

Chapter 4

Findings and Results

Part 1 Demographic and characteristics of child and their parent

Between June, 2007 and February, 2008, a total of 2,237 children and their parents were enrolled in the study. 2,083 of children, who presences the classroom at the data collection times and 1,818 of their parents were answer question. 1,866 of these children and 1,790 of their parents were recruited in the study. The response rate for children and their parents were 93.1% and 81.3%, respectively. Demographic and characteristics of all respondents were summarized in mean \pm Standard Deviation (SD), frequency, and percentage, as show in Table 4.1.

The total number of boys and girls in the study was 845 (45.3%), 1,021 (54.7%), severally. Seven hundred twenty nine (39.1%) were studying in primary school, 1,137 (60.9%) were studying in secondary school. The average age of the boys and girls was 12.6 (SD 3.1 years) and 13.3 (SD 2.6), with a range of 8.0 to 18.3. The children were composed of 881 (47.2%) child (age range 8-12 years) and 985 (52.8%) adolescents (age range 13-18 years). The prevalence of non-obese and obese was 73.3%, and 26.7%, respectively. A slightly lower proportion of girls than boys were classified as obesity (48.6% obesity girls compared to 51.4% boys).

Table 4.1

Demographic characteristics of children and parent-proxy (8 – 18 years)

Characteristics	n	Frequency (%)
Age (mean \pm SD), years	1,866	13.0 \pm 2.6
Gender: Boys	1,866	845(45.3)
Weight in kilogram (mean \pm SD)	1,813	44.5 \pm 15.4
Height in centimeter (mean \pm SD)	1,806	148.5 \pm 14.0
Obesity	1,803	
Non-obese		1,322 (73.3)
Obese		481 (26.7)
Parental Occupation	1,361	
Government officer/ State Enterpriser		268 (19.7)
Officer		407 (29.9)
Trader		395 (29.0)
Other		291 (21.4)
Parental Education	1,344	
Primary school /lower		231 (17.2)
High school		480 (35.7)
Diploma		214 (15.9)
Bachelor's degree and Higher		419 (31.2)
Parental income per month (mean \pm SD)	1,234	
<10,000 Bath		276 (22.4)
10,000 – 19,999 Bath		411 (33.3)
20,000 – 29,000 Bath		244 (19.8)
\geq 30,000 Bath		303 (24.6)
Paternal age (years)	987	44.4 \pm 5.7
Maternal age (years)	1,006	41.8 \pm 5.3
Informant	1,367	
Father		457 (33.4)
Mother		812 (59.4)
Other		98 (7.2)

Part 2 Descriptive data of Health-related quality of life

Health-related quality of life of 1,866 children was measured using the PedsQL™ 4.0 generic core scale, Thai version. The Internal consistency reliability alpha coefficients (cronbach's coefficients alpha) of the PedsQL™ 4.0 both child self-report and for parent proxy-report were demonstrated in Table 4.2.

Table 4.2

Cronbach's alpha of each domain for child self-report and parent proxy-report

Scale	Number of item scale	Cronbach's alpha	
		Child self-reported	Proxy-reported
Total summary score	23	0.85	0.91
Physical Functioning	8	0.74	0.88
Psychosocial Health	15	0.80	0.86

The cronbach's alpha of child self-report and parent proxy-report for total summary scores exceeded the minimum reliability standard of 0.7 in both self-report and proxy-report scales ($\alpha = 0.85$, and $\alpha = 0.91$, respectively). The cronbach's alpha of parent proxy-report of all domains was higher than child self-report. The result demonstrated reliability of questionnaire, which depended on the age of participants.

The means scores and standard deviation (SD) of each domain of PedsQL™ 4.0 in both child self-report and parent proxy-report were presented in Table 4.3.

Table 4.3

Scale for descriptive for PedsQL™ 4.0 Generic Core Scale:
child self-report and parent proxy-report

Scale	n	Mean ± SD
Child self-reported		
Total summary score	1781	75.8 ± 11.0
Physical Functioning	1780	79.6 ± 13.1
Psychosocial Health	1781	73.8 ± 12.0
Proxy-reported		
Total summary score	1488	72.4 ± 15.7
Physical Functioning	1436	68.4 ± 22.3
Psychosocial Health	1488	74.7 ± 14.3

The overall subscales of child self-report were higher than their parent except emotional functioning was lower than their parent. According to psychosocial health for child self-report, emotional functioning scored the least, followed by school functioning and social functioning whereas parent proxy-report school functioning scored the least, followed by emotional functioning and social functioning, respectively.

Table 4.4 presented the comparison of the PedsQL™ 4.0 score across age group for child self-report and parent proxy-report. Age groups were categorized 2 groups as; child (8 – 12 years) and adolescent (13 - 18 years). The total summary score, physical functioning score, and psychosocial health summary was found significant different across age group. For child self-report, adolescent was reported higher HRQOL scores than child in all domains. Similarly, the HRQOL scores of their parent were reported significant differently, which reported all domains of HRQOL scores higher than child.

According to the PedsQL™ 4.0 subscale, the overall scale of child self-report in adolescent reported significant different higher than child except school functioning reported non-significant. While parent proxy-report showed all domain of adolescent reported significantly higher than child. The result revealed that HRQOL scores were significantly associated with the age of children.

Table 4.4

Scale descriptive for the PedsQL™ 4.0 Generic Core Scale child self-report and parent proxy-report: child and adolescent

Scale	Age group				Mean Differences	95% Confidence Intervals
	Adolescent (13-18 years)		Child (8-12 years)			
	n	Mean ± SD	n	Mean ± SD		
Child self-report						
Total summary score	956	77.2 ± 10.5	825	74.2 ± 11.4	3.0	2.0 - 4.0
Physical Functioning	955	81.6 ± 12.5	825	77.4 ± 13.5	4.2	3.0 - 5.4
Psychosocial Health	956	74.8 ± 11.4	825	72.5 ± 12.5	2.3	1.2 - 3.4
Parent Proxy-report						
Total summary score	761	74.9 ± 15.7	727	69.8 ± 15.3	5.2	3.6 - 6.7
Physical Functioning	744	71.4 ± 22.8	692	65.1 ± 21.7	6.3	4.0 - 8.6
Psychosocial Health	761	77.0 ± 13.9	727	72.2 ± 14.2	4.8	3.3 - 6.2

The mean scores, SD and mean difference of each domain of the PedsQL™ 4.0 for child self-report and parent proxy-report categorized by gender showed in Table 4.5.

Table 4.5
Scale descriptive for the PedsQL™ 4.0 Generic Core Scale child self-report
and parent proxy-report: boys and girls

Scale	Gender					
	Girls		Boys		Mean Differences	95% Confidence Intervals
	n	Mean ± SD	n	Mean ± SD		
Child self-report						
Total summary score	988	75.3 ± 10.8	793	76.4 ± 11.2	-1.0	- 2.1 - 0.0
Physical Functioning	988	78.6 ± 12.5	792	81.0 ± 13.8	-2.4	- 3.6 - 1.2
Psychosocial Health	988	73.6 ± 11.9	793	73.9 ± 12.1	-0.4	-1.4 - 0.8
Parent Proxy-report						
Total summary score	868	73.5 ± 15.8	620	70.9 ± 15.5	2.5	0.9 - 4.2
Physical Functioning	847	69.4 ± 22.1	589	66.9 ± 23.1	2.4	0.1 - 4.8
Psychosocial Health	868	75.7 ± 14.3	620	73.2 ± 14.0	2.5	1.1 - 4.0

For child self-report, the boys reported significantly difference for all domains higher than girls except psychosocial health reported no significantly difference. Whereas parent proxy-reported, the boys reported significant difference for all domain lower than girls.

According to psychosocial health summary, the significant difference was found. In child self-report, the boys reported significantly difference in emotional functioning higher than girls. Whereas social functioning and school functioning lower than girls. In parent proxy-report, the boys demonstrated significantly difference in social functioning and school functioning lower than girls except emotional functioning. The result showed that HRQOL scores were associated with gender of children.

Table 4.6 presented the comparison of the PedsQL™ 4.0 score across obese group both child self-report and parent proxy-report. Obesity were categorized 2 groups as; non-obese (<120 % the mean weight for height for gender) and obese ($\geq 120\%$ the mean weight for height for gender). The total summary score, physical functioning score, and psychosocial health summary was found no significant different across obese group both child self-repot and parent proxy-report.

For child self-report, obese was reported higher HRQOL scores than non-obese except physical functioning reported lower scores than non-obese. In contrast, parent proxy-report was demonstrated non-obese higher HRQOL scores than obese.

According to psychosocial health summary, child self-report of obese group was reported significantly difference in emotional functioning, obese were higher HRQOL scores than non-obese. While parent proxy-report, obese group was reported no significantly difference. In social and school functioning, obese reported HRQOL lower scores than non-obese both child self-repot and parent proxy-report but no significant different.

The comparison of the PedsQL™ 4.0 score across occupation, education, and parental income group for child self-report and parent proxy-report were demonstrated in Table 4.7, 4.8, and 4.9, respectively. Occupation, education, and income of their parent were categorized four groups.

According to Table 4.7, significant different was found in total summary score and physical functioning for child self-report whereas no significant difference in all domain of PedsQL™ 4.0 for parent proxy-report. Table 4.8 and 4.9, the comparison of educational and parental income in both child self-report and parent proxy-report was found no significant difference.

Table 4.6
 Scale descriptive for the PedsQL™ 4.0 Generic Core Scale child self-report
 and parent proxy-report: non obese and obese

Scale	Obese		Non Obese		Mean Differences	95% Confidence Intervals
	n	Mean ± SD	n	Mean ± SD		
Child self-report						
Total summary score	458	76.0 ± 11.3	1268	75.7 ± 10.8	-0.2	-0.9 - 1.4
Physical Functioning	457	79.2 ± 13.7	1268	79.8 ± 12.9	-0.6	- 2.0 - 0.8
Psychosocial Health	458	74.3 ± 12.4	1268	73.6 ± 11.8	-0.7	-0.6 - 2.0
Parent Proxy-report						
Total summary score	391	72.3 ± 15.9	1047	72.7 ± 15.7	-0.4	-2.2 - 1.4
Physical Functioning	375	68.2 ± 22.4	1016	68.6 ± 22.7	-0.4	-3.0 - 2.3
Psychosocial Health	391	74.3 ± 14.8	1047	75.0 ± 14.0	-0.6	-2.3 - 1.0

Table 4.7
Effect of occupational on HRQOL
for child self-report and parent proxy-report

Score	Officer/ State Enterpriser		Officer		Trader		Other		P value
	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	
Child self-report									
Total summary score	258	74.6 ± 12.1	398	74.8 ± 10.7	379	76.7 ± 11.1	280	76.3 ± 10.2	0.044
Physical Functioning	258	77.6 ± 13.5	398	78.0 ± 13.8	379	81.3 ± 12.6	280	80.1 ± 12.4	0.150
Psychosocial Health	258	72.9 ± 13.3	398	73.1 ± 11.2	379	74.3 ± 12.1	280	74.2 ± 11.1	0.007
Parent Proxy-report									
Total summary score	266	72.8 ± 16.0	401	71.9 ± 15.3	393	71.9 ± 15.8	287	72.9 ± 16.0	0.804
Physical Functioning	256	68.1 ± 23.8	394	67.2 ± 21.8	378	68.0 ± 22.5	277	68.6 ± 22.3	0.487
Psychosocial Health	266	75.1 ± 14.3	401	74.5 ± 13.9	393	74.3 ± 14.4	287	75.2 ± 14.7	0.794

Table 4.8
Effect of education on HRQOL
for child self-report and parent proxy-report

Score	lower/ Primary school		High school		Diploma		Bachelor / Higher		P value
	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	
Child self-report									
Total summary score	226	75.6 ± 11.2	460	76.2 ± 11.2	207	75.0 ± 9.8	404	75.4 ± 11.3	0.124
Physical Functioning	226	78.9 ± 13.6	460	80.3 ± 13.0	206	78.4 ± 11.7	404	79.0 ± 13.6	0.079
Psychosocial Health	226	73.8 ± 12.0	460	74.0 ± 12.2	207	73.2 ± 10.7	404	73.5 ± 12.3	0.149
Parent Proxy-report									
Total summary score	225	70.2 ± 15.1	476	71.2 ± 15.7	213	72.1 ± 15.5	416	74.5 ± 15.9	0.841
Physical Functioning	222	65.2 ± 22.3	457	66.2 ± 22.2	207	68.9 ± 21.3	401	70.5 ± 23.2	0.527
Psychosocial Health	225	73.1 ± 13.2	476	74.0 ± 14.5	213	73.8 ± 14.1	416	76.5 ± 14.6	0.375

Table 4.9
Effect of income on HRQOL
for child self-report and parent proxy-report

Score	<10,000 B		10,000 – 19,999 B		20,000 – 29,000 B		≥30,000 B		P value
	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	
Child self-report									
Total summary score	263	74.9 ± 10.9	399	75.9 ± 11.6	236	75.1 ± 10.5	290	76.4 ± 10.9	0.349
Physical Functioning	263	78.2 ± 13.6	399	79.5 ± 12.9	235	78.4 ± 14.2	290	80.8 ± 12.5	0.131
Psychosocial Health	263	73.2 ± 11.5	399	73.9 ± 12.6	236	73.3 ± 11.2	290	74.0 ± 12.1	0.130
Parent Proxy-report									
Total summary score	273	69.6 ± 15.4	406	71.2 ± 15.6	242	73.4 ± 14.9	301	75.1 ± 16.0	0.729
Physical Functioning	261	64.5 ± 22.2	395	65.9 ± 22.3	235	68.6 ± 21.8	289	72.7 ± 23.0	0.861
Psychosocial Health	273	72.4 ± 14.3	406	74.2 ± 14.4	242	75.8 ± 13.4	301	76.6 ± 14.3	0.662