone sampling. The poorer representation of young residents in the sample is related probably to more young residents possessing cellphones. When using telephone sampling in future surveys, the coverage of landline telephone and cellphone users should be considered to make sure sample selection covers the whole range of population. This survey did not include the residents without access to telephone; these are usually in lower socio-economic status, which may reduce the chance of selecting residents with lower incomes. The possibility of some degree of high-income bias of the survey sample needs to be considered.

The telephone interview was conducted in English and people who are not fluent in English may have opted not to take part. Non-English speakers such as people from Asia form a significant component of the New Zealand population. There is about 3.5% of residents of Asian origin in the total adult population in MDHB region.

Education is widely used as an indicator of socio-economic status and has the advantage over income as a measure of greater stability. Including education when gathering demographic information should be considered in future surveys in order to better analyse the association between health and socio-economic determinants.

Some of the information gathered from the KAP questionnaire is altered possibly by the time of year. For example residents choosing vegetables or fruit would be influenced by their price fluctuation in different seasons. Selecting a time that could better represent the investigated factors (such as autumn or between seasons instead of winter for vegetable/fruit choosing behaviour) and fixing the same time for each survey would improve the monitoring of changes in population health related behaviours.

Conclusion and Recommendations

The 2003 KAP survey shows positive results in most health areas compared with the 2000 survey. Differences were found between gender and among age groups in both protective and risk factors related to health. Consistent with other reports, this survey provides further evidence that Maori bear disproportionate risk parameters in a range of health areas. Where comparable, the prevalence of health status and health related factors among the adult residents of MDHB is generally similar to the New Zealand population.

Key results for each sector are summarised as following:

- **Self-rated health**: The majority of MDHB adults rated their health as good, very good or excellent. The rating remains stable compared with the 2000 report and is close to the National Health Survey. No difference was detected for the rating levels between Maori and non-Maori and among different geographic areas.

- **Nutrition**: The majority of adult respondents did not eat fast food frequently. Young people, males and Maori had a higher consumption of fast food. A small percentage of people ate fast food very frequently. About two thirds of adults ate two or more servings of fruit and half of them ate three or more servings of vegetables per day. Fruit consumption has increased compared with the 2000 KAP; but a gap between the recommended consumption of fruit/vegetable still exists especially for males and Maori.

- **Physical activity**: There is an increase in moderate physical activity in 2003. About two thirds of MDHB adults were physically active, slightly lower than that of New Zealand as a whole. Housework was the most frequently reported activity. Lack of time was the top cited barrier preventing people from taking exercise.

- **Alcohol**: No change was found in the frequency of consuming alcohol in the three year period with about one in five adults drinking three times or more weekly. However, more adults reported that they became intoxicated in the 2003 survey than 2000. Young people, males and Maori were the high risk group for intoxication. Own home was the most frequently cited place for drinking.

- **Cannabis**: Cannabis use remained similar to 2000 with less than one tenth of respondents having tried it in the last 12 months. Young people, males and Maori were more likely to use cannabis.

- **Smoking**: The prevalence of current smokers among MDHB adult residents in the 2003 survey (22.1%) was similar to 2000 and also to national rates. Young people and Maori had higher rates of smoking. Bars, clubs and restaurants were the most frequently cited places where non-smokers were exposed to second hand smoking. The majority supported the suggestion that smoking should be restricted in restaurants, bars and clubs.

• **Injury and poisoning**: Similar to the National Health Survey and 2000 KAP result, about one quarter of adult respondents reported having injuries/poisonings that required medical treatment in the previous year. Injury/poisoning in the 16-24 age group appears to have decreased while in the 75+ year old group it appears to have increased over the 2000 levels, but no statistical significance was reached. Fall and sport/games were still the leading causes for the injuries.

• **Sexual health**: Young adults had an enhanced awareness of the risk of getting HIV/AIDS and of the protection from sexually transmitted diseases resulting from condom use. The lower awareness of the risk of HIV/AIDS among males and the underestimate of the protection of condoms in females is of concern.

• **Oral health**: There has been an increase in visiting dentists among MDHB adults with a significantly higher rate for young people in the 2003 survey. More than half of adult residents agreed that fluoridation of drinking water can prevent tooth decay and supported fluoridation of public water supplies in the district.

• **Food safety**: Food safety knowledge regarding meat storage in the fridge and cooking chicken shows an improvement in 2003 compared with the 2000 survey. Females had a better knowledge than males.

• **School health**: More parents believed schools are safe and healthy places in the 2003 survey than in 2000. There was an increased awareness among the parents of the range of health promotion programmes at schools in the region.

• **Communicable diseases**: About two thirds of MDHB adults were aware of how to reduce the risk of meningococcal disease, which is significantly higher than 2000. Knowledge was higher in females than males. Attitudes towards immunisation were improved in 2003. Maori and non-Maori showed similar attitude levels toward immunisation.

• **Public health services**: There were marked increases in awareness about the range of services MidCentral Public Health Services provided. More people reported feeling well informed about the services and knowing how to contact them. No difference was found between Maori and non-Maori or among different geographic areas in the region in this respect.

• **Recommendations for future surveys**: Future telephone interview surveys would need to consider the coverage of landline phone, cellphone users, and residents without telephones in order to enhance sample representation. Efforts to include non-English speakers would also increase sample coverage. Education as a more stable socio-economic indicator would be gathered in future surveys to enhance analysing socio-economic determinants on health. Fixing a regular date for future surveys would improve detection of changes in population health status.

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Appendices

Appendix 1: Calculation of Margin of Error

The margin of error is calculated using the following formula

$$\text{Margin of Error} = 1.96 \times \sqrt{\frac{p(1-p)}{n}}$$

n = sample size
p = proportion

eg. if p = 0.5 (ie. 50%)

For example, total sample n = 1005, $ME = 1.96 \times \sqrt{\frac{0.5 \times (1-0.5)}{1005}} = \pm 3.1\%$

Unless they were given in the report, the sample sizes for calculating margin of error in this report are:

Total sample 2003 n= 1005, 2000 sample n= 1055

Maori n= 430, non-Maori n= 640

Male n= 360, Female n= 640

Age 16-24 n= 105, 25-44 n= 350, 45-64 n= 317, 65-74 n= 132, 75+ n= 85

Palmerston North n= 456, Manawatu n= 178, Tararua n= 118,

Horowhenua n= 195, Kapiti n= 50

As this analysis excluded no-responses, the numbers of sample used for calculating margin of error are slightly smaller than actual numbers of sample size. The above formula for estimating margin of error is suitable when sample sizes are large. When the sample size is small, say np or n(1-p) is less then 5, the estimate is less reliable.

Appendix 2: Survey Questionnaire

(See next page)

DAY **T/S INITIALS**

Hello it's (NAME) from market research company name *here, we are phoning on behalf of MidCentral and Good Health Wanganui Public Health Services as they're examining the health knowledge, practices and attitudes of Manawatu/ Tararua/ Horowhenua/Palmerston North/Kapiti/Wanganui/Rangitikei/Ruapehu people. (SPECIFY APPLICABLE AREA)*

The survey takes between 15-20 minutes,

Add next birthday question to select from eligible adults

(if you are 16 years and over) Would you like to be part of the study?

If *YES*, May I interview you now? Or should I call back later? (ask for a suitable time)

IF NO, Would you like more time to think about this? Then if *YES* say that you will phone back in a day. If *NO*, thank them for their time and end call.

IF YES, The following questions are referring only to you, not others in your household & please be assured all responses remain anonymous. You may withdraw from the survey at any stage of the interview.

Q1. **Thinking back over the last 12 months have you had an injury or poisoning for which you received medical treatment?**
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Yes -1
GO TO Q4. ⇐ No/ Don't know -2

Q2. **What type of accident resulted in your injury or poisoning?** (DON'T READ OUT & CIRCLE **ALL** RESPONSES)

Vehicle, motorbike, push bike, boat, or other form of transport -1
Burn or scald -2
A fall -3
Assault, a fight -4
Sport or game -5
Exposed to a poison -6
_____ (SPECIFY) Other -7

Q3. **Which type of medical professional gave you the medical treatment?** (DON'T READ OUT & CIRCLE **ALL** RESPONSES)

A&E/ Accident and emergency hospital staff -1
GP or family doctor (not at a hospital) -2
Nurse (not at a hospital) -3
Physiotherapist -4
Pharmacist/ Chemist -5
St Johns Ambulance/ First Aid -6
Maori Traditional Practitioner 7
Complementary Health Practitioner..8
_____ (SPECIFY) Other -9
Don't Know -10

Q4. **In general would you say your health is….** (READ OUT & CIRCLE **ONE** RESPONSE)

GO TO Q6. ⇐ Excellent -1
GO TO Q6. ⇐ Very Good -2
GO TO Q6. ⇐ Good -3
Fair -4
Or, Poor -5
(DON'T READ OUT) Don't Know -6

(IF "FAIR" OR "POOR" HEALTH ASK Q5)

Q5. ***Why is that?***

_____

Q6. **As far as you are aware, does Public Health provide the following services?**

(READ OUT LIST & CIRCLE ALL **YES** RESPONSES)

ROTATE STARTING POINT

As far as you are aware, do they ……..

Services	*Yes*
Infectious disease control such as controlling outbreaks of TB or meningitis	-1
Environmental health protection such as ensuring safe drinking water	-2
Advice on food preparation & storage safety	-3
Provide information on the effects of drugs & alcohol	-4
Promote smokefree environment & quit smoking programmes	-5
Conduct health programmes within schools	-6
Provide child & youth health services	-7
Provide Sexual health services	-8
Advice on injury prevention	-9
Positive parenting programmes	-10
Nutrition & physical activity promotions such as the push play & 5 plus vege & fruit	-11
Maori health promotion	-12
Mental well-being promotions	-13

Q7. **Please indicate with a Yes or No, if you agree to the following,** (READ OUT & CIRCLE **ONE** RESPONSE PER STATEMENT)

	Yes	*Somewhat*	*No*	*DK*
I feel well informed about public health issues in my community	1	2	3	4
I am aware how to contact the services provided by Public Health	1	2	3	4

I am now going to ask a few questions on the types of food you eat.

Q8. **How many times a week do you have fast food e.g., McDonalds, KFC, Fish & Chips?**
(READ OUT & CIRCLE **ONE** RESPONSE)

Rarely -1
Once a week -2
2 to 3 times a week -3
4 to 5 times a week -4
Almost daily -5

Q9. **Thinking of how much fruit you ate yesterday, where 1 serving is equal to a medium apple or half a large banana Approximately how many servings of fruit would you have eaten yesterday?** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

I don't eat fruit -1
Less than 1 serving -2
1 serving -3
2 servings -4
3 or more servings -5
Don't Know -6

Q10. **Thinking of vegetable servings you ate yesterday, where 1 serving is equal to ½ cup of mixed vegetables or 1 cup of salad. Approximately how many servings of vegetables would you have eaten yesterday?**
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

I don't eat vegetables -1
Less than 1 serving -2
1 serving -3
2 servings -4
3 or more servings -5
Don't Know -6

Q11. **Thinking of exercise, how many times in the last 7 days did you go……..,**
(READ OUT & RECORD HOW OFTEN IN PREVIOUS WEEK & TOTAL MINUTES/HOURS)

	Frequency	***Minutes***	***Hrs***	
Walking	**x** ___	___	___	-1
Swimming	**x** ___	___	___	-2
Gardening	**x** ___	___	___	-3
Cycling	**x** ___	___	___	-4
Running or jogging	**x** ___	___	___	-5
House work such as vacuuming or mowing the lawn	**x** ___	___	___	-6
_____ (SPECIFY) Any Other	**x** ___	___	___	-7

Q12. **Approximately how many minutes or hours did you…….** (RECORD HOW OFTEN IN MINUTES/ HOURS)

Q13 **What stops you from getting more exercise?** (DON'T READ OUT AND CIRCLE ALL RESPONSES)
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Lack of time -1
Family and children -2
Work commitments -3
Feel inadequate 4
No motivation 5
Injury or disability 6
Lack of access to facilities 7
Poor health 8
Fear of failure 9
Lack of knowledge of opportunities -10
Cost -11
Other(specify)_____12
Don't Know -13

Q14. **Thinking now of alcohol, how often in a usual week do you drink alcohol?** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Daily -1
3-6 times per week -2
Twice per week -3
Once per week -4
Once a fortnight -5
Once per month -6
Less than 12 occasions per year -7
GO TO Q19. ⇐ I don't drink alcohol/ Never -8
Don't Know/ Undisclosed -9

Q15. **How often in a usual week, do you drink enough alcohol to feel drunk?** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Daily -1
3-6 times per week -2
Twice per week -3
Once per week -4
Once per fortnight -5
Once per month -6
Less than 12 occasions per year -7
I don't get drunk/ Never -8
Don't Know/ Undisclosed -9

Q16. **What places do you usually drink alcohol?** (DON'T READ OUT – RECORD **FIRST** & **FOLLOWING** RESPONSES)

	First Response Only	**Following Responses**
Own home	-1	-10
Others home	-2	-11

PROBE: Are there any other places?

	Pubs, hotels, bars	-3	-12
	Nightclubs	-4	-13
	Sports clubs	-5	-14
	Restaurants	-6	-15
	Work places	-7	-16
_____ (SPECIFY) Other		-8	-17
	Don't Know	-9	

Q17. **I am now going to ask you a question on cannabis usage.**
Please stop me when I indicate, how often have you ever used cannabis? (READ OUT & CIRCLE **ONE** RESPONSE)

Never -1
I have tried it over a year ago -2
I have had some in the last 12 months -3
I have had some in the last 6 months -4
In the last month -5
Or, I am a Regular user -6
(DON'T READ OUT) Undisclosed/ Don't Know -7

Q18. **In relation to tobacco smoking, which of the following statements best describes you?**
(READ OUT & CIRCLE **ONE** RESPONSE)

I am a current smoker -1
GO TO Q22. ⇐ I am an ex-smoker -2
GO TO Q22. ⇐ or, I have never been a smoker -3
(DON'T READ OUT) Don't Know -4

ONLY NON SMOKERS & EX-SMOKERS ANSWER Q19.
Q19. **Please indicate with a Yes or No, to the following** (READ OUT & CIRCLE **YES** RESPONSES)
I have been exposed to other people's tobacco smoke within the last month……..

In my own home -1
In someone else's home -2
In a private vehicle -3
In a work vehicle -4
At a sports venue -5
In your workplace -6
In a café or restaurant -7
In a bar or nightclub -8
_____ (SPECIFY) Any other places -9

Q20. **Do you think people should be able to smoke anywhere they want, only in set places or not at all in the following places? READ OUT EACH PLACE (Circle answer)**

Schools	NOT AT ALL	SET AREAS	ANYWHERE
Workplaces	NOT AT ALL	SET AREAS	ANYWHERE
Home	NOT AT ALL	SET AREAS	ANYWHERE
Nightclubs	NOT AT ALL	SET AREAS	ANYWHERE
Hotels and bars/pubs	NOT AT ALL	SET AREAS	ANYWHERE
Sports clubs/centres	NOT AT ALL	SET AREAS	ANYWHERE
Restaurants and cafes	NOT AT ALL	SET AREAS	ANYWHERE
Social clubs & societies eg. RSA	NOT AT ALL	SET AREAS	ANYWHERE
Outdoor sports fields or courts	NOT AT ALL	SET AREAS	ANYWHERE
Marae	NOT AT ALL	SET AREAS	ANYWHERE

Q21. **Where would you advise someone to go if they thought they had put themselves at risk of getting a sexually transmitted infection?**
(DON'T READ OUT & CIRCLE **FIRST** RESPONSE)

GP/Doctor -1
Sexual Health Service (STD Clinic) -2
Public Health Nurse Youth Clinic -3
Maori Health Provider -4
Family Planning Association -5
_____ (SPECIFY) Other -6
Don't Know -7

Q22. **As far as you are aware, is the risk of getting HIV/AIDS in New Zealand <u>less</u> or <u>more</u> than it was 10 years ago?**
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Less -1
About the same/ More -2
Don't Know -3

Q23. **Please indicate whether you agree or disagree with this statement,** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)
"Condoms are reliable protection against sexually transmitted infection"

Agree -1
Somewhat agree -2
Disagree -3
Don't Know -4
Undisclosed -5

Q24. **How often do you visit the dentist?** (READ OUT & CIRCLE **ONE** RESPONSE)

Would it be, 6 Monthly -1
Once a Year -2
Once every 2 Years -3
GO TO Q27. ⇐ More than 2 years apart -4

(IF "MORE THAN 2 YEARS APART" OR "NEVER" ASK) GO TO Q27. ⇐ Or

Never -5

Q25. **What is your main reason for not going to a Dentist more regularly?** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Cost -1
Effort/ Time -2
Travel/ access -3
Fear -4
No problems with my teeth -5
_____ (SPECIFY) Other -6
Don't Know/ No reason -7

Q26. **Do you think fluoridation of drinking water helps prevent tooth decay?**
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Yes -1
No -2
Don't know -3

Q27. **Would you support fluoridation of public water supplies in the district?**
(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Yes -1
No -2
Don't know -3

Q28. **Do you believe raw meat should be stored <u>above</u> or <u>below</u> all cooked food in the fridge?**

(DON'T READ OUT & CIRCLE **ONE** RESPONSE)
Above -1
Below -2
Don't know -3

Q29. **Please indicate whether you agree or disagree with the following statement:**

(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

"The <u>best</u> way to tell if roast chicken is cooked is to check to see if it is dark brown all over"

Agree -1
Somewhat agree -2
Disagree -3
Don't Know -4

Q30. **Do you have school aged children?** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Yes -1
GO TO Q33. ⇐ No -2

ONLY ASK PEOPLE WITH SCHOOL AGED CHILDREN Q31&32

Q31. **Thinking of the schools your children attend1 do you believe they are generally safe and healthy places?**

(DON'T READ OUT & CIRCLE **ONE** RESPONSE)

Yes -1
Somewhat -2
No -3
Don't know -4

Q32. **Please indicate if you have been made aware of the following classroom health education programmes at your children's school?**

(READ OUT & CIRCLE **YES** RESPONSES)

Food & Nutrition -1
Injury & Accident Prevention -2
Mental Health -3
Drug & Alcohol -4
Skin Cancer Prevention -5
Smoking Education -6
Road Safety -7
Sexuality -8
Exercise & Fitness -9

Q33. **In 2002 there were 552 cases of meningitis and 19 deaths from this disease. Which of the following <u>best</u> describes a way to prevent meningococcal disease?** (READ OUT & CIRCLE **FIRST** RESPONSE)

A) Eat a healthy diet -1
B) Don't share spit -2
Or, C) Wash your hands -3
(DON'T READ OUT) Don't Know -4

Q34. **Please indicate whether you agree with the following statement,** (DON'T READ OUT & CIRCLE **ONE** RESPONSE)

"I believe immunisation is a safe and effective way to prevent some important diseases"

Agree -1
Somewhat agree -2
Disagree -3
Don't Know -4

DEMOGRAPHICS **The final questions are about you, that can relate to health.**

What year were you born? _____-

Which ethnic group do you belong to? Choose the group or groups which apply to you.
(READ OUT & CIRCLE **ALL** RESPONSES)

New Zealand European -1
Maori -2
Samoan -3
Cook Island Maori -4
Tongan -5
Niuean -6
Indian -7
(SPECIFY) Other such as Dutch, Japanese, Tokelauan. Please state -8
_____

For the job(for pay, profit or income or in the family business or farm) that you worked the most hours in, what was your occupation?

Professional -1
Farming & horticulture -2
Fire, police, armed services -3
Technicians and associate professional -4
Plant and machine operators and assembler -5
Trades, labourer & manual worker -6
Sales & Clerical workers -7
Homemaker -8
Student -9
Retired -10
Not Currently Employed -11
Other -12

What would be <u>your</u> total annual income <u>before</u> tax? (**READ OUT** & CIRCLE **ONE** RESPONSE)

Up to $10,000 -1
Between $10,001 & $20,000 -2
Between $20,001 & $30,000 -3
Between $30,001 & $40000 -4
$40,001 or more -4
(DON'T READ OUT) Don't Know/ Undisclosed -5

How many people over 15 years live in your household? _____

Do you consider you live within a….

City -1
Town -2
or Rural location -3

Area defined by telephone address:

Palmerston -1
Manawatu -2
Tararua -3
Horowhenua -4
Kapiti…-5
Wanganui…-6
Ruapehu…-7
Rangitikei…-8

Gender:

Male -1
Female -2