

Section 5: Appendices

Appendix 1: Demographic Characteristics of Sample

Table 73: 1996/97 New Zealand Health Survey: demographic characteristics of total sample

	Number	Proportion of Sample (%)	Population Estimate	Weighted Population Proportion (%)
Sex				
Male	3258	41.4	1,374,003	48.6
Female	4604	58.6	1,450,783	51.4
Age group				
15–24 years	1050	13.4	527,965	18.7
25–44 years	3221	41.0	1,141,599	40.4
45–64 years	2063	26.2	750,268	26.6
65–74 years	885	11.3	244,550	8.7
75+ years	643	8.2	160,404	5.7
Ethnicity				
European/Pākehā	5647	71.8	2,267,396	80.3
Māori	1321	16.8	279,174	9.9
Pacific	645	8.2	132,360	4.7
Other	249	3.2	145,854	5.2
Family income				
0–\$20,000	2226	34.1	503,987	22.0
\$20,001–\$30,000	1152	17.6	379,033	16.5
\$30,001–\$50,000	1459	22.3	534,942	23.3
\$50,001+	1691	25.9	874,348	38.1
NZDep96				
1 (least deprived)	1418	18.0	809,388	28.7
2	1636	20.8	700,702	24.8
3	1924	24.5	635,313	22.5
4 (most deprived)	2891	36.7	679,382	24.1
Education				
No qualifications	2704	34.4	807,416	28.6
School only	1815	23.1	691,221	24.5
Post-school only	942	12.0	320,990	11.4
School and post-school	2356	30.0	992,920	35.2

Table 73 provides information on the demographic and socioeconomic characteristics of the sample as a whole. Table 74 provides information on how representative the Māori sample was in terms of socioeconomic status. This table contains the weighted and unweighted proportions found in the Māori sample in categories of education, labour force status and family income, together with the corresponding proportions found in the Census.

As Table 74 indicates, the data on education and labour force status suggest that the sample was representative of the national Māori population in terms of socioeconomic status. The data on family income are more equivocal. The family income data need to be treated with caution, however, because in both the sample and the Census a significant proportion of individuals provided no information on family income.

Table 74: Socioeconomic characteristics of Māori sample

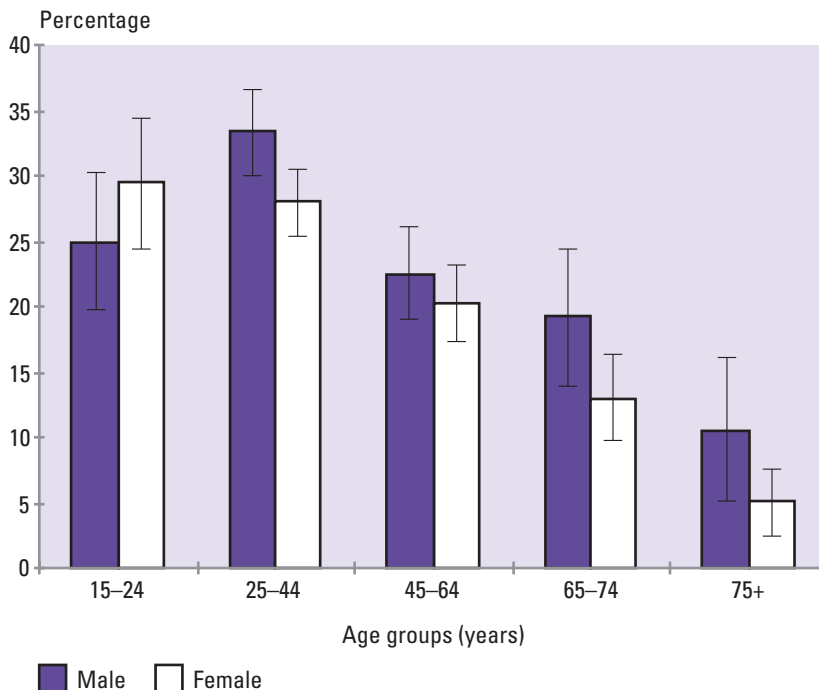
	Census proportion (%)	1996/97 Health Survey Māori sample proportion (unweighted) (%)	1996/97 Health Survey Māori sample proportion (weighted) (%)
Labour force status			
Employed	53.9	46.4	53.2
Unemployed	11.4	12.0	12.5
Not in the labour force	34.7	39.9	32.7
Education			
No qualifications	47.1	46.5	43.6
School qualifications	24.8	19.6	22.7
Family income			
0-\$20,000	43.9	41.6	29.2
\$20,001-\$30,000	17.6	18.6	18.4
\$30,001-\$50,000	21.7	21.2	24.8
\$50,000+	16.8	18.6	28.7

Appendix 2: Notes to Figures and Tables

Understanding the figures

There are two main types of figures used in the text. The first type is illustrated by *Figure Example 1*. This graph shows the percentage of males and females in different age groups who are current smokers in the population (extrapolated from the survey after applying the sample survey weight). For example, the pair of bars on the left show that 25% of male 15–24-year-olds and a little under 30% of female 15–24-year-olds in New Zealand are current smokers.

Figure Example 1: Proportion of people who are current smokers, by age and sex

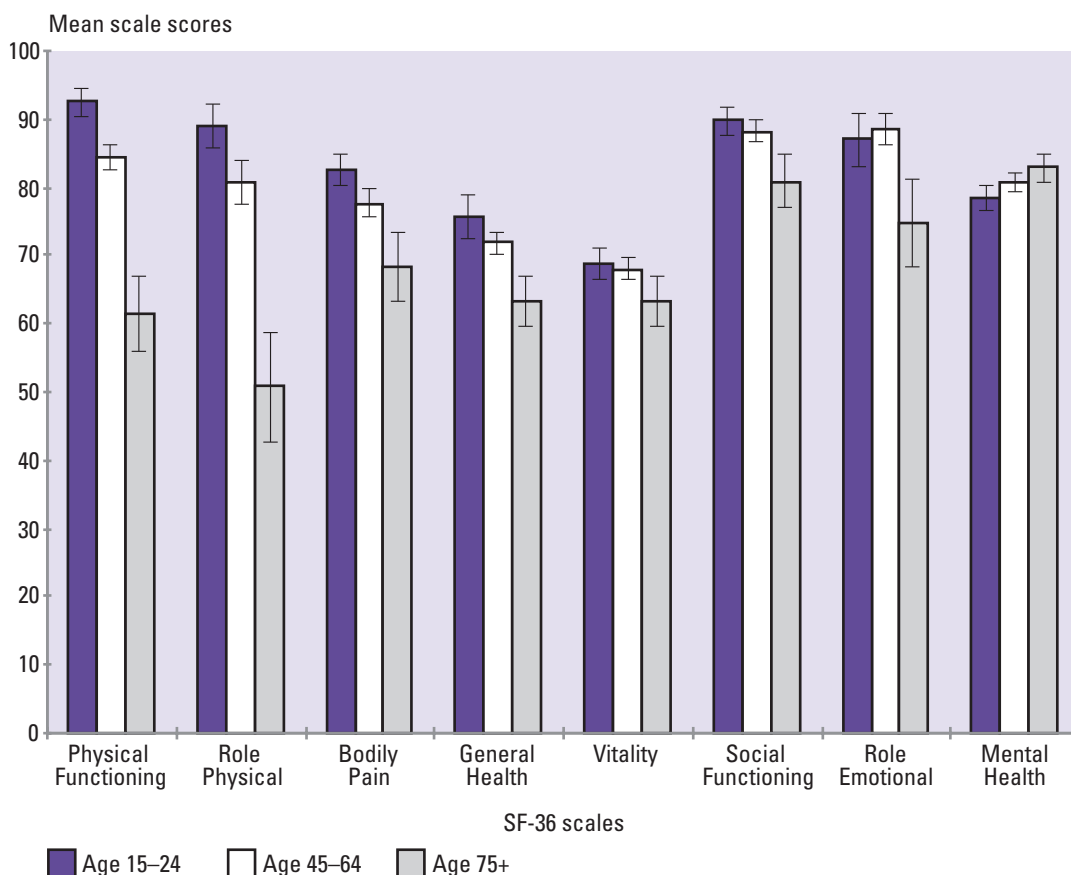


The confidence interval indicators (error bars) displayed at the top of each bar of the graphs indicate the 95% confidence interval* for the estimate. In *Figure Example 1* above we can see that the estimate of 25% of male 15–24-year-olds who are current smokers has a confidence interval of 20–30% (approximately). This tells us that there is a 95% probability of the true population prevalence rate for current smokers falling within the range of 20–30%. Expressed another way, if we repeated a similar survey 100 times, 95 of the samples would give us an estimate somewhere in the range of 20–30%.

The second type of figure is that used for the SF-36 graphs, which show population mean scale scores instead of population proportions. The example given below (*Figure Example 2*) shows the mean scores for each SF-36 scale, for males, in each of the selected age groups. For example, the mean score on the Physical Functioning scale for 15–24-year-old males in the New Zealand population is 92 (approximately), while for 45–64-year-old males it is 84 (approximately), and for males 75 and older it is 62 (approximately).

* See Chapter 1: The Survey for further explanation of confidence intervals.

Figure Example 2: SF-36 mean scale scores by selected age group, males



Confidence intervals can provide some visual indication as to whether or not there are statistically significant differences between groups (in this case, at a 95% confidence level). For the difference between two groups to be statistically significant means that there is only a 5% chance that the difference between the groups occurred by chance. To demonstrate, where the confidence intervals clearly do not overlap in *Figure Example 2*, as in the comparison of 15-24-year-old males on the Physical Functioning scale with either of the other two age groups on the same scale, then the mean scores of the groups can be considered to be significantly different from each other. Where there is some overlap of confidence intervals, as, for example, in the comparison of the 15-24-year-olds with the 45-64-year-olds on the General Health scale, then it cannot be concluded visually whether the two groups differ significantly and a formal statistical test must be undertaken.

Understanding the tables

In *Table Example* below, taken from Chapter 2: Smoking, the unadjusted rate for males in the population in the current smoking category is 26.5%. This means that 26.5% of all males in the population are current smokers. Below this number is the range 24.5–28.5. This is the 95% confidence interval, as discussed above. The column labelled ‘Pop est’ is short for population estimate. For example, the population estimate for the proportion of males who currently smoke is 363,189. This means that the proportion of 26.5% for current male smokers corresponds to 363,189 males in the New Zealand population who are current smokers. The sample survey weight (see Chapter 1: The Survey) applied to the sample estimates allows this extrapolation from the survey estimate to population estimate.

Table Example: Smoking status for total population and by sex: percent (95% confidence intervals)

	Current smokers			Ex-smokers			Never smoked		
	% (95% CI)		Pop est	% (95% CI)		Pop est	% (95% CI)		Pop est
	Unadj	Adj*		Unadj	Adj*		Unadj	Adj*	
Total	24.9 (23.5–26.3)		701,351	24.9 (23.5–26.3)		702,767	50.2 (48.6–51.8)		1,413,946
Sex									
Male	26.5 (24.5–28.5)	26.4 (24.4–28.4)	363,189	26.6 (24.6–28.6)	27.0 (25.0–29.0)	364,026	46.9 (44.5–49.3)	46.6 (44.2–49.0)	642,813
Female	23.4 (21.8–25.0)	23.5 (21.9–25.1)	338,162	23.4 (21.6–25.2)	23.3 (21.5–25.1)	338,741	53.3 (51.3–55.3)	53.2 (51.2–55.2)	771,134

Appendix 3: Psychometric Properties of SF-36

Table 75: 1996/97 Health Survey, percent complete items in each SF-36 scale, by sociodemographic variables

	Physical Functioning	Role Physical	Bodily Pain	General Health	Vitality	Social Functioning	Role Emotional	Mental Health
Total	94.8	97.0	97.7	96.8	97.3	96.8	96.5	97.5
Age^a								
15–24 years	98.0	99.2	99.3	99.1	98.9	98.7	98.9	99.2
25–44 years	96.1	97.8	98.0	97.8	98.1	97.8	97.5	98.1
45–64 years	93.6	96.6	97.7	96.6	97.2	96.9	96.1	97.3
65–74 years	92.3	94.3	96.3	93.7	95.5	94.1	93.2	95.8
75+ years	83.9	89.9	92.0	87.3	89.8	87.1	88.6	90.6
Sex^b								
Male	94.6	97.2	97.7	96.8	97.2	96.5	96.6	97.3
Female	94.9	96.8	97.7	96.8	97.4	97.1	96.4	97.7
Ethnicity^c								
European/Pākehā	95.5	97.6	98.2	97.5	97.8	97.5	97.1	97.9
Māori	91.9	94.8	95.1	94.1	95.1	93.7	93.1	95.1
Pacific	90.5	91.7	92.0	90.7	91.9	91.8	90.8	92.1
Education^c								
No qualification	94.0	95.7	96.6	95.5	96.4	95.1	95.0	96.6
School qualification only	93.5	97.3	97.4	96.9	97.2	96.9	96.6	97.0
Post-school qualification only	93.3	96.6	97.5	96.4	96.6	96.8	94.9	97.4
School and post-school qualification	96.0	97.4	98.1	97.5	97.8	97.6	97.5	98.1
Family income^c								
0–\$20,000	93.7	95.9	96.6	96.4	96.1	95.4	94.5	96.8
\$20,001–\$50,000	94.9	97.4	98.2	97.1	97.7	97.2	97.2	98.1
\$50,001+	96.8	98.9	98.6	98.0	98.6	98.2	98.6	98.4

^a Percentages are sex-standardised. ^b Percentages are age-standardised. ^c Percentages are age- and sex-standardised.

Table 76: Results of item scaling tests and reliability estimates for SF-36

Scale	Number of items	Range of item correlations		Item scaling tests		Scale
		Item internal consistency ^a	Item discriminate validity ^b	Success/total ^c	Scaling success (%)	Reliability ^d
Physical Functioning	10	0.64–0.83	0.15–0.56	80/80	100	0.93
Role Physical	4	0.86–0.89	0.20–0.58	32/32	100	0.91
Bodily Pain	2	0.95	0.26–0.56	16/16	100	0.91
General Health	5	0.65–0.83	0.19–0.56	40/40	100	0.82
Vitality	4	0.77–0.80	0.24–0.56	32/32	100	0.82
Social Functioning	2	0.90	0.39–0.56	16/16	100	0.78
Role Emotional	3	0.83–0.90	0.24–0.52	24/24	100	0.83
Mental Health	5	0.62–0.77	0.10–0.55	40/40	100	0.80

^a Correlations between items and scale (corrected for overlap): higher correlations indicate that the scale has good internal consistency.

^b Correlations between items and other scales: lower correlations indicate good discrimination between the scales.

^c Number of significantly higher / total number of correlations.

^d Internal consistency reliability (Cronbach's alpha): a measure of the equivalence of questions intended to measure the same concept.

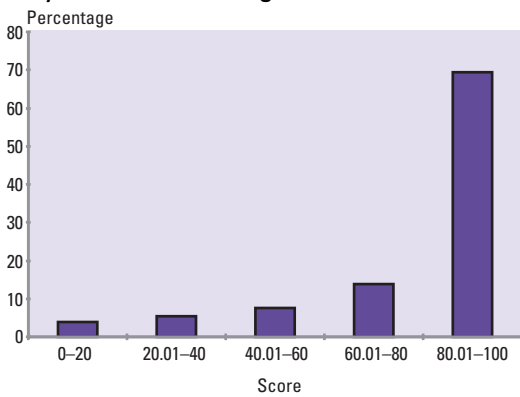
Table 77: Descriptive statistics and features of score distributions for SF-36*

	Physical Functioning	Role Physical	Bodily Pain	General Health	Vitality	Social Functioning	Role Emotional	Mental Health
Items	10	4	2	5	4	2	3	5
Levels	21	5	11	21	21	9	4	26
Mean	86.0	80.7	77.9	73.8	65.6	86.6	85.0	78.0
SE	0.33	0.6	0.4	0.3	0.3	0.3	0.5	0.3
Median	95.0	100.0	84.0	77.0	70.0	100.0	100.0	80.0
Range	0–100	0–100	0–100	0–100	0–100	0–100	0–100	0–100
SD	21.7	34.9	24.5	20.1	18.5	20.6	30.9	15.3
% floor	0.6	11.4	0.6	0.1	0.2	0.6	7.7	0.0
% ceiling	43.2	71.9	42.1	9.6	1.7	58.9	77.6	5.1

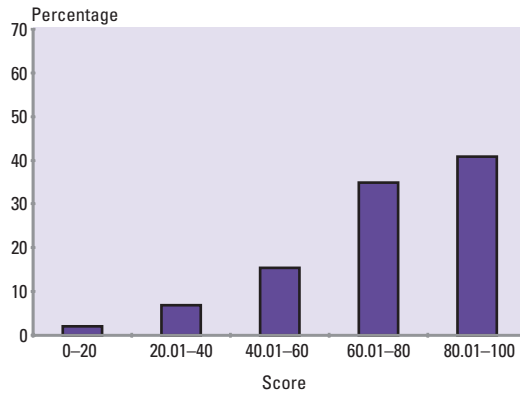
* All statistics weighted to adjust for the complex sampling scheme.

Figure 120: Frequency distributions of SF-36 scale scores

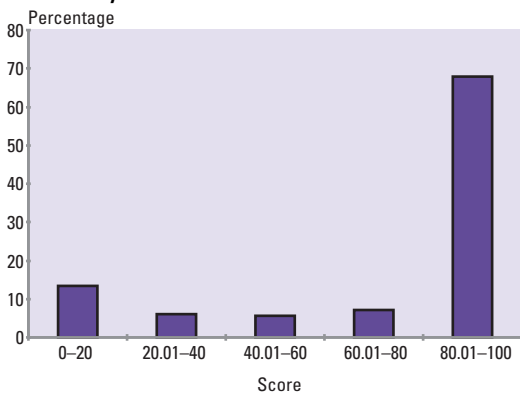
Physical Functioning



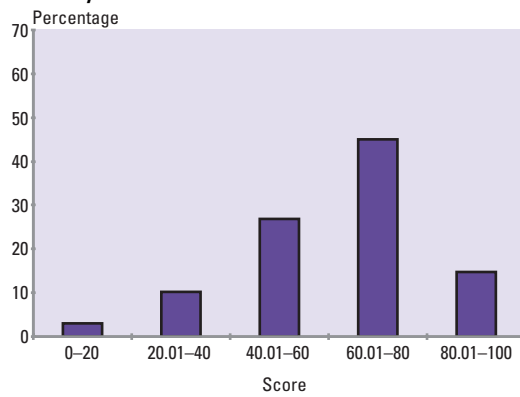
General Health



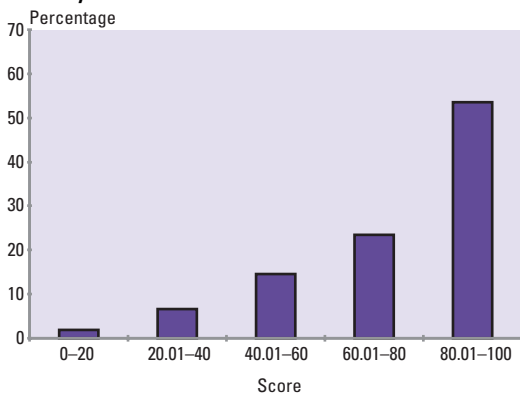
Role Physical



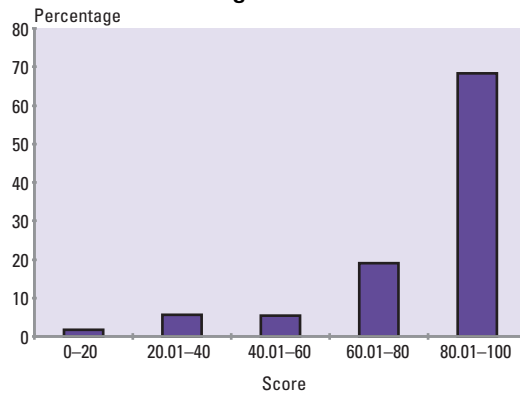
Vitality



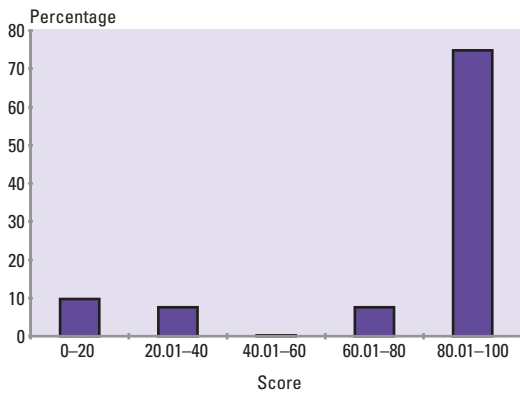
Bodily Pain



Social Functioning



Role Emotional



Mental Health

