

## 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<sup>16</sup> (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 (Raaf 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.

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<sup>16</sup> 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

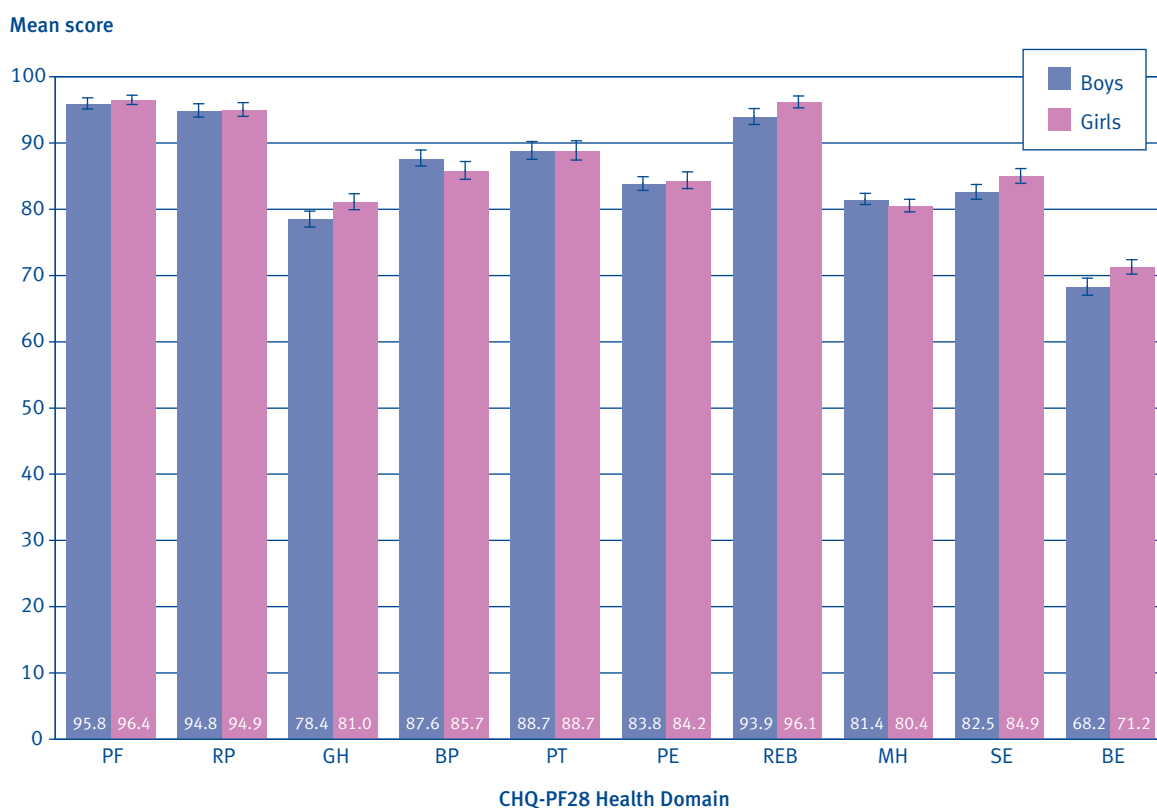
There were no differences between boys' and girls' mean scores for the CHQ health domains of physical functioning, role physical, the two parental impact domains (time and emotional) and mental health (Figure 4.8).

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.

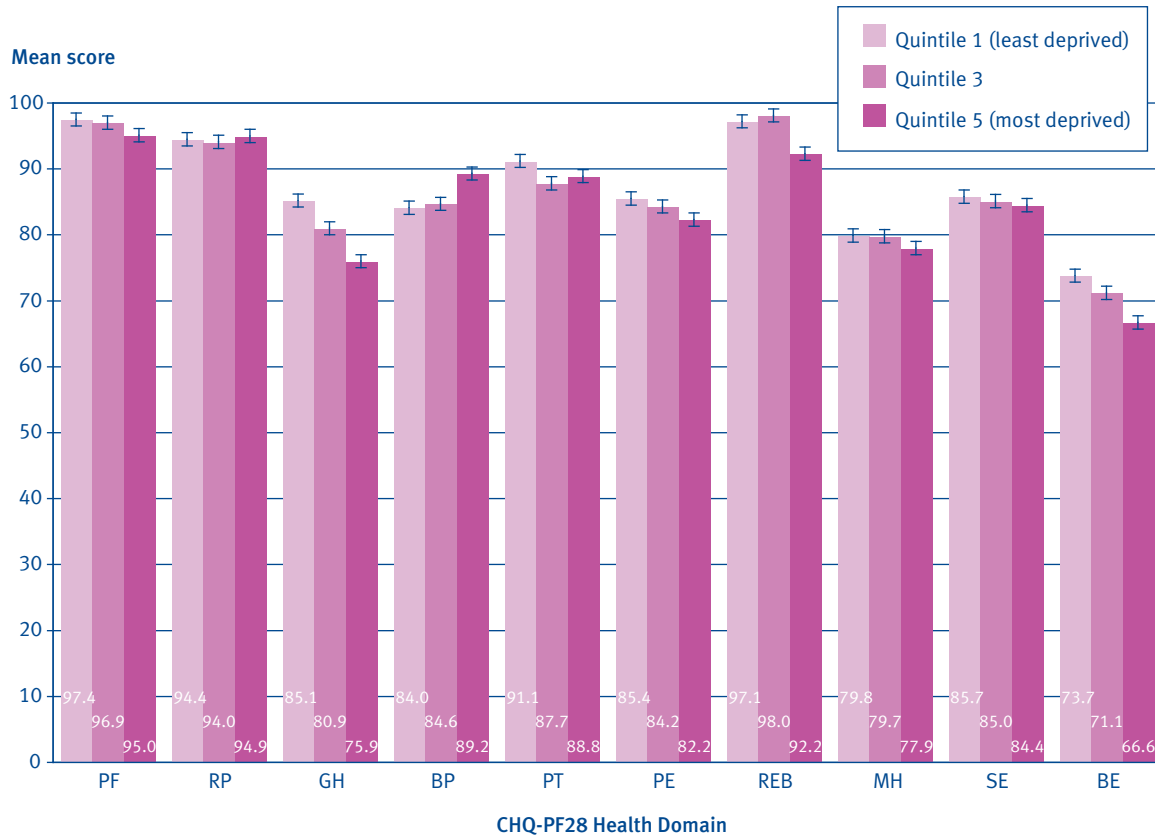
## **CHQ-PF28 scores, by neighbourhood deprivation**

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

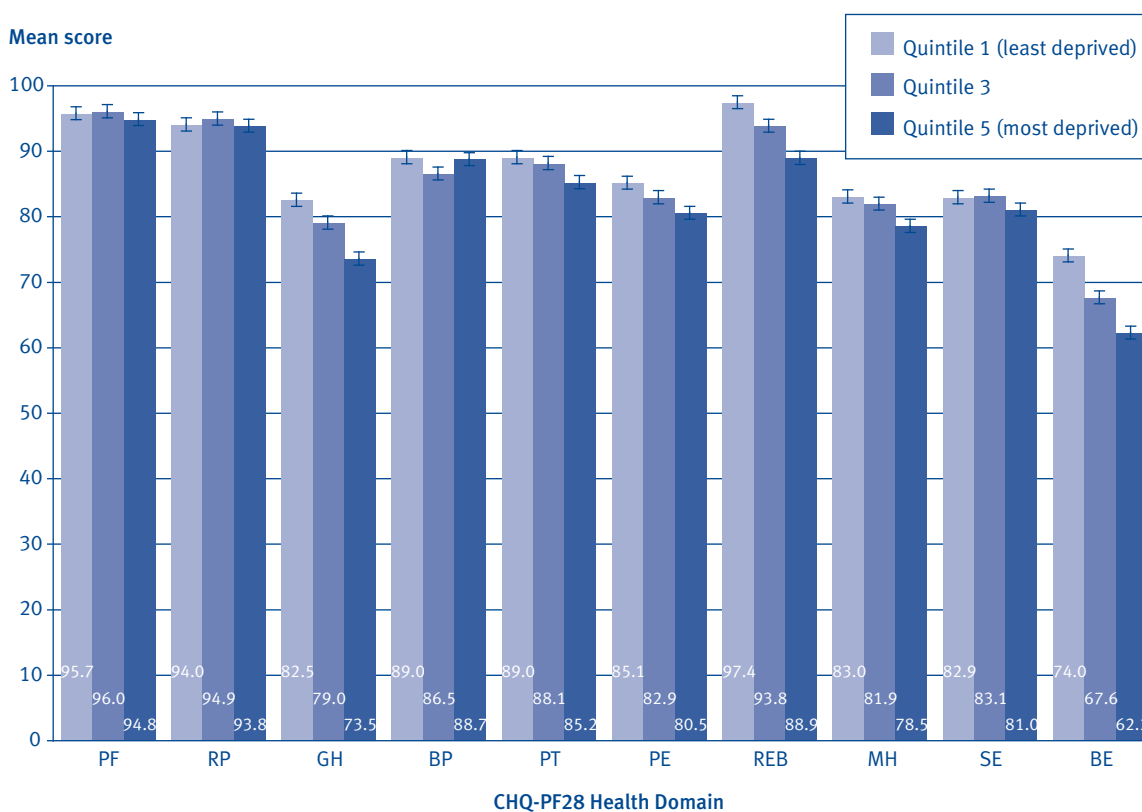
Note: Comparisons can be made between NZDep2006 quintiles within domains, not between domains.

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.