Chapter 4: Health Status

Introduction

Self-reported health measures, based on an individual's own perception of their health status and functioning, provide an alternative to the more traditional objective measures of health, such as hospitalisation rates and disease prevalences. Self-reported health measures introduce an element of subjectivity into health status measurement, which is useful for providing a more consumer-centred view of health, and for placing more emphasis on quality of life and wellbeing.

Since 1996/97 the New Zealand Health Survey has included the Medical Outcomes Study Short Form 36 questionnaire (SF-36), which is used internationally to measure health-related quality of life in adults. In 2006/07 a comprehensive module on child health, the Child Health Questionnaire Parent Form 28 (CHQ-PF28), was introduced into the New Zealand Health Survey to capture the health-related quality of life in children aged 5–14 years. The SF-36 and the CHQ-PF28 both contain the general health summary question, and responses to this question have been included at the start of this chapter.

In addition to the general health summary, SF-36 and CHQ-PF28, this chapter includes results on chronic pain for adults, and the results from the Kessler 10 (K10) instrument measuring non-specific psychological distress for adults. The chapter ends with findings from a question asked of parents in the New Zealand Health Survey about the ability of their family to get along – a proxy for family cohesion.

Appendices 5 and 6 describe how to access data presented in this chapter, as well as additional results available online.

General health summary

Introduction

What were the survey questions?

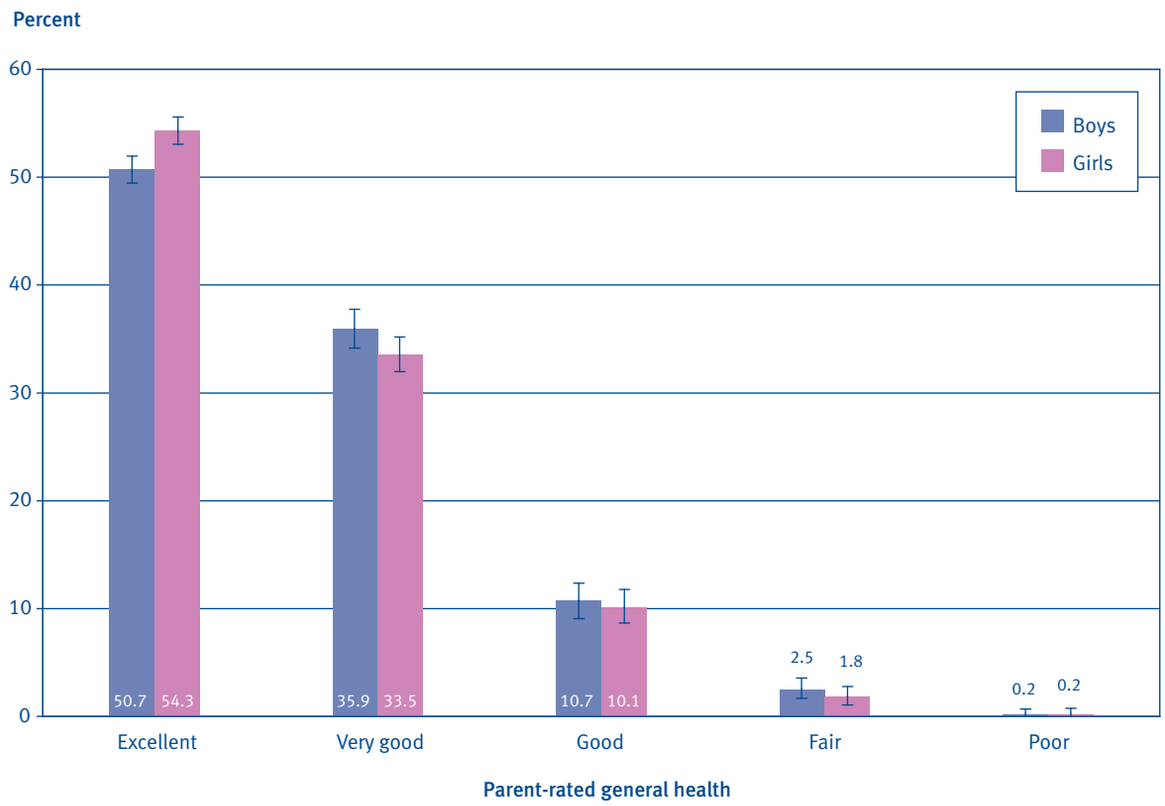
Adult participants in the New Zealand Health Survey were asked to summarise their perception of their health overall by indicating whether, in general, they would say their health was *excellent*, *very good*, *good*, *fair* or *poor*. The parents of child participants were similarly asked whether they considered their child's health to be *excellent*, *very good*, *good*, *fair* or *poor*.

This internationally used question, known as the general self-rated health summary, is simple, encompassing both mental and physical health status. The question has been found to be a powerful predictor of future health care use and mortality, independent of other medical, lifestyle and psychosocial risk factors (Idler and Benyamini 1997; McCallum et al 1994; Miilunpalo et al 1997).

General health summary for children and adults

More than half of parents rated their child's health as excellent, and nine out of ten parents (87.2%, 85.9–88.5) rated their child's health as excellent or very good. Parents of girls were more likely than parents of boys to rate their child's health as excellent, but there was no difference between boys and girls when the categories of excellent and very good were combined (Figure 4.1).

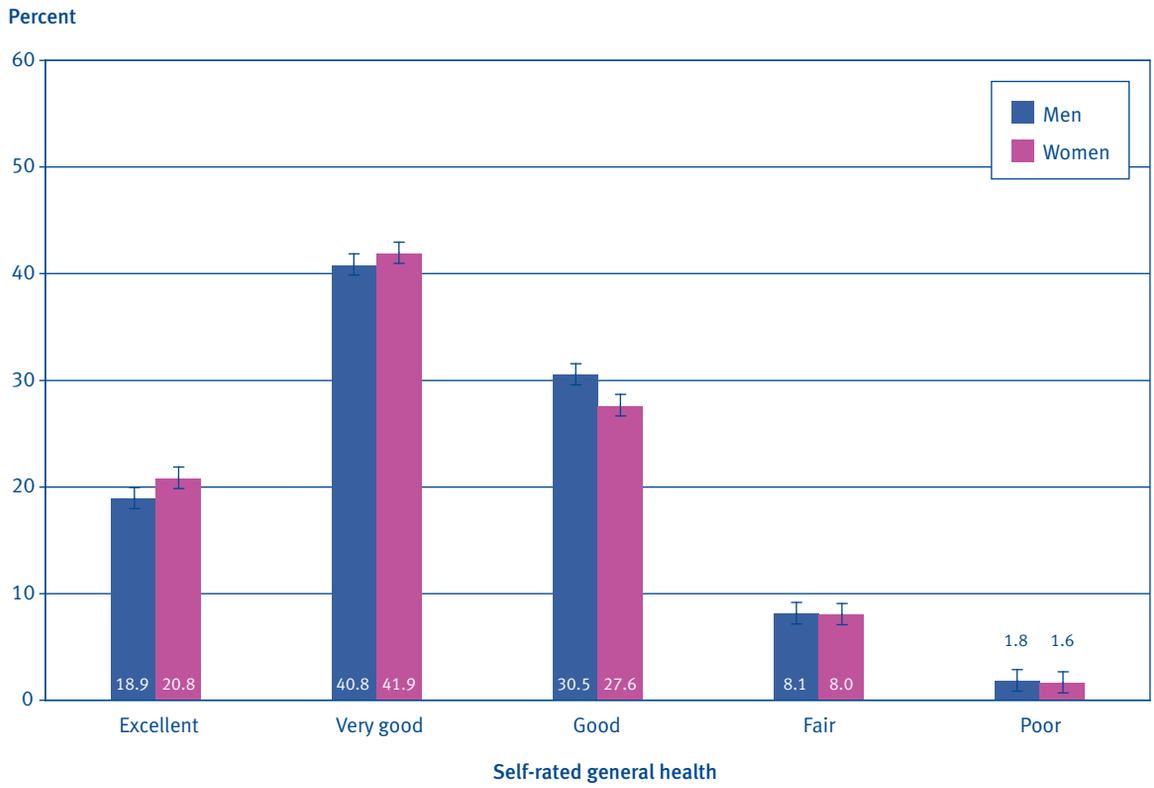
Figure 4.1: Parent-rated general health for children, by gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Three out of five adults (60.6%, 59.3–62.0) rated their own health as excellent or very good. Women were more likely than men to rate their health as excellent or very good, adjusted for age (p-value < 0.05) (Figure 4.2).

Figure 4.2: Self-rated general health for adults, by gender (age standardised prevalence)



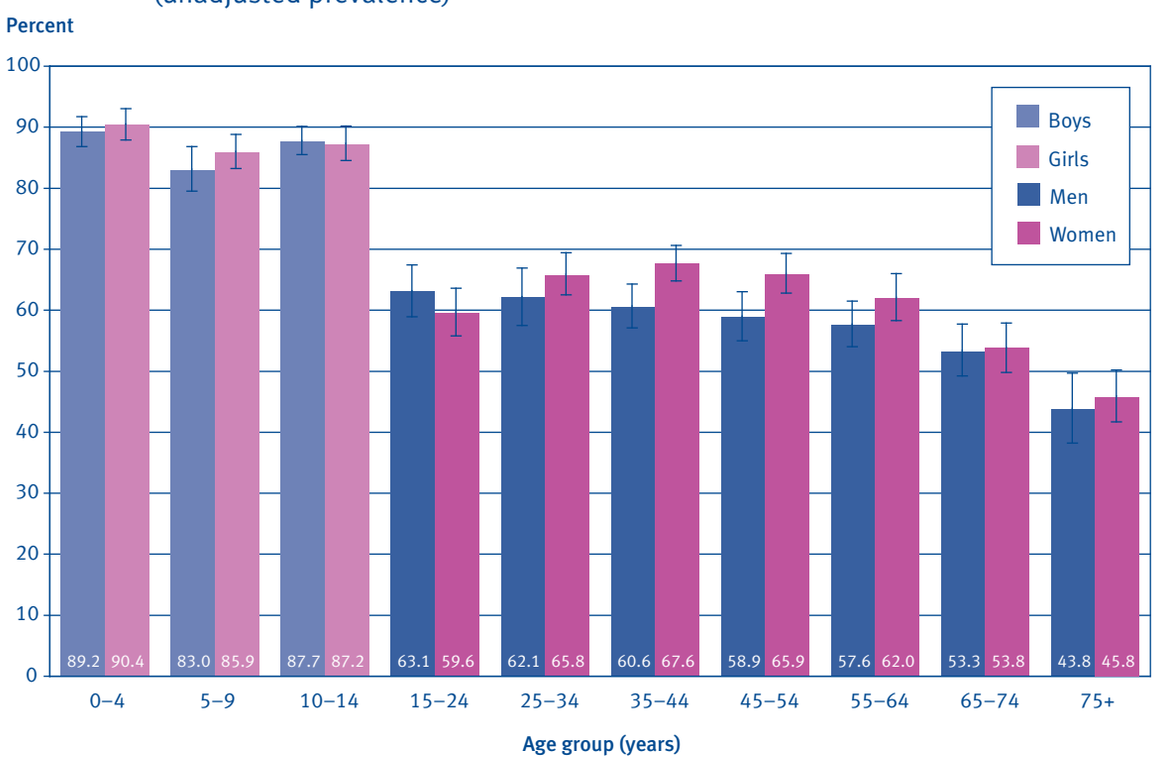
Source: 2006/07 New Zealand Health Survey

General health summary, by age group

Children's health as rated by their parents was much higher than adult self-rated health. Boys aged 5–9 years had the lowest parent-rated health, and adults aged 75-years-and-over had the lowest self-rated health (Figure 4.3).

The proportion of men who said their health was excellent or very good was fairly stable at around 60%, with a steady decline in older age until less than 50% of men aged 75 years or over said their health was excellent or very good. The pattern for women was slightly different, with the proportion self-rating their health as excellent or very good improving in middle age and then declining in old age to the same rate as men. Women aged 35–54 years were significantly more likely than men of the same age to rate their health as excellent or very good (Figure 4.3).

Figure 4.3: Parent-rated and self-rated excellent or very good health, by age group and gender (unadjusted prevalence)

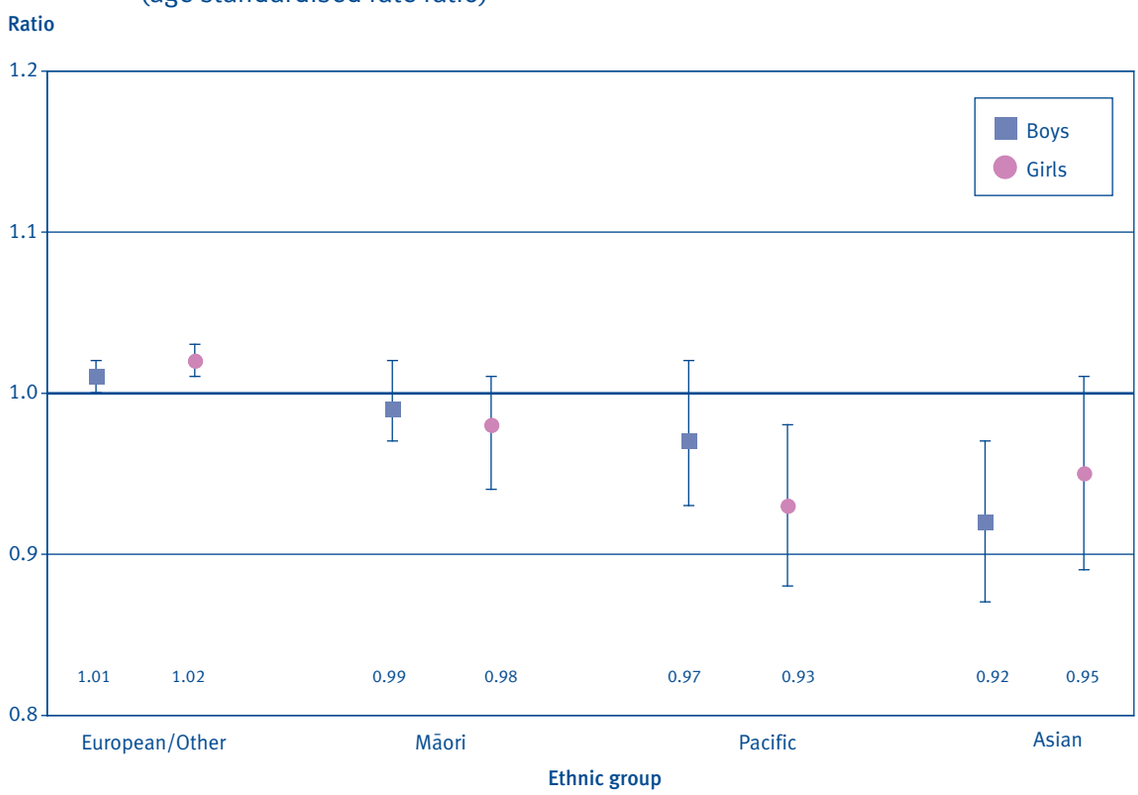


Source: 2006/07 New Zealand Health Survey

General health summary, by ethnic group

Adjusted for age, European/Other girls were slightly more likely than girls in the total population to have excellent or very good parent-rated health (Figure 4.4). Asian boys and Pacific girls were less likely to have excellent or very good parent-rated health.

Figure 4.4: Excellent or very good parent-rated health for children, by ethnic group and gender (age standardised rate ratio)

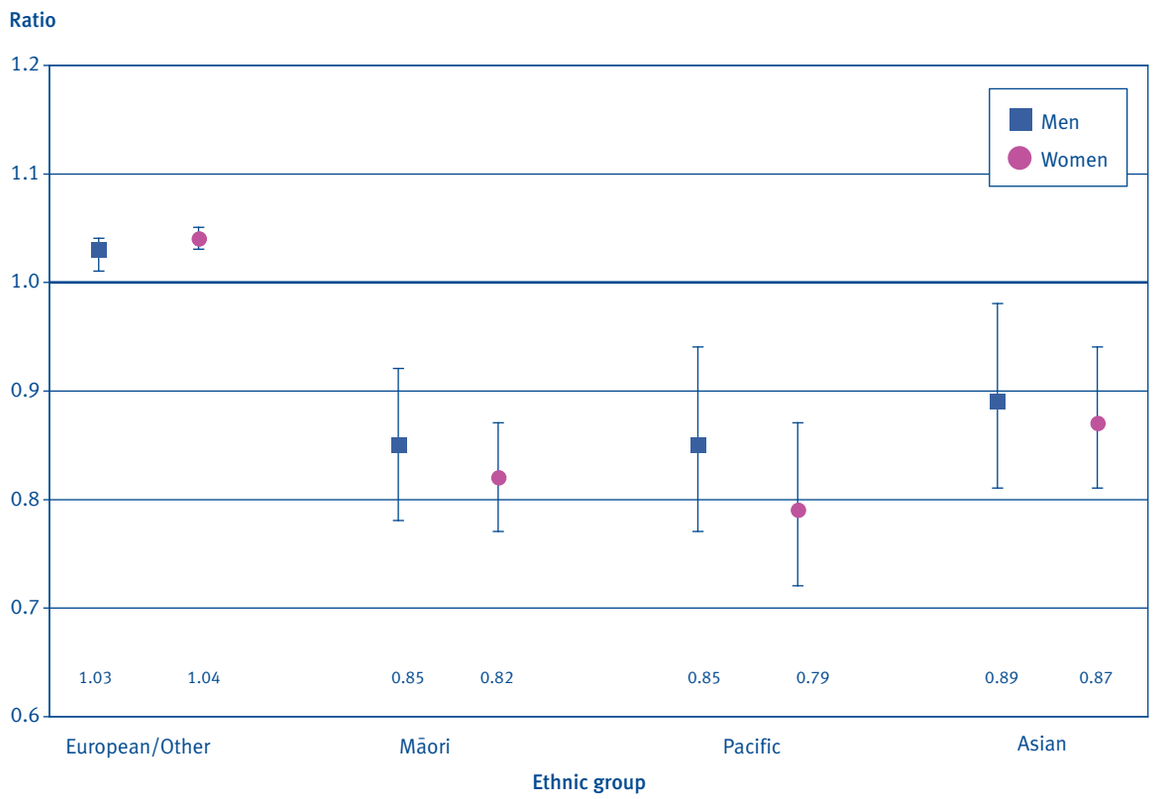


Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged from birth to 14 years. Total response standard output for ethnic groups has been used.

Adjusted for age, Māori men and women, Pacific men and women, and Asian men and women were all less likely to report excellent or very good self-rated health, whereas European/Other men and women were more likely to report excellent or very good self-rated health, compared to men and women in the total population (Figure 4.5).

Figure 4.5: Excellent or very good self-rated health for adults, by ethnic group and gender (age standardised rate ratio)



Source: 2006/07 New Zealand Health Survey

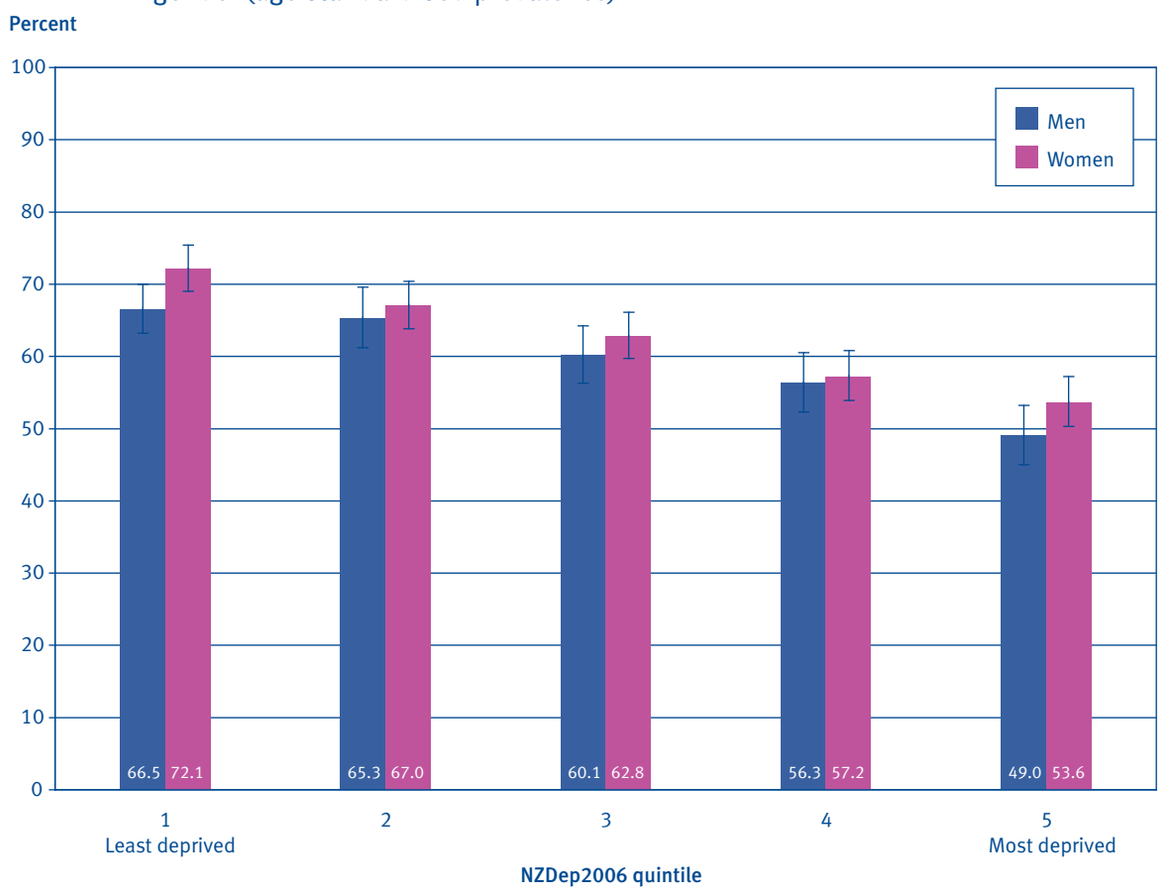
Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

General health summary, by neighbourhood deprivation

Adults living in the least deprived neighbourhoods (NZDep2006 quintile 1 or 2) were more likely to self-rate their health as excellent or very good than adults living in the most deprived neighbourhoods (quintile 5) (Figure 4.6).

This relationship was similar for children, but only statistically significant for girls (92.5%, 89.3–95.8 in NZDep2006 quintile 1 compared with 82.6%, 79.0–86.2 in quintile 5) (graph not shown).

Figure 4.6: Self-rated excellent or very good health in adults, by NZDep2006 quintile and gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

General health summary, by DHB area

There were no differences by DHB in the proportion of parents who rated their child's health as excellent or very good. For adults, only Waikato DHB area was significantly different to the national rate, with proportionately fewer adults in that area rating their own health as excellent or very good (Table 4.1).

Table 4.1: Parent-rated and self-rated excellent or very good health for children and adults, by DHB area (unadjusted)

DHB area	Prevalence for children (95% CI)	Number of children	Prevalence for adults (95% CI)	Number of adults
Northland / Tairawhiti / Hawke's Bay / Lakes / Whanganui	86.5 (83.8–89.3)	99900	60.3 (57.7–62.9)	226400
Waitemata	85.5 (81.7–89.2)	88900	61.6 (58.0–65.2)	233300
Auckland	86.4 (82.4–90.3)	64500	60.7 (56.6–64.8)	195800
Counties Manukau	85.4 (82.2–88.5)	94900	60.2 (56.4–63.9)	194000
Waikato	85.1 (81.5–88.7)	64900	56.7 (53.4–60.0) –	147100
Bay of Plenty / Taranaki / MidCentral	87.2 (83.6–90.8)	85900	60.2 (57.1–63.2)	211400
Wairarapa / Hutt Valley / Capital and Coast	89.0 (85.5–92.5)	79700	60.8 (57.1–64.5)	210800
Canterbury	90.4 (86.7–94.1)	82200	63.2 (59.6–66.8)	234400
Nelson Marlborough / West Coast / South Canterbury / Otago / Southland	89.6 (85.5–93.7)	84300	60.7 (57.3–64.1)	238500
New Zealand total	**87.2 (85.9–88.5)**	**745100**	**60.6 (59.3–62.0)**	**1891800**

Source: 2006/07 New Zealand Health Survey

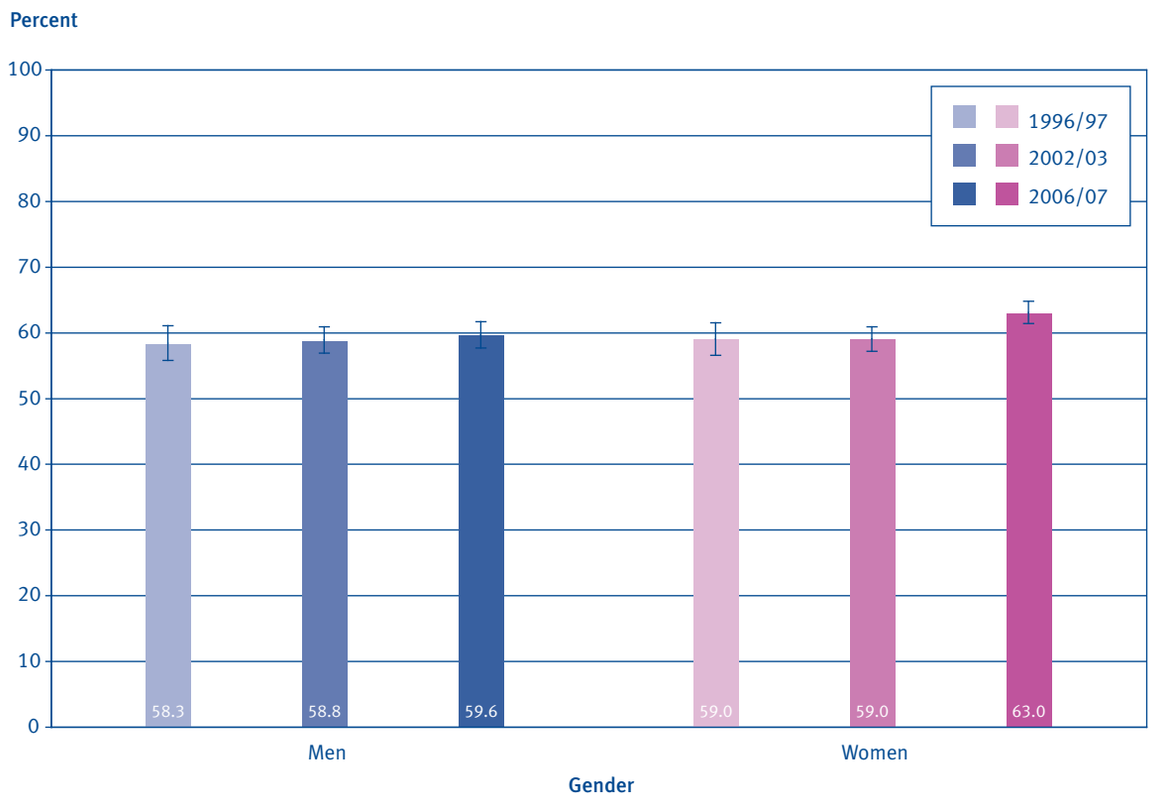
Notes: Estimates indicated with a + are significantly higher than the national rate, and estimates indicated with a – are significantly lower than the national rate. Data are based on direct survey estimates and could be confounded by different population characteristics in each DHB. Due to small sample size, some DHB areas have been combined. Survey population is the estimated resident population living in permanent private dwellings at 31 June 2007.

Time trends in general health summary for adults

There is no comparable time trend for children in the general health summary.

Between 2002/03 and 2006/07 there was a small but significant increase in the proportion of women who rated their health as excellent or very good, adjusted for age (Figure 4.7). Looking at Māori specifically, between 1996/97 and 2006/07 there was no change in the proportion of men and women reporting excellent or very good health, adjusted for age (graph not shown).

Figure 4.7: Self-rated excellent or very good health for adults, by gender, 1996/97, 2002/03 and 2006/07 (age standardised prevalence)



Source: 1996/97, 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

Child health status (CHQ-PF28)

Introduction

The Child Health Questionnaire Parent Form (CHQ-PF28) is 28 questions (items) on children's quality of life and wellbeing across 10 health-related domains: physical functioning, role limitation (physical and emotional/behavioural), general health perceptions, bodily pain, parental impact (time and emotional), self-esteem, mental health and behaviour[16] (Landgraf et al 1999). Responses to each of the CHQ-PF28 items are scored, and expressed on a 0–100 scale for each of the 10 health domains. Box 4.1 lists the CHQ-PF28 domains and provides a summary for interpreting scores.

The longer 50-item CHQ was developed in 1995 and has since been used extensively throughout the world in child health surveys, including in Australia, Ireland, England, the United States of America and many European countries (Ruperto et al 2001). The shorter form of the CHQ, used in the 2006/07 New Zealand Health Survey, is a reliable and valid measure of health-related quality of life in children at a population level (Raat et al 2004).

Interpretation of the CHQ-PF28 is based on the mean average scores. The domains are independent of each other and domain mean scores cannot be compared. However, within each domain, population subgroup (age group, ethnic group, NZDep2006 quintile) means can be compared. The ordering of the domains in the graphs is an international standard, with the order from left to right representing the extent to which each scale measures physical health (closer to the left) or mental health (closer to the right) in children.

As the CHQ-PF28 is currently only appropriate for use with parents of children aged 5–14 years, the results presented here are for this age group only. A CHQ appropriate for the parents of under five-year-olds is currently being developed.

16 Data on family cohesion and change in health status are also collected in the CHQ-PF28, but these are not reported as measures of population-level child health. See page 212 for family cohesion results.

Box 4.1: Interpretation of CHQ-PF28 domain scores

Code	Domain	Low score interpretation	High score interpretation
PF	Physical functioning	Child is limited a lot in performing all physical activities, including self-care, due to health	Child performs all types of physical activities, including the most vigorous, without limitations due to health
RP	Role/social –physical	Child is limited a lot in school work or activities with friends as a result of physical health	Child has no limitations in school work or activities with friends as a result of physical health
GH	General health perceptions	Parent believes child's health is poor and likely to get worse	Parent believes child's health is excellent and will continue to be so
BP	Bodily pain	Child has extremely severe, frequent and limiting bodily pain	Child has no pain or limitations due to pain
PT	Parental impact – time	Parent experiences a lot of limitations in time available for personal needs due to child's physical and/or psychosocial health	Parent doesn't experience limitations in time available for personal needs due to child's physical and/or psychosocial health
PE	Parental impact – emotional	Parent experiences a great deal of emotional worry/concern as a result of child's physical and/or psychosocial health	Parent doesn't experience feelings of emotional worry/concern as a result of child's physical and/or psychosocial health
REB	Role/social – emotional/ behavioural	Child is limited a lot in school work or activities with friends as a result of emotional or behavioural problems	Child has no limitations in school work or activities with friends as a result of emotional or behavioural problems
SE	Self esteem	Child is very dissatisfied with abilities, looks, family/peer relationships and life overall	Child is very satisfied with abilities, looks, family/peer relationships and life overall
MH	Mental health	Child has feelings of anxiety and depression all of the time	Child feels peaceful, happy and calm all of the time
BE	Behaviour	Child very often exhibits aggressive, immature, delinquent behaviour	Child never exhibits aggressive, immature, delinquent behaviour

Note: A four-week recall period is used in all domains, except GH, which uses an 'in general' recall period.

Mean CHQ-PF28 scores for children

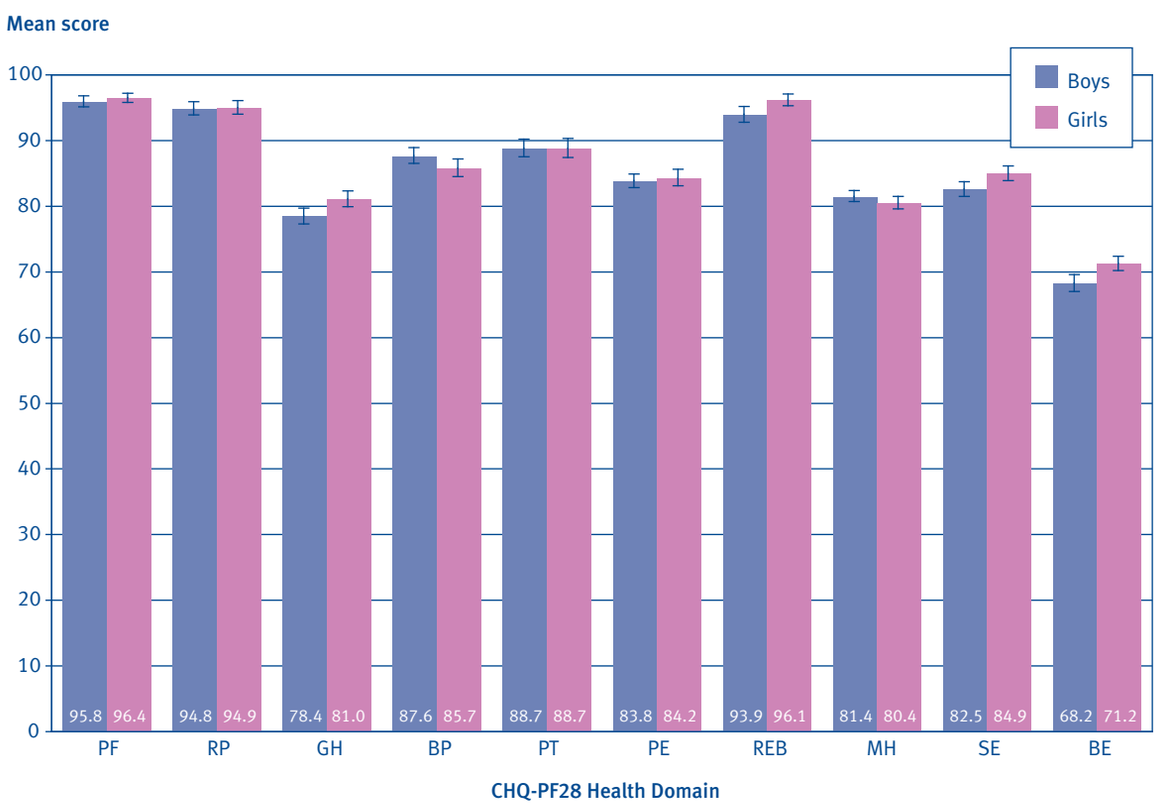
There were no differences between boys' and girls' mean scores for the CHQ health domains of physical functioning, role physical, the two parental impact domains (time and emotional) and mental health (Figure 4.8).

The mean score for girls was significantly higher than the mean score for boys in the following health domains:

- general health
- self esteem
- role/social – emotional/behaviour
- behaviour.

Boys scored higher than girls for bodily pain (p-value ‹ 0.05), meaning that parents of boys reported on average that their child experienced less bodily pain or limitations due to pain compared to parents of girls (Figure 4.8).

Figure 4.8: Mean CHQ-PF28 scores for children aged 5–14 years, by gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between genders within domains, not between health domains.

CHQ-PF28 scores, by age group

In the health domains of parental impact – emotional, role/social – emotional/ behavioural and mental health there were no significant differences between the mean scores of 5–9-year-olds compared to 10–14-year-olds, for both girls and boys (Table 4.2).

In both boys and girls the mean score for bodily pain and self esteem decreased with age. For girls the mean score for physical functioning and role physical also decreased in the 10–14 year age group, with no significant difference in boys (Table 4.2).

In both boys and girls the mean score for behaviour improved with age. For boys the mean score for parental impact – time increased in the 10–14 year age group, with no significant difference for girls (Table 4.2).

Table 4.2: Mean CHQ-PF28 scores for children, by age group and gender (unadjusted)

CHQ domain	Boys		Girls	
	5–9 years	10–14 years	5–9 years	10–14 years
Physical functioning	96.3 (95.0–97.5)	95.4 (94.3–96.6)	97.3 (96.4–98.2)	95.5 (94.4–96.6)
Role/social – physical	95.2 (93.7–96.6)	94.5 (93.1–95.9)	96.6 (95.5–97.6)	93.3 (91.5–95.0)
General health perceptions	78.3 (76.1–80.4)	78.6 (77.0–80.1)	80.2 (78.3–82.1)	81.8 (80.2–83.3)
Bodily pain	88.9 (87.2–90.7)	86.3 (84.7–87.8)	87.0 (85.1–88.9)	84.5 (82.5–86.5)
Parental impact – time	86.6 (84.3–88.8)	90.9 (89.4–92.4)	88.6 (86.5–90.7)	88.9 (87.0–90.8)
Parental impact – emotional	84.2 (82.3–86.1)	83.3 (82.0–84.6)	85.0 (83.4–86.6)	83.5 (81.6–85.3)
Role/social – emotional/ behavioural	94.1 (92.3–95.9)	93.7 (92.1–95.2)	96.1 (94.8–97.5)	96.1 (94.9–97.2)
Mental health	81.3 (79.9–82.6)	81.6 (80.6–82.7)	79.9 (78.9–81.0)	80.9 (79.4–82.4)
Self esteem	84.3 (82.8–85.8)	80.7 (79.3–82.2)	86.5 (85.1–87.9)	83.2 (81.6–84.9)
Behaviour	67.1 (65.2–68.9)	69.3 (67.7–70.9)	69.5 (68.0–71.0)	72.9 (71.3–74.4)

Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between age groups and genders within domains (ie, within rows).

CHQ-PF28 scores, by ethnic group

This section summarises the CHQ mean score rate ratios comparing ethnic group by gender to the total child mean score. All results have been age standardised.

European/Other boys and girls had no difference between their mean scores and the scores of boys and girls in the total population on all health domains, except general health, where both genders had a higher mean score than boys and girls in the total population.

Māori boys and girls had lower mean scores on the following domains compared to boys and girls in the total population:

- general health
- role emotional/behavioural
- parental impact – emotional
- mental health
- behaviour.

In addition, Māori girls had a lower mean score on the parental impact–time domain compared to the mean score for all girls, with no difference for Māori boys. In other domains there were no differences for Māori children.

Pacific boys and girls also had lower mean scores for general health compared to boys and girls in the total population, but were similar to the national average for most other domains. Exceptions to this were that Pacific girls had higher mean scores for bodily pain (meaning they had less pain or fewer limitations due to pain) but a lower score for behaviour compared to all girls; and Pacific boys had a higher mean score for self esteem but a lower mean score for parental impact – time compared to all boys. In other domains there were no differences for Pacific children.

Asian boys and girls had higher mean scores compared to boys and girls in the total population for bodily pain (meaning they had less pain or fewer limitations due to pain), parental impact – emotional, mental health and behaviour. Asian boys also had a higher mean score for self esteem compared to all boys, and Asian girls had higher mean scores for role physical and parental impact – time compared to all girls. In other domains there were no differences for Asian children.

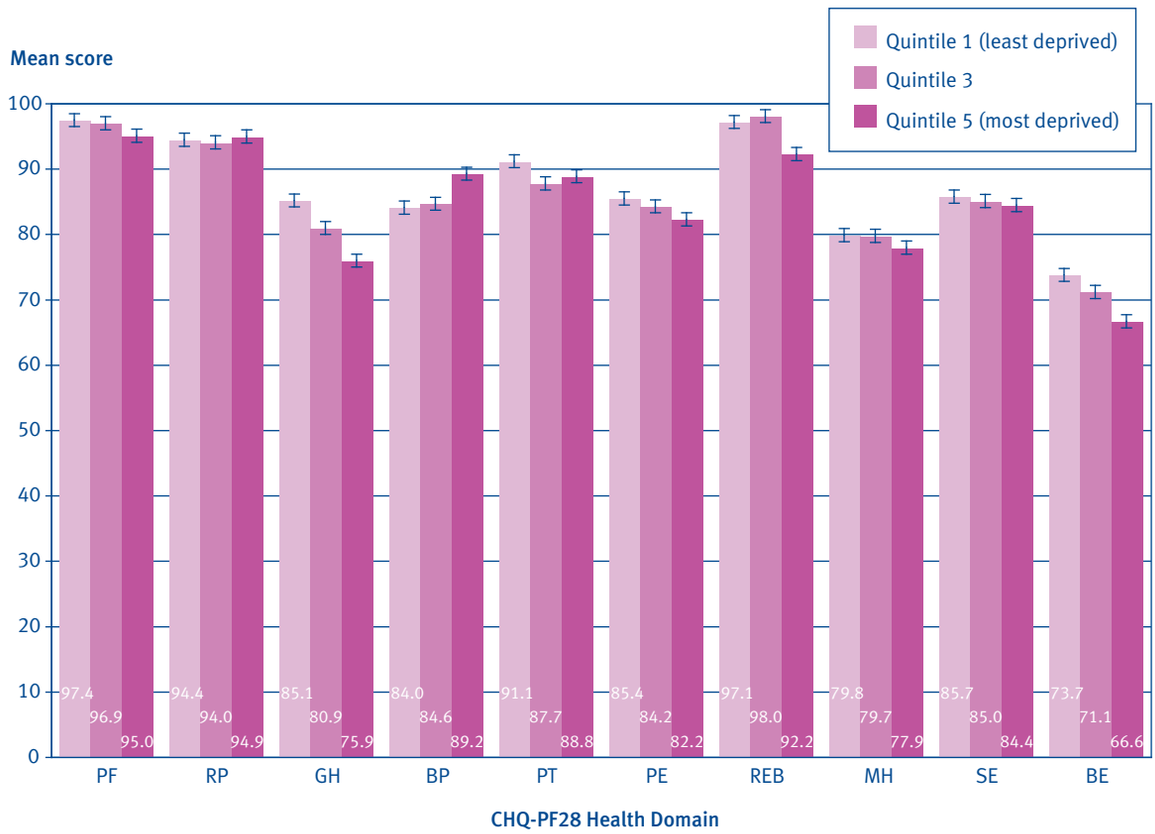
CHQ-PF28 scores, by neighbourhood deprivation

Six of the ten CHQ health domains had no differences for girls aged 5–14 years by neighbourhood deprivation: physical functioning, role/social –physical, parental impact – time, parental impact – emotional, mental health and self esteem (p-values all > 0.05).

Parents' general perceptions of their daughters' health decreased steadily with increasing neighbourhood deprivation. It was more likely for girls living in the most deprived areas (NZDep2006 quintile 5) to have their parents report they were limited in school work or activities with friends as a result of emotional or behavioural problems (role/social – emotional/behavioural domain), and that they exhibited aggressive, immature or delinquent behaviour (behaviour domain) compared to girls living in the least deprived areas (quintile 1) (Figure 4.9).

Parents of girls living in the most deprived neighbourhoods (NZDep2006 quintile 5) on average thought their daughters experienced less pain and had fewer limitations due to pain than parents of girls living in less deprived neighbourhoods (both NZDep2006 quintile 1 and 3) (Figure 4.9).

Figure 4.9: Girls aged 5–14 years mean CHQ-PF28 scores for each health domain, by NZDep2006 quintile (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

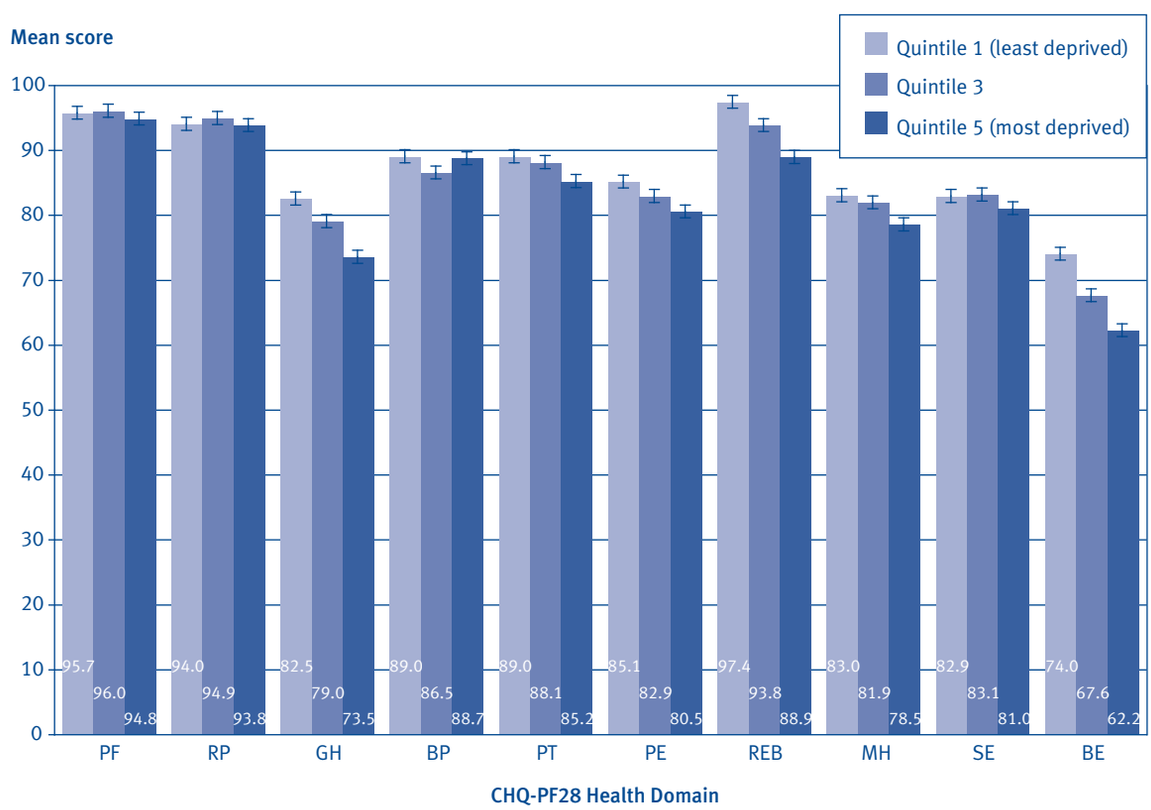
Note: Comparisons can be made between NZDep2006 quintiles within domains, not between domains.

Five of the ten CHQ health domains had no differences for boys aged 5–14 years by neighbourhood deprivation: physical functioning, role/social – physical, bodily pain, parental impact – time, and self esteem (p-values all › 0.05).

As with girls, parents' general health perceptions of their sons decreased steadily with increasing neighbourhood deprivation. It was also more likely for parents of boys living in the most deprived areas (NZDep2006 quintile 5) to report that they themselves experienced emotional worry/concern as a result of their son's physical and/or psychosocial health (parent impact – emotional) and that their sons were limited in school work or activities with friends as a result of emotional or behavioural problems (role/social – emotional/behavioural domain) compared to boys living in the least deprived areas (quintile 1) (Figure 4.10).

Parents of boys living in NZDep2006 quintile 5 (most deprived) were also more likely to report that their sons had feelings of anxiety and depression (mental health domain), and that they exhibited aggressive, immature or delinquent behaviour (behaviour domain) compared to boys living in NZDep2006 quintile 1 (Figure 4.10).

Figure 4.10: Boys aged 5–14 mean CHQ-PF28 scores for each health domain, by NZDep2006 quintile (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between NZDep2006 quintiles within domains, not between domains.

Adult health status (SF-36)

Introduction

The Medical Outcomes Study Short Form 36 questionnaire (SF-36) is one of the most widely used questionnaires for measuring self-reported physical and mental health status in adults. The SF-36 consists of 36 questions (items) measuring physical and mental health status in relation to eight health domains: physical functioning, role limitation (physical), bodily pain, general health perceptions, vitality (energy/fatigue), social functioning, role limitation (emotional), and general mental health (Ware et al 2005). Responses to each of the SF-36 items are scored, and expressed on a 0–100 scale for each of the eight health domains. Box 4.2 lists the SF-36 domains and provides a summary for interpreting the scores.

Box 4.2: Interpretation of SF-36 domain scores

Code	Domain	Low score interpretation	High score interpretation
PF	Physical functioning	Limited a lot in performing all physical activities, including self-care, due to health	Performs all types of physical activities, including the most vigorous, without limitations due to health
RP	Role limitation – physical	Limited a lot in work or other daily activities as a result of physical health	No problems with work or other daily activities as a result of physical health
BP	Bodily pain	Very severe and extremely limiting bodily pain	No pain or limitations due to pain
GH	General health perceptions	Evaluates own health as poor and believes it is likely to get worse	Evaluates own health as excellent
VT	Vitality	Feels tired and worn out all of the time	Feels full of energy all of the time
SF	Social functioning	Extreme and frequent interference with normal social activities due to physical or emotional problems	Performs normal social activities without interference due to physical or emotional problems
RE	Role limitation – emotional	Problems with work or other daily activities as a result of emotional problems	No problems with work or other daily activities as a result of emotional problems
MH	Mental health	Has feelings of nervousness and depression all of the time	Feels peaceful, happy and calm all of the time

Note: A four-week recall period is used in all domains, except GH, which uses an 'in general' recall period.

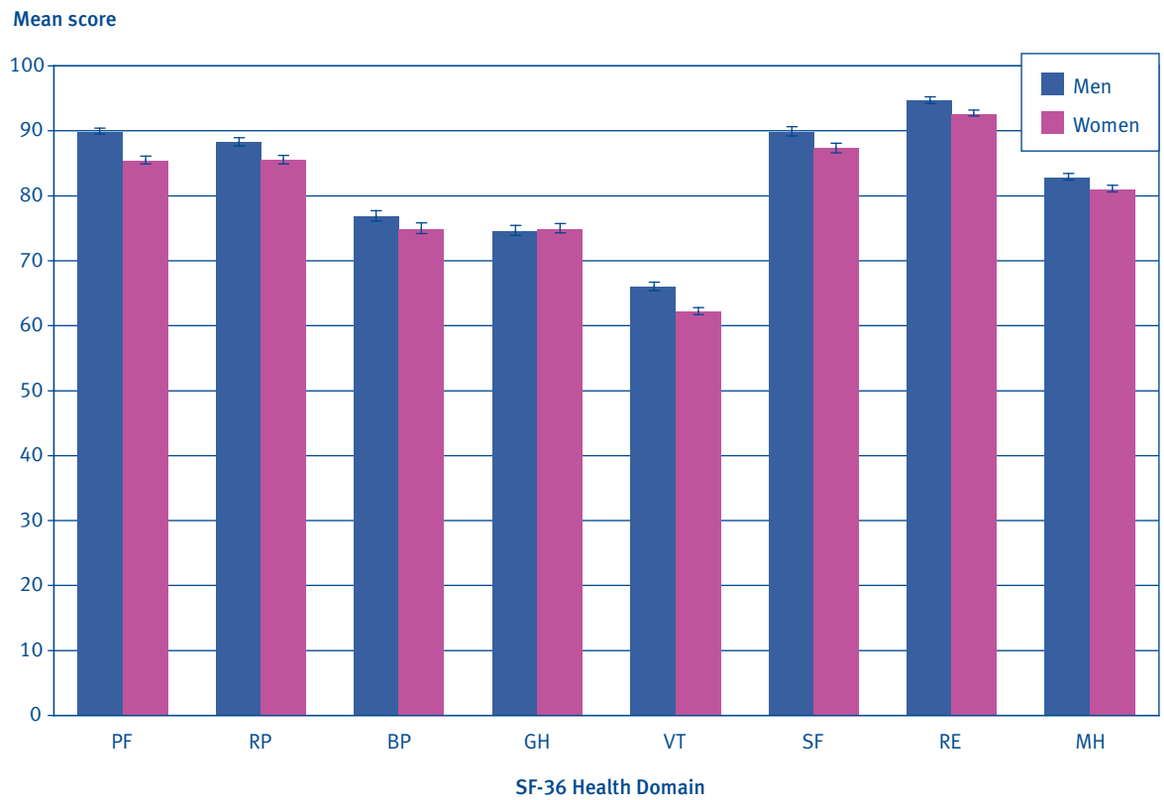
Interpretation of the SF-36 is based on the mean average scores. The domains are independent of each other and domain scores cannot be compared. However, within each domain, population subgroup (ethnic group, age, NZDep2006 quintile) means can be compared. The ordering of the domains used in this report is an international standard, with the order from left to right representing the extent to which each scale measures physical health (closer to the left) or mental health (closer to the right).

The New Zealand edition for Version 2 of the standard SF-36 was used in the 2006/07 New Zealand Health Survey. This version improved the wording and layout, and reduced the number of responses in some questions, minimising ambiguity and bias and allowing for greater comparability between cultural adaptations and translations. Versions 1 and 2 of SF-36 can be directly compared (Ware et al 2000).

Mean SF-36 scores for adults

Men scored significantly higher than women on all SF-36 health domains except general health, adjusted for age (Figure 4.11). The differences were most pronounced for physical functioning and vitality.

Figure 4.11: Mean SF-36 scores for adults, by gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between genders within domains, not between health domains.

SF-36 scores for adults, by age group

Mean SF-36 scores across the health domains generally declined with age, particularly in physical functioning, role physical and bodily pain, which are the domains most associated with physical health. General health, vitality, social functioning and role emotional were fairly stable throughout the age groups, but then declined in 75-year-olds and over (earlier for general health). Mental health mean scores improved with age, with a stabilising in the mean score from 55 years of age (Table 4.3).

Table 4.3: Mean SF-36 scores for adults, by age group (unadjusted)

Age group (years)	Physical functioning	Role physical	Bodily pain	General health	Vitality	Social functioning	Role emotional	Mental health
15–24	93.6 (92.8–94.4)	91.0 (90.1–92.0)	78.6 (77.2–80.0)	74.6 (73.5–75.7)	64.6 (63.6–65.7)	88.7 (87.6–89.7)	93.6 (92.8–94.4)	79.8 (79.0–80.5)
25–34	92.3 (91.4–93.1)	89.9 (88.9–90.9)	77.9 (76.5–79.3)	76.1 (75.0–77.2)	63.1 (62.2–63.9)	88.8 (87.6–89.9)	93.3 (92.5–94.1)	80.7 (80.0–81.5)
35–44	90.7 (89.9–91.5)	88.8 (87.8–89.8)	76.1 (74.9–77.2)	76.5 (75.6–77.4)	63.5 (62.5–64.5)	88.1 (87.2–89.0)	93.2 (92.6–93.8)	81.4 (80.7–82.0)
45–54	87.4 (86.3–88.5)	87.1 (85.8–88.4)	75.2 (73.6–76.7)	75.4 (74.2–76.6)	65.3 (64.2–66.3)	89.6 (88.5–90.6)	94.0 (93.0–94.9)	82.8 (81.9–83.7)
55–64	81.3 (80.1–82.6)	83.2 (81.9–84.5)	73.0 (71.6–74.5)	73.6 (72.5–74.6)	65.0 (64.1–66.0)	89.0 (88.0–90.1)	94.6 (93.9–95.4)	84.6 (83.9–85.2)
65–74	73.6 (71.9–75.2)	76.5 (74.6–78.5)	70.1 (68.2–71.9)	71.0 (69.5–72.4)	64.3 (63.0–65.6)	88.1 (86.7–89.5)	94.2 (93.3–95.1)	85.2 (84.5–86.0)
75 +	56.2 (54.2–58.1)	63.5 (61.0–66.0)	68.8 (67.1–70.5)	67.5 (65.9–69.0)	58.9 (57.5–60.3)	82.4 (80.6–84.2)	91.6 (90.3–93.0)	84.9 (84.0–85.9)

Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between age groups within domains (ie, within columns).

Looking at gender within the above age groups, men consistently had higher scores than women in the domain of physical functioning, and mainly had higher scores in the domains of vitality (except in the 55–64 years range, where there was no difference between men and women) and mental health (except for the 25–34 and 45–54 years ranges, where there were no differences).

Men also had higher scores than women for the age groups in the following health domains:

- role physical for ages 25–34, 35–44 and 75 years and over
- bodily pain for ages 65–74 and 75 years and over
- social functioning for ages 15–24 years and 75 years and over
- role emotional for ages 15–24, 65–74 and 75 years and over.

Other age groups in the domains above showed no difference between men and women.

In the domain of general health, men aged 15–24 years scored higher than women of the same age, and women aged 45–54 years scored higher than men of the same age. There were no other differences between the genders by age group.

SF-36 scores for adults, by ethnic group

This section summarises the SF-36 mean score rate ratios by ethnic group and gender. All results have been age standardised.

European/Other men and women had no differences in mean scores compared to men and women in the total population for all domains, except vitality, where European/Other men scored slightly lower than all men.

Māori men and women had lower mean scores than men and women in the total population on all SF-36 domains except vitality, where there were no differences for either gender, and mental health, where Māori men showed no difference compared to all men but Māori women were lower than all women.

Pacific men and women had lower mean scores than men and women in the total population on the two domains related to limitations in daily activities because of physical and emotional health problems. Pacific women also had lower mean scores than all women on physical functioning, general health and social functioning, whereas Pacific men had no difference in these domains compared to all men.

Asian men and women had a significantly higher mean score than men and women in the total population for bodily pain and vitality, with no other differences for this ethnic group compared to the total population.

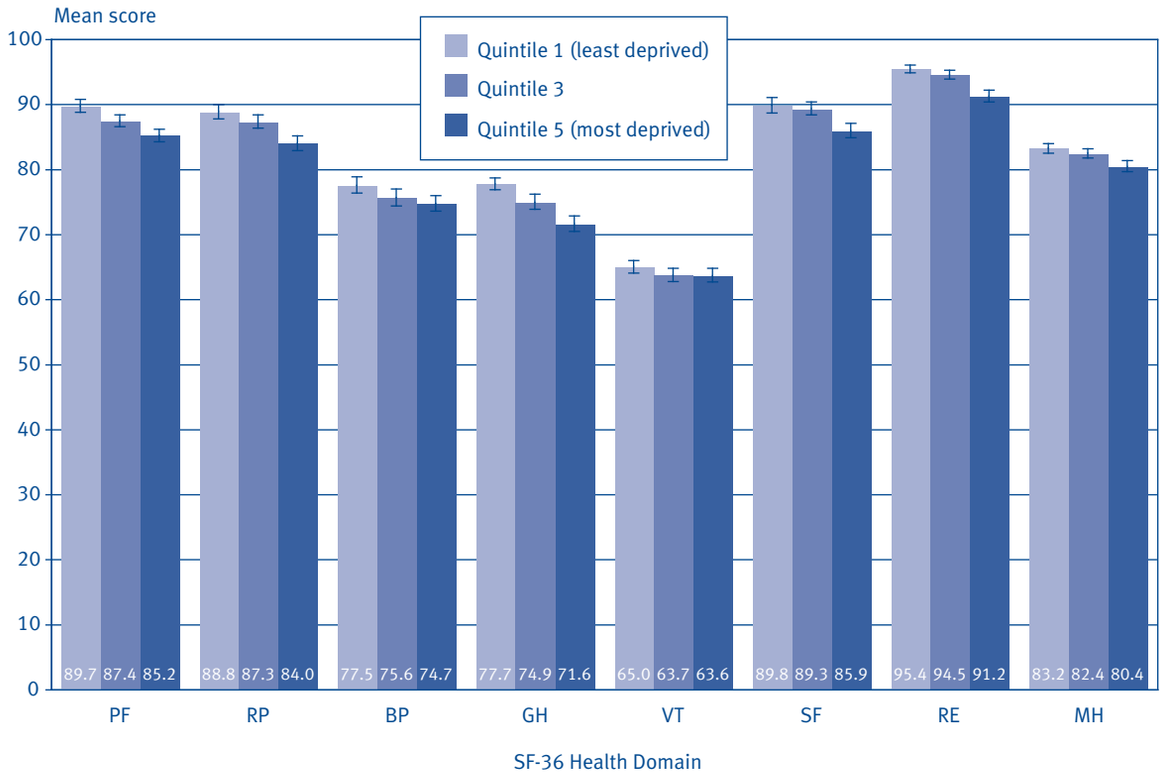
SF-36 scores, by neighbourhood deprivation

The same patterns were evident in SF-36 mean scores for both men and women by NZDep2006 quintile, so the analysis here combines data for men and women.

In all SF-36 domains, mean scores decrease as neighbourhood deprivation increases, with the exception of vitality, where there is no significant difference by NZDep2006 quintile.

In the SF-36 domains more closely related to physical health (physical functioning, role physical, bodily pain and general health), a steady gradient of decreasing score with increasing deprivation is evident, whereas in the domains more closely related to mental health (social functioning, role emotional and mental health) there is little difference, if any, between NZDep2006 quintiles 1 and 3, and then a significant decrease between quintile 3 and quintile 5 (Figure 4.12).

Figure 4.12: SF-36 mean scores for adults, by NZDep2006 quintile (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Note: Comparisons can be made between NZDep2006 quintiles within domains, but not between domains.

Time trends in SF-36 scores for adults

This section summarises the time trends in SF-36 mean scores for adults by gender and ethnic group. All results have been age standardised, and differences are only mentioned when they are statistically significant.

For women there was no change in the general health and vitality scores between 1996/97 and 2006/07.

For men, there was an increase in SF-36 scores from 1996/97 to 2006/07 in the role physical and role emotional domains. There was a decrease in the bodily pain score between 1996/97 and 2006/07 and within the vitality domain between 2002/03 and 2006/07. Between 1996/97 and 2002/03 there were increases in the physical functioning, general health, social functioning, and mental health domains, followed by decreases between 2002/03 and 2006/07.

For women, there was an increase in the role emotional score between 1996/97 and 2006/07 and in the role physical score between 2002/03 and 2006/07. Between 1996/97 and 2002/03 there were increases in the physical and social functioning scores, followed by decreases between 2002/03 and 2006/07. There was also an increase in bodily pain score between 2002/03 and 2006/07. Between 1996/97 and 2002/03 there was an increase in the mental health score but no change between 2002/03 and 2006/07.

For Māori the same trends as above can also be seen across the SF-36 domains.

Chronic pain

Introduction

Chronic pain is pain which lasts for longer than the usual time of healing. It is often defined as lasting for more than six months (Merskey and Bogduk 1994). Chronic pain is not usually relieved by simple pain remedies and can be present almost every day, with varying intensity. Chronic pain can be debilitating and affect a person's ability to carry out their usual activities. Types of chronic pain include back pain, headaches, arthritis, and neuropathic pain which results from injury to nerves.

What were the survey questions?

In the 2006/07 New Zealand Health Survey, adult participants were asked if they experience chronic pain; that is, pain that has lasted, or is expected to last, six months or more. If so, they were asked questions about the location, cause and treatment of their chronic pain.

The cause of chronic pain is not reported here due to complexity of analysis. The survey did not ask directly how chronic pain affects participants' usual activities, but this could be analysed by looking at correlations between chronic pain and SF-36 information (not reported here).

Prevalence of chronic pain for adults

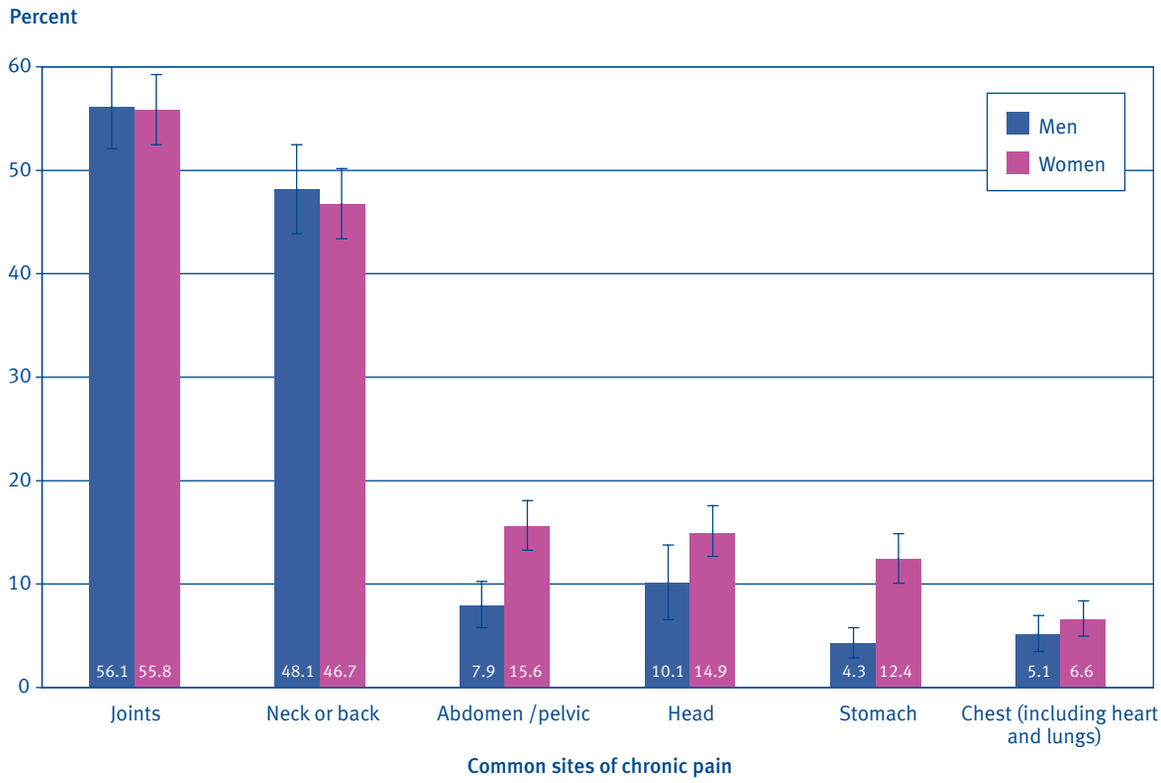
One in six adults (16.9%, 16.0–17.8) reported that they experienced chronic pain, which equates to 528,100 adults. When adjusted for age there was no difference between the prevalence of chronic pain in men (15.2%, 14.0–16.3) and women (16.1%, 14.9–17.2).

Chronic pain sufferers reported that the part(s) of their body affected by pain were:

- joints (57.6%, 55.0–60.3)
- neck or back (47.5%, 45.1–49.8)
- abdomen/pelvic region (12.5%, 10.8–14.3)
- head (12.0%, 10.0–14.0)
- chest, including heart and lungs (6.1%, 4.9–7.3)
- stomach (8.3%, 6.9–9.6)
- face/jaw (4.5%, 3.2–5.9)
- teeth/gums (1.7%, 1.1–2.3)
- other (1.2%, 0.7–1.9).

Women were more likely than men to be affected by chronic pain in the abdomen / pelvic region, head and stomach (p-values < 0.05) (Figure 4.13).

Figure 4.13: Six most common sites of chronic pain for adults, by gender (age standardised prevalence)

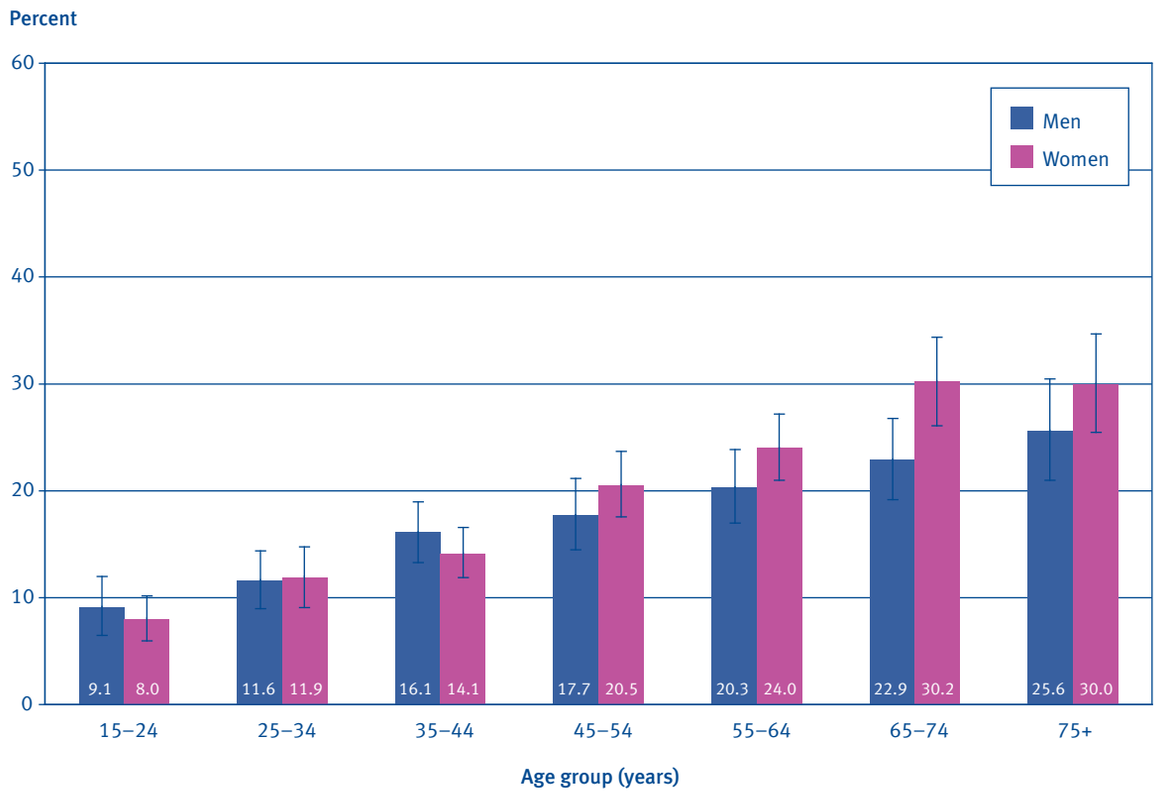


Source: 2006/07 New Zealand Health Survey

Prevalence of chronic pain, by age group and gender

Chronic pain was present in all age groups, but was more prevalent as age increased. Nearly one in three adults aged 65 years or over reported having chronic pain (Figure 4.14).

Figure 4.14: Chronic pain for adults, by age group and gender (unadjusted prevalence)



Source: 2006/07 New Zealand Health Survey

Prevalence of chronic pain, by ethnic group

Table 4.4 gives an indication of the burden of chronic pain in New Zealand's main ethnic population groups.

Table 4.4: Chronic pain for adults, by ethnic group (unadjusted)

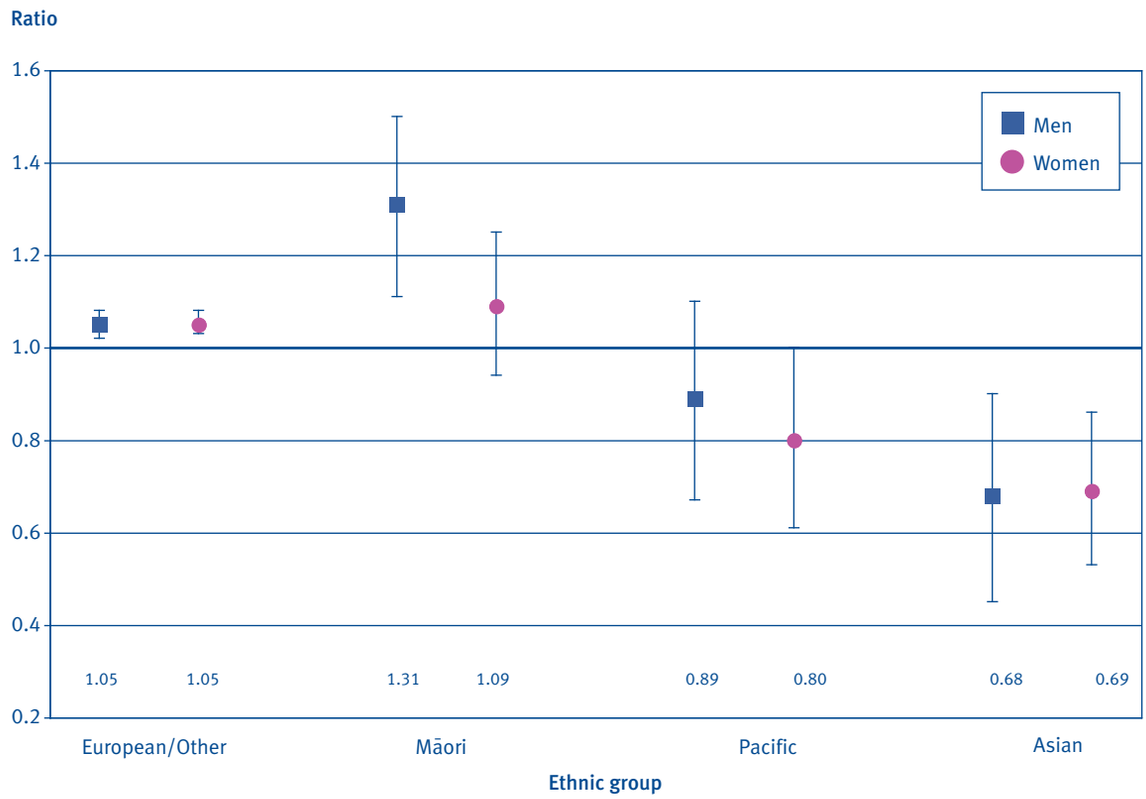
Ethnic group	Prevalence (95% CI)	Number of adults
European/ Other	18.1 (17.0–19.1)	461000
Māori	17.3 (15.3–19.2)	61400
Pacific	12.0 (10.0–14.0)	19800
Asian	9.6 (7.8–11.3)	26700

Source: 2006/07 New Zealand Health Survey

Note: Total response standard output for ethnic groups has been used.

When adjusted for age, Māori men had a significantly increased prevalence of chronic pain compared to men in the total population. Pacific women, Asian men and Asian women were significantly less likely to report chronic pain (Figure 4.15).

Figure 4.15: Chronic pain for adults, by ethnic group and gender (age standardised rate ratio)



Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

Prevalence of chronic pain, by neighbourhood deprivation

Men living in the most deprived neighbourhoods (NZDep2006 quintile 5: 19.3%, 16.2–22.5) were more likely than men living in the least deprived neighbourhoods (quintile 1: 13.0%, 10.3–15.6) to report chronic pain, standardised for age (p-value ‹ 0.05). There were no differences for women.

Treatment for chronic pain

A small number of chronic pain sufferers (3.2%, 2.3–4.2) used injections to treat their pain. Half of all adults with chronic pain (51.0%, 48.6–53.5) used oral medication to treat their pain. Two out of five adults with chronic pain (40.8%, 38.3–43.3) did not report using any form of treatment for their pain.

Psychological distress for adults (K10)

Introduction

The Kessler 10-item scale (K10) is a set of questions used internationally to screen populations for non-specific psychological distress and serious mental illness (Kessler et al 2003).

Many studies have found that the higher the K10 score, the more likely a respondent has symptoms that meet the criteria for any mental disorder using the Diagnostic and Statistical Manual of Mental Disorders criteria (American Psychiatric Association 1994), especially anxiety and mood disorders (Furukawa et al 2003; Kessler et al 2002). There is a strong association between a K10 score of 12 or more and having a mental disorder both for the previous month and the previous 12 months (Andrews and Slade 2001).

What were the survey questions?

In the 2006/07 New Zealand Health Survey, adult participants were asked to recall how often in the past four weeks they felt:

1. tired out for no good reason
2. nervous
3. so nervous that nothing could calm them down
4. hopeless
5. restless or fidgety
6. so restless they could not sit still
7. depressed
8. so depressed that nothing could cheer them up
9. worthless
10. that everything was an effort.

Responses are based on a five-point scale from 'None of the time' to 'All of the time', and scored from 0 to 4.

In keeping with other studies (M Oakley Browne, personal communication, 25 March 2008), participants were said to have the following likelihood of an anxiety or depressive disorder by categorising the K10 scores as follows:

- no or low probability (K10 score of 0–5)
- moderate probability (K10 score of 6–11)
- high probability (K10 score of 12–19)
- very high probability (K10 score of 20–40).

Chapter 3 of this report contains results on the prevalence of doctor-diagnosed mood and anxiety disorders for adults.

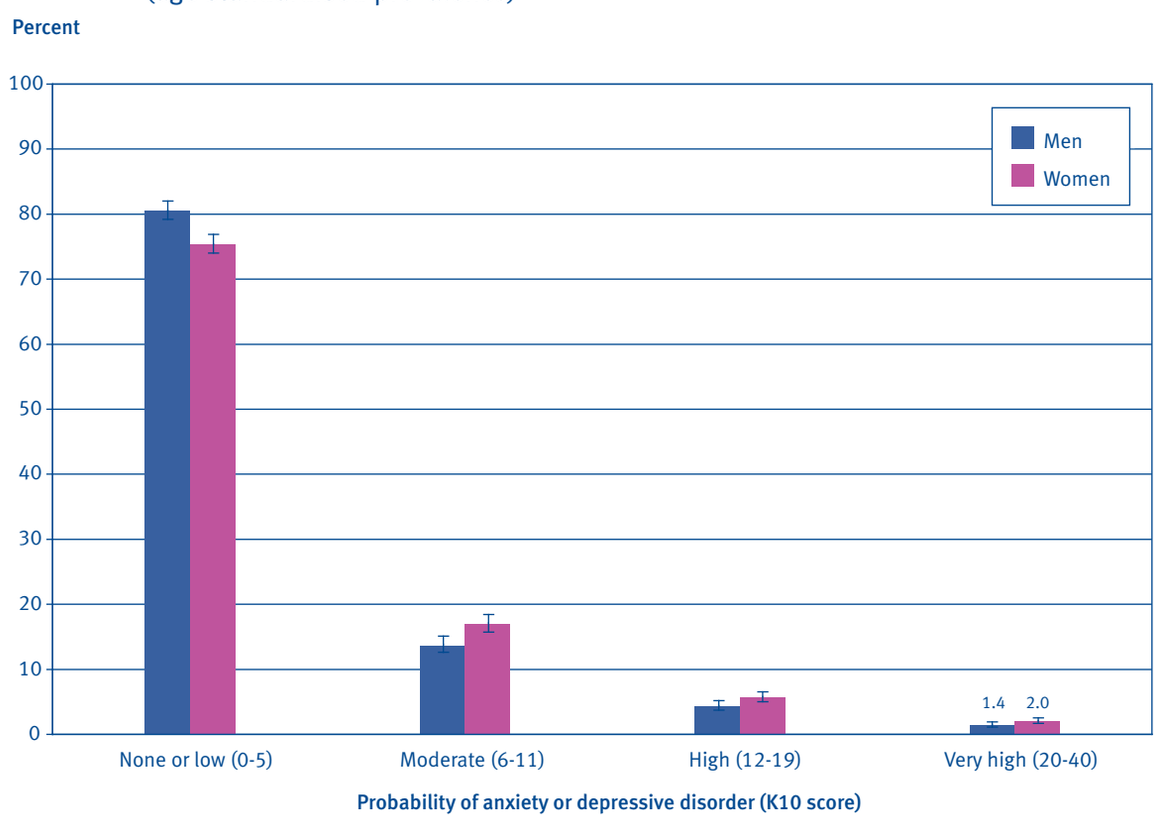
Psychological distress for adults

Most adults were found to have no or very low psychological distress, and therefore to have no or a low probability of having an anxiety or depressive disorder (78.7% 77.8–79.7).

One in seven adults (14.7%, 14.0–15.5), or an estimated 459,400 people, had a moderate probability of an anxiety or depressive disorder, and one in 15 adults (6.6%, 6.0–7.1), or 204,600 adults, had a high or very high probability of an anxiety or depressive disorder.

Women had an increased prevalence of moderate, high and very high probability of an anxiety or depressive disorder compared to men, when adjusted for age (Figure 4.16).

Figure 4.16: Probability of anxiety or depressive disorder (K10 scores) for adults, by gender (age standardised prevalence)



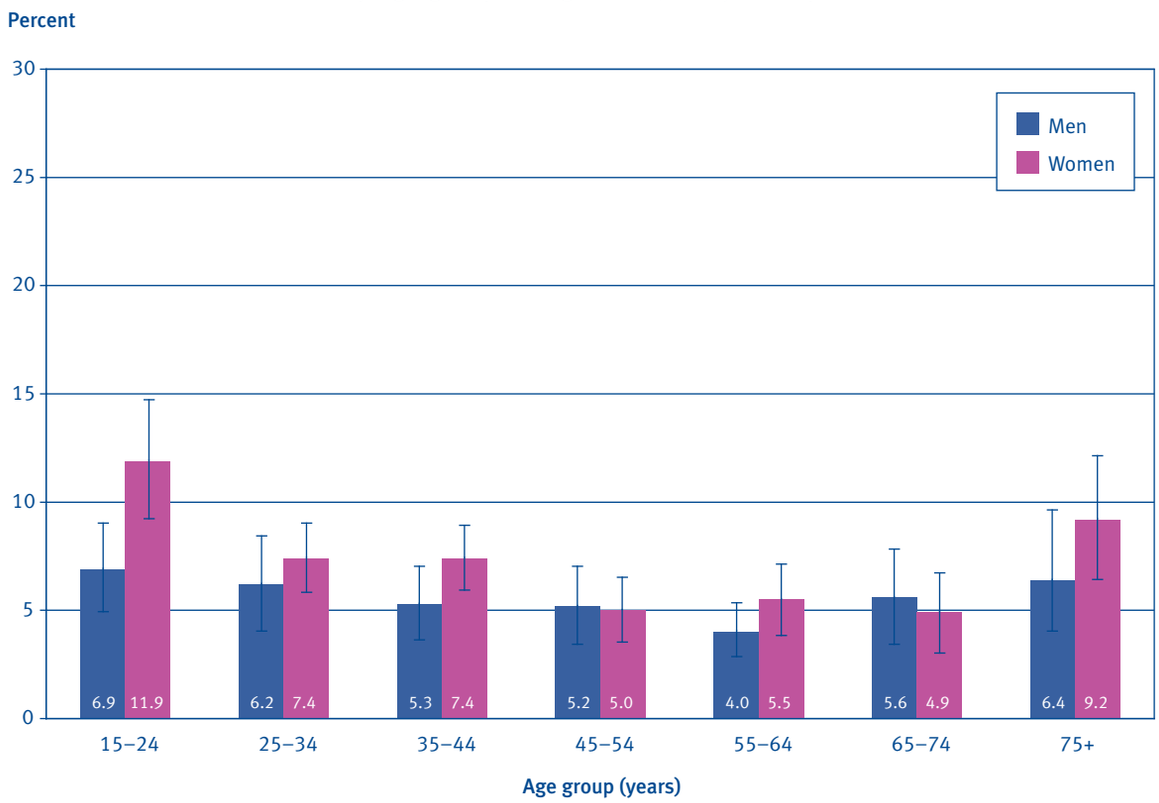
Source: 2006/07 New Zealand Health Survey

The following analyses combine the last two categories of high and very high probability of an anxiety or depressive disorder.

Psychological distress, by age and gender

Psychological distress occurred in all age groups, but the prevalence of high or very high probability of an anxiety or depressive disorder was highest in women aged 15–24 years, with an increase in prevalence again when women were aged over 75 years. In men, the prevalence of high or very high probability of an anxiety or depressive disorder remained stable across the age groups with no significant differences by age (Figure 4.17).

Figure 4.17: High or very high probability of anxiety or depressive disorder for adults (K10 score of 12 or more), by age group and gender (unadjusted prevalence)



Source: 2006/07 New Zealand Health Survey

Psychological distress, by ethnic group

Table 4.5 gives an indication of the burden of psychological distress in New Zealand's main ethnic population groups.

Table 4.5: High or very high probability of anxiety or depressive disorder for adults (K10 score of 12 or more), by ethnic group (unadjusted)

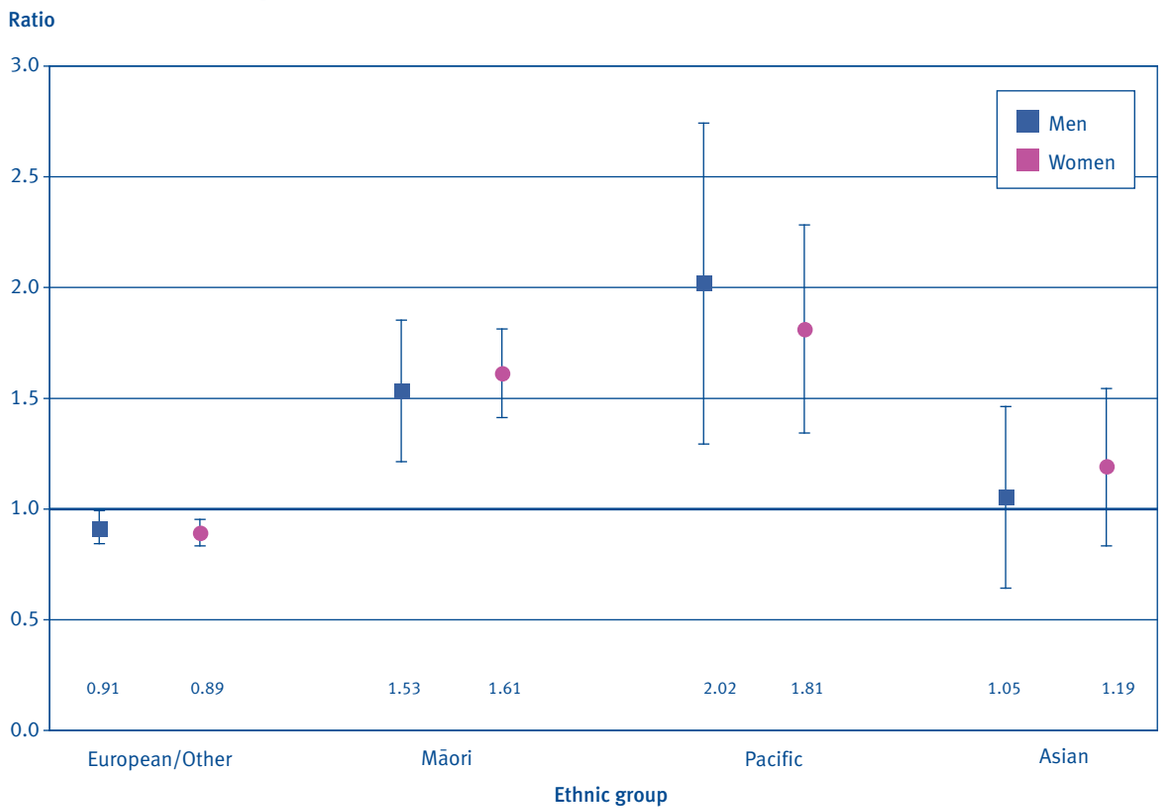
Ethnic group	Prevalence (95% CI)	Number of adults
European/ Other	5.9 (5.2–6.5)	149300
Māori	10.9 (9.6–12.3)	38800
Pacific	13.1 (10.5–15.7)	21500
Asian	7.4 (5.7–9.2)	20800

Source: 2006/07 New Zealand Health Survey

Note: Total response standard output for ethnic groups has been used.

Adjusted for age, Māori men and women and Pacific men and women had 1.5 to 2 times the prevalence of high or very high probability of an anxiety or depressive disorder compared to men and women in the total population (Figure 4.18). European men and women were slightly less likely than men and women in the total population to have a high or very high probability of an anxiety or depressive disorder.

Figure 4.18: High or very high probability of anxiety or depressive disorder (K10 score of 12 or more) (age standardised rate ratio)



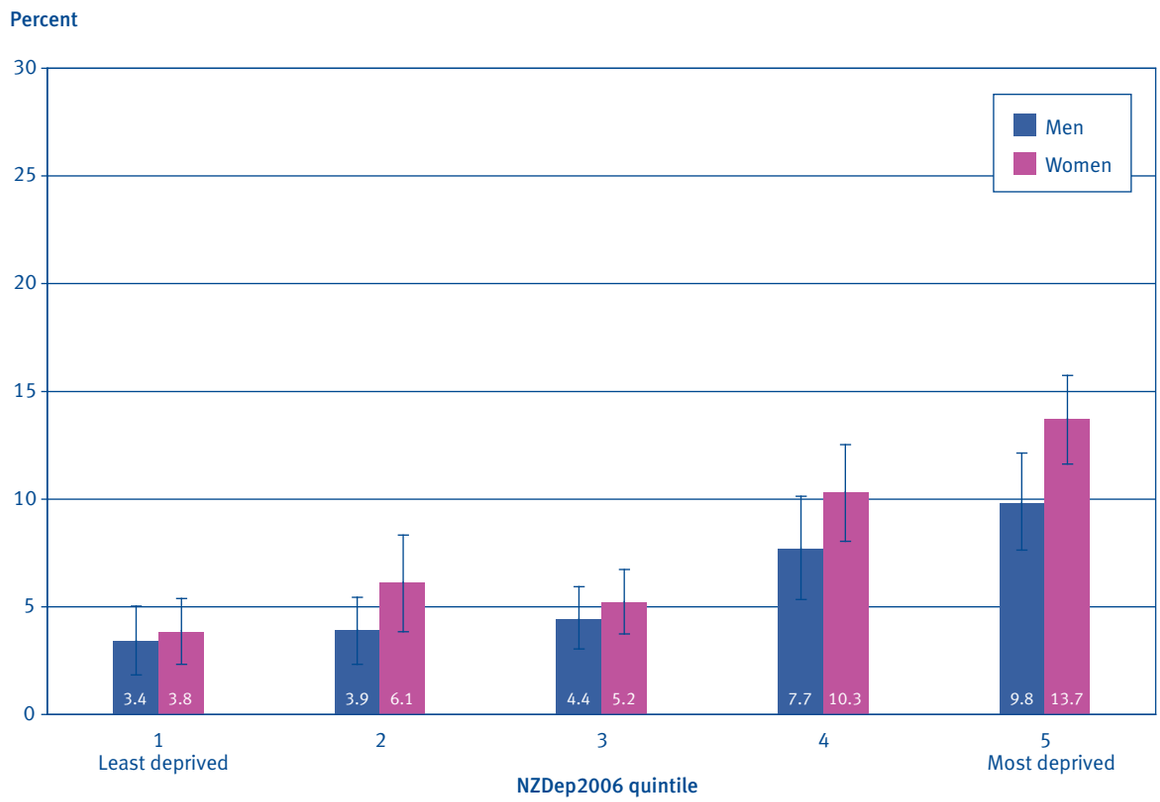
Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.0 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

Psychological distress, by neighbourhood deprivation

Adjusted for age, women living in the most deprived areas (NZDep2006 quintile 5) were more than three times as likely to have a high or very high probability of an anxiety or depressive disorder compared to women living in the least deprived areas (NZDep2006 quintile 1) (Figure 4.19). Similarly, men living in NZDep2006 quintile 5 areas were more than twice as likely to have a high or very high probability of an anxiety or depressive disorder compared to men living in the least deprived neighbourhoods (NZDep2006 quintile 1) adjusted for age (Figure 4.19).

Figure 4.19: High or very high probability of anxiety or depressive disorder for adults (K10 score of 12 or more), by NZDep2006 quintile and gender (age standardised prevalence)



Source: 2006/07 New Zealand Health Survey

Psychological distress, by DHB area

There was little variation by DHB area in the level of psychological distress for adults. Waitemata DHB area was the only area to show a difference with the national rate, with a smaller proportion of the population in this DHB area having a high or very high probability of an anxiety or depressive disorder (Table 4.6).

Table 4.6: High or very high probability of anxiety or depressive disorder for adults (K10 score of 12 or more), by DHB area (unadjusted)

DHB area	Prevalence (95% CI)	Number of adults
Northland / Tairawhiti / Hawke's Bay / Lakes / Whanganui	6.9 (5.7–8.2)	26100
Waitemata	4.8 (3.4–6.2) –	18100
Auckland	6.9 (4.9–8.8)	22100
Counties Manukau	7.7 (5.8–9.6)	24800
Waikato	6.9 (5.4–8.3)	17700
Bay of Plenty / Taranaki / MidCentral	6.9 (5.4–8.4)	24200
Wairarapa / Hutt Valley / Capital and Coast	7.2 (5.0–9.4)	24900
Canterbury	5.7 (4.0–7.3)	21100
Nelson Marlborough / West Coast / South Canterbury / Otago / Southland	6.5 (4.8–8.2)	25600
New Zealand total	**6.6 (6.0–7.1)**	**204600**

Source: 2006/07 New Zealand Health Survey

Notes: Estimates indicated with a + are significantly higher than the national rate, and estimates indicated with a – are significantly lower than the national rate. Data are based on direct survey estimates and could be confounded by different population characteristics in each DHB. Due to small sample size, some DHB areas have been combined. Survey population is the estimated resident population living in permanent private dwellings at 31 June 2007.

Family cohesion

Introduction

Family is an important social institution, critical to the health and wellbeing of individuals, especially children, who depend on their family for most of their needs for physical and emotional development (Ministry of Social Development 2004).

The health or wellbeing of families is a complex concept to measure, especially in a survey where only one family member is interviewed. The New Zealand Health Survey used an internationally validated question from the Child Health Questionnaire Parent Form (CHQ-PF28) as a proxy for family wellbeing, which captured one parent's opinion of how well their family members interact. This is often called 'family cohesion', and is both a critical element in the daily functioning of a family and an important asset for families to have in order to 'rebound' from stresses and in times of crisis (Kalil 2003). Family cohesion is not the sole determinant of family wellbeing, but simply one dimension of many that has an impact on the way a family functions (Olson 1993).

What were the survey questions?

In the 2006/07 New Zealand Health Survey the primary caregiver of each child participant aged from birth to 14 years was asked to rate their family's ability to get along with one another. A definition of family as the immediate family members that live in the same household was given to all participants.

While the definition of family in the question does not match the description many New Zealanders have of their family – which may include supporting friends and wider family members who do not live in the household – this definition allowed for consistency across family types and cultures within New Zealand.

Analyses presented here have not been adjusted for the number of people in the family, household overcrowding, or other socio-demographic variables about the family which may impact on cohesion. As with other analyses in this report, these are simply the first descriptive findings by age and ethnic group of the child, and neighbourhood deprivation of the household. It is expected that further research will be undertaken on these data to explore associations with other variables of interest.

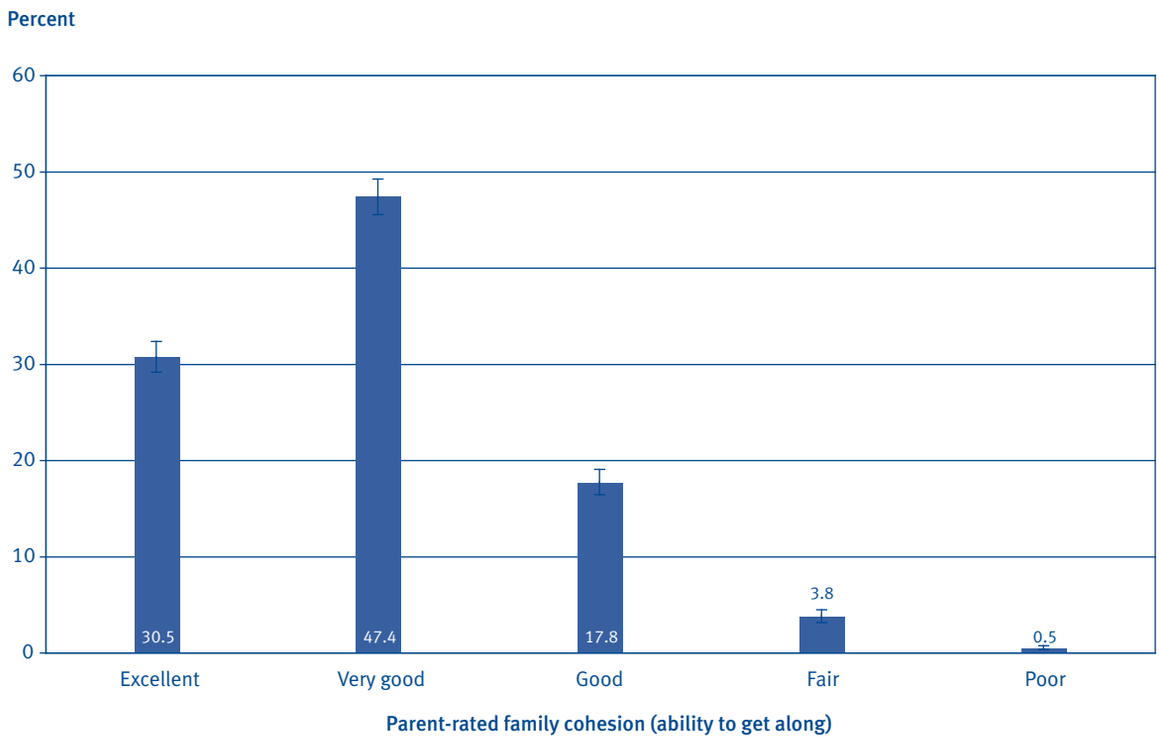
There were no differences in family cohesion by gender of the child, so the analyses in this section combine data for boys and girls.

Cohesion of families with children

Most parents of children aged from birth to 14 years reported that their family got along very well (Figure 4.20). Four out of five parents (77.9%, 76.4–79.3) rated their family's ability to get along with one another as 'excellent' or 'very good'. A further 17.8% (16.5–19.1) rated their family's ability to get along as 'good'.

One in twenty-three parents (4.3%, 3.6–5.0) rated their family's ability to get along as 'fair' or 'poor', which equates to 37,100 children living in families with low levels of cohesion.

Figure 4.20: Parent rating of family's ability to get along (unadjusted prevalence)



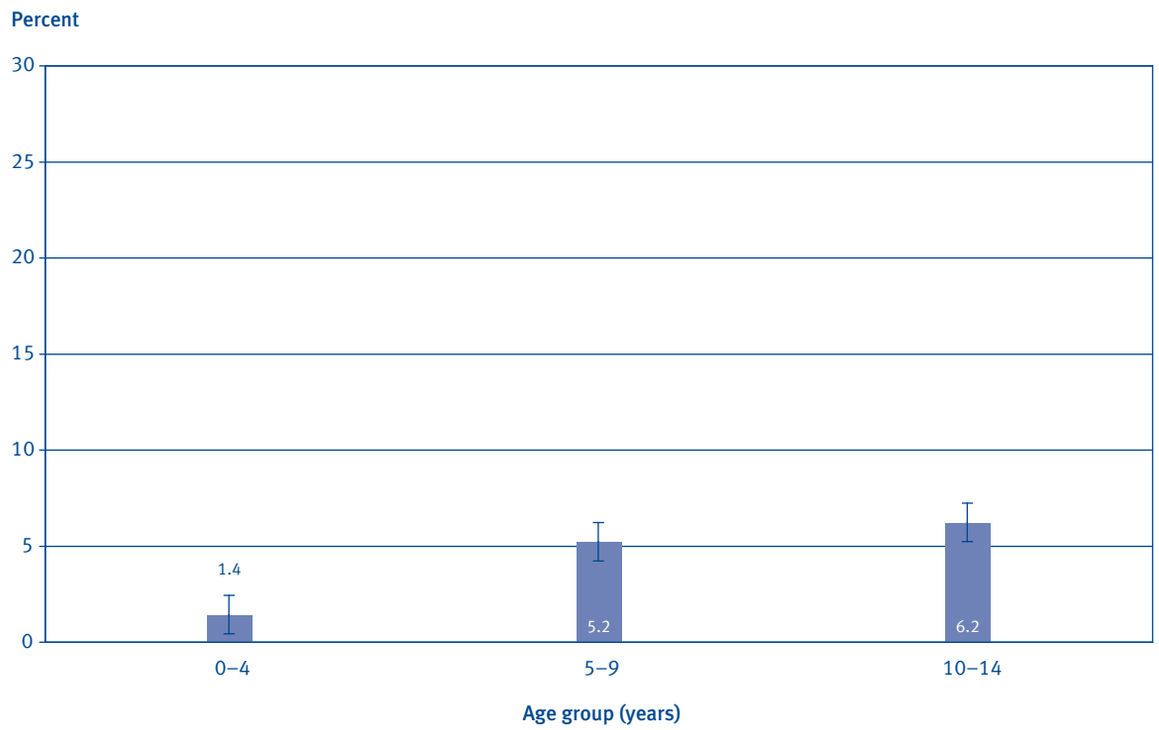
Source: 2006/07 New Zealand Health Survey

The rest of this section focuses on children living in families with 'fair' or 'poor' parent-rated family cohesion.

Cohesion of families with children, by age of child

Parents of children aged from birth to 4 years were significantly less likely than parents of children aged from 5–14 years to rate their family's ability to get along as fair or poor (p-value < 0.05). One in 16 parents of 10–14 year olds reported low family cohesion (Figure 4.21).

Figure 4.21: Parent-rated family's ability to get along as fair or poor, by age of child (unadjusted)



Source: 2006/07 New Zealand Health Survey

Cohesion of families with children, by ethnic group of child

The ethnic group analyses in this section do not represent the family unit, that is, these analyses do not describe, for example, 'Pacific families'. There is currently no standard method for analysing the ethnicity of families in New Zealand (Callister et al. 2007b).

Table 4.7 presents an indication of the proportion and number of children in New Zealand's main ethnic population groups who live in families with low cohesion (as reported by a parent).

Table 4.7: Children living in families where parent rated family's ability to get along as fair or poor, by ethnic group of the child (unadjusted)

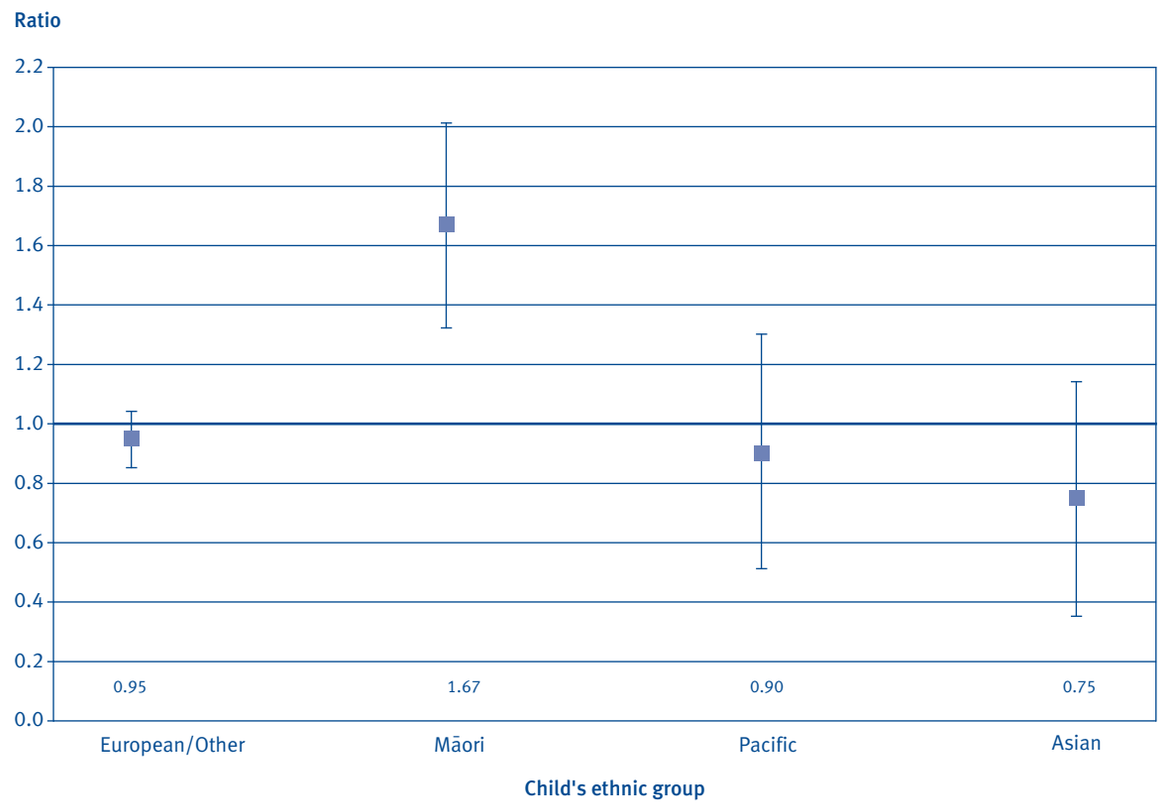
Ethnic group	Prevalence (95% CI)	Number of children
European/ Other	4.1 (3.3 - 5.0)	26700
Māori	7.1 (5.7 - 8.6)	13900
Pacific	3.8 (2.0 - 5.5)	3800
Asian	3.2 (1.7 - 5.6)	2500

Source: 2006/07 New Zealand Health Survey

Note: Total response ethnic group has been used. Ethnic groups cannot be compared using the crude rates presented in this table.

Adjusted for the age of the child, parents of Māori children were 60 percent more likely to have rated their family's ability to get along as fair or poor (Figure 4.22). There were no other differences by ethnic group of the child.

Figure 4.22: Parent-rated family's ability to get along as fair or poor, by ethnic group of the child (age standardised)



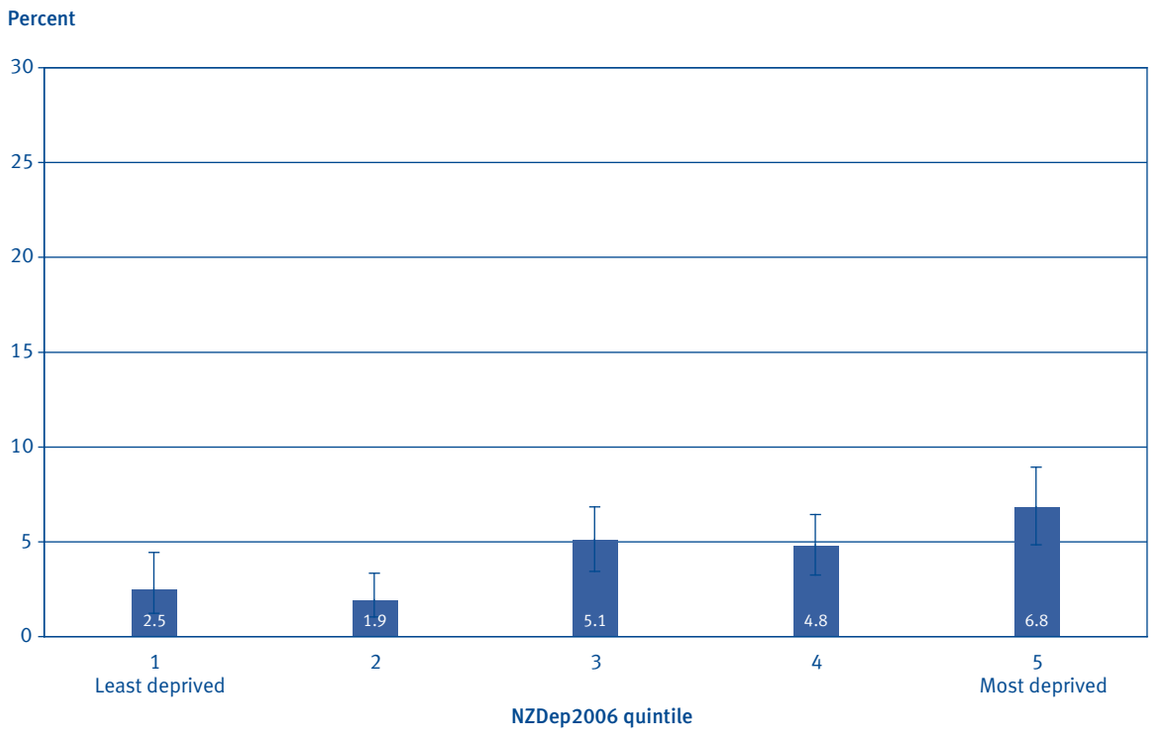
Source: 2006/07 New Zealand Health Survey

Notes: Reference group (bold line, rate ratio=1.0) is the total child population aged 0-14 years. Total response ethnic groups have been used. Ethnic groups cannot be compared with each other; compare only to the reference group. Age-standardised to WHO world population.

Cohesion of families with children, by neighbourhood deprivation

A small number of families in all NZDep2006 quintiles reported low family cohesion; however, families in the most deprived areas (quintile 5) were more than twice as likely as families living in the least deprived areas (quintile 1) to report that their ability to get along was only 'fair' or 'poor' (Figure 4.23).

Figure 4.23: Parent-rated family's ability to get along as fair or poor, by NZDep2006 quintile (age standardised prevalence by age of child)



Source: 2006/07 New Zealand Health Survey