

Offspring Education, Mental Health Status and Quality of Life among Parents of High School Students in the Northeast of Thailand

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Citation

Khamharnpol T, Banchonhattakit P, Laohasiriwong W. Offspring Education, Mental Health Status and Quality of Life among Parents of High School Students in the Northeast of Thailand. *Kathmandu Univ Med J.* 2021;75(3):287-93.

ABSTRACT

Background

Providing children best education could be burden on parents which might impaired their mental health and quality of life (QOL).

Objective

To assess children education, mental health status and their influence on QOL of parents of high school students in the Northeast of Thailand.

Method

This cross-sectional study was conducted among 1,098 parents of high school students. The study population were selected by using multistage random sampling from 20 high schools in 10 provinces of the Northeast of Thailand to response to a structured questionnaire interview. Multilevel logistic regression was performed to identify the influence of mental health status and offspring education on QOL of parents of high school students.

Result

Among the total of 1,098 respondents, 28.78% had poor quality of life. Factors that were associated with poor QOL of the parents were had moderate to severe depressive symptoms (adj.OR=5.72; 95% CI:4.01-8.16), had moderate to high levels of stress (adj.OR=2.32; 95% CI:1.64 - 3.29), not expected the child to study bachelor degree (adj.OR=2.59; 95% CI:1.74 -3.84), perceived children's academic performance as not to minimal importance (adj.OR=2.20; 95% CI: 1.54 - 3.14), had 2 or more children currently studying (adj.OR= 1.62; 95% CI:1.00 - 2.64), and had low to high concerns on their children low examination scores (adj.OR=1.51; 95% CI: 1.06 - 2.15).

Conclusion

Depression, stress, children education as well as physical health and work-related problems had influence on QOL.

KEY WORDS

Children education, Depression, High school student, Mental health, Parents, Quality of life

INTRODUCTION

Parents of high school student in middle income countries like Thailand are mostly aged 40 years old or older which are middle age adults, who are confronting the beginnings of unavoidable physical decline of which the signs of declining.¹⁻³ In Thailand, high school students must pass the National Entrance Examination to study in public university's undergraduate programs. Therefore, Thai students must spend most of their times both in classrooms and extra classes for tutorial aiming at better academic excellent outcomes.⁴⁻⁶ Parents whose children are studying in grade 12th faced a lot of challenge including physical changes, children education, as well as mental health problems. Mental health disorders caused chronic disabilities, social and economic burdens as well as adverse impact on quality of life which related with their socioeconomic and cultural context.^{7,8}

The Northeast of Thailand consists of 20 provinces and 15 district offices of secondary education which administered the total of 933 secondary schools.⁹ A research study indicated that depression, anxiety and general well-being had influences on QOL of high school students in the Northeast.² There is no comprehensive study on parents of the high school students who mostly under threat of physical change and psychosocial pressures. Therefore, the objective of this study was to describe mental health status, children education and determine their influences on quality of life.

METHODS

This cross-sectional study was conducted among 1,098 parents of high school students who were recruited by using a multistage random sampling from 20 high schools in 10 provinces of the Northeast of Thailand to response to a structured questionnaire interview. The questionnaire covered the WHOQOL-BREF 10 to assess QOL, the Depression Assessment (CES-D) and Perceived Stress Scale (PSS) to assess mental health.¹⁰⁻¹² The inclusion criteria were parents of present grade 12th students of 20 high schools in 5 provinces of the Northeast of Thailand, willing to participate in the study, could communicate with researcher and did not have severe illness. Human Ethical permission for the study was obtained from the Ethics Committee in Human Research of Khon Kaen University, Khon Kaen, Thailand (HE622168).

Stata version 10.0 (Stata Corp, College Station, TX) was used to analyses the data. To describe categorical data, descriptive statistics including frequency and percentage were administered, whereas mean, standard deviation, median, and maximum minimum were for continuous data. A simple logistic regression was used to identify the association between each independent factor and poor quality of life. The independent factors that had p-value < 0.25 were processed to the multivariable analysis using

the multilevel logistic regression to identify the influence of mental health status, offspring's educational burden on quality of life of parents of high school students when controlling the effect of other covariates. Five provinces and 20 high schools were used as random effects. The magnitude of association was presented as adjusted odds ratio (Adj. OR), 95% confidence interval (CI). P-value < 0.05 was a statistically significant level.

RESULTS

Table 1 describes about characteristic distribution of senior high school students' parents in the Northeast of Thailand. Among the total of 1,098 parents, 52.64% was female with the average age of 46.77 ± 6.69 years old, and 79.05% was married. Almost half-finished undergraduate degree or higher (49.73%), 47.54% lived in rural areas, with the average family size of 4.29 persons, and 52.25% were head of the family. The highest proportion worked in public sectors or state enterprises (32.42%) and most of them had good job security (78.05%). Their median working hours was 8 hours per day and 5 days per week. The median monthly income was 20,000 Baht whereas their median monthly expense was 15,000 Baht. Nearly half had enough income with no savings (40.07%).

Majority of the parents were overweight or obesity (53.83%). More than one third (38.16%) did not exercise. More than half slept less than 8 hours daily (54.46%). Almost half had no to only one day per week for recreation. More than one fourth drank alcohol (27.78%) and about 10% were current smokers. Most of them perceived of having good health status (63.57%), however 24.23% having chronic diseases. More than one-fifth had moderate stress (26.50%), 15.48% had moderate depressive symptoms and 7.47% had severe depressive symptoms. Most of these parents had no problem concerning family health expenditure (73.13%), 44.81% had health promotion services and 44.81% received physical health checkup during the past one year.

Concerning children education, more than half had 2 children currently studying, and 66.03% provided extra class for their children, of which about 20% had problem on children education expenses. Here 43.62% had a child with very good school's grade point average (GPA) of between 3.5 and 4.00, and 36.43% perceived that children's GPA had high impact on their future success. In addition, 87.16% of parents expected their children to study in bachelor's degree level, and 47.27% had high confidence that their children will pass the university entrance examination. However, only 31.79% had no concern on poor examination scores of their children (Table 1).

The number and percentage of quality of life (QOL) among parents of high school students in the Northeast of Thailand. As high as 28.78% (26.17-31.53) of high school student's parents in the Northeast of Thailand had poor

Table 1. Characteristic distribution of senior high school students' parents in the Northeast of Thailand (n=1,098)

Factors	Number	Percent
Socioeconomic Factors		
Genders		
Male	520	47.36
Female	578	52.64
Age (years)		
< 30	16	1.46
30-39	87	7.92
40-49	663	60.38
50-59	284	25.87
≥ 60	48	4.37
Mean ± SD	46.77 (± 6.69)	
Median (Min : Max)	46 (18:74)	
Marital status		
Married	868	79.05
Separate	71	6.47
Widow/Divorced	121	11.02
Single	38	3.46
Residence		
Urban	576	52.46
Rural	522	47.54
Educational attainment		
Undergraduate/higher	546	49.73
< Undergraduate	552	50.27
Family size (persons)		
≤ 2	42	3.83
3	167	15.21
4 - 5	747	68.03
≥ 6	142	12.93
Mean ± SD	4.29 (±1.20)	
Median (Min : Max)	4 (1: 11)	
Family status		
Head of family	577	52.55
Member in family	521	47.45
Occupation		
Staff in public sectors/state enterprises	270	24.59
Business	258	23.50
Workers	134	12.20
Agriculturist	159	14.48
Employees of private sectors	116	10.56
Government officer	106	9.65
Other	55	5.01
Working experience		
< 1	37	3.37
1-4	104	9.47
5-9	110	10.02
10-14	238	21.68
≥ 15	609	55.46
Mean ±SD	16.02 (± 9.71)	

Median (Min : Max)	15 (0:53)	
Position		
Staff	642	58.47
Head of section	245	22.31
Manager	211	19.22
Job ssecurity		
Yes	857	78.05
No	241	21.95
Problem at work		
No problem	515	46.90
Slightly problem	555	50.55
Severe problem	28	2.55
Average working time (Hours per day)		
≤ 8	839	76.41
> 8	259	23.59
Mean ±SD	7.84 (±2.35)	
Median (Min : Max)	8 (0: 16)	
Average working day (Days per week)		
< 1	40	3.64
1-5	592	53.92
6	203	18.49
7	263	23.95
Mean ±SD	5.40 (±1.43)	
Median (Min : Max)	5 (0: 7)	
Average monthly income (Bath)		
≤ 5,000	82	7.46
5,001 - 15,000	350	31.88
15,001 - 30,000	346	31.51
30,001 - 50,000	256	23.32
> 50,000	64	5.83
Mean ±SD	24,494.54 (±16,115.26)	
Median (Min :Max)	20,000 (0: 100,000)	
Average monthly expense (Bath)		
≤ 5,000	168	15.30
5,001 - 15,000	416	37.89
15,001 - 30,000	326	29.69
30,001 - 50,000	155	14.12
> 50,000	33	3.00
Mean ± SD	20,089.14 (±16,961.37)	
Median (Min : Max)	15,000 (0: 150,000)	
Financial status		
Not enough income with debts	28	2.55
Not enough income with no debts	223	20.31
Enough income with no savings	440	40.07
Enough income with savings	407	37.07
Health status and health behaviors		
Currently health status		

Healthy	698	63.57
Mild illness	309	28.14
Moderate illness	90	8.20
Severe illness	1	0.09
Chronic disease		
No	832	75.77
Yes	266	24.23
Body mass index (BMI)(kg/m²)		
< 18.5	76	6.92
18.5 – 22.9	431	39.25
23 – 24.9	237	21.58
≥ 25	354	32.25
Mean ±SD	23.56 (±3.72)	
Median (Min : Max)	23.43 (13.55: 38.28)	
Physical activity		
No	419	38.16
Moderate exercise	438	39.89
Excessive exercise	241	21.95
Average daily sleeping hours		
< 8	598	54.46
≥ 8	500	45.54
Mean ± SD	7.04 (±1.29)	
Median (Min : Max)	7 (1: 12)	
Weekly recreation days		
No	93	8.47
1	392	35.70
2	477	43.44
≥ 3	136	12.39
Mean ± SD	1.75 (±1.26)	
Median (Min : Max)	2 (0: 7)	
Alcohol consumption		
No	638	58.11
Used to drink, now quit	155	14.12
Current drinker	305	27.78
Smoking status		
Never smoke	863	78.60
Quit smoking	130	11.84
Current smoker	105	9.56
Stress level		
Low (0-26)	794	72.31
Moderate (27-52)	291	26.50
High (53-80)	13	1.18
Depressive symptoms		
Not depress to mildly depress (0-15points)	846	77.05
Moderately depress (16-23 points)	170	15.48
Severely depressed (24-60 points)	82	7.47
Problem on family health expenditure		
No problem	803	73.13
Minor problem	286	26.05

Severe problem	9	0.82
Received health promotion services during the past 1 year		
No	606	55.19
Received	492	44.81
Received physical examination services during the past 1 year		
Never received	584	53.19
Received	514	46.81
Health insurance		
Civil servant medical benefit scheme (CSMBS)	420	38.25
Social security scheme (SSS)	369	33.61
Universal health coverage (UC)	309	28.14
Children Education		
Number of children currently studying (person)		
1	400	36.43
2	588	53.55
3	92	8.38
≥ 4	18	1.64
Mean ± SD	1.75 (±0.69)	
Median (Min : Max)	2 (1: 6)	
Children extra class		
Not attend	373	33.97
Attended	725	66.03
Problem on children education expense		
No problem	554	50.45
Mild problem	332	30.24
Moderate problem	160	14.57
Severe problem	43	3.92
Very severe problem	9	0.82
Grade point average (GPA) in grade 12th of the children		
< 2.00	12	1.09
2.00 - 2.49	43	3.92
2.50 - 2.99	154	14.03
3.00 - 3.49	410	37.34
3.50 - 4.00	479	43.62
Perceived importance of children GPA for their future		
Very importance	137	12.48
Importance	263	23.95
Indifference	309	28.14
Little importance	217	19.76
Not importance	172	15.66
Expectation for the children to study in a bachelor's degree level		
No	141	12.84
Yes	957	87.16
Confidence on child's ability to pass the entrance examination		
High confidence	177	16.12
Confidence	342	31.15
Indifference	394	35.88
Low	107	9.74

No	78	7.10
Parents' concern on children poor examination score		
No	349	31.79
Low	404	36.79
Moderate	250	22.77
High	74	6.74
Very high	21	1.91

QOL. In addition, most of the parents had moderate level of QOL (68.12 %, 95% CI: 65.30 - 70.81) (Table 2).

Table 2. Number and percentage of quality of life (QOL) among parents of high school students in the Northeast of Thailand (n=1,098)

Quality of life	Number	Percent	95%CI
Good level	34	3.10	2.21 - 4.30
Moderate level	748	68.12	65.30 - 70.81
Poor level	316	28.78	26.17 - 31.53

The factors associated with quality of life among senior high schools' parents in the Northeast of Thailand by using the multilevel logistic regression. The multilevel logistic regression indicated both offspring's education and mental health status were significantly associated with having poor quality of life of parents of high school students. Those factors were had moderate to severe depressive symptoms (adj.OR=5.72; 95% CI: 4.01-8.16), had moderate to high levels of stress (adj.OR=2.32; 95% CI: 1.64 - 3.29), not expected the child to study in undergraduate level (adj. OR=2.59; 95% CI: 1.74 - 3.84), though their children GPA was not or little importance (adj.OR=2.20; 95% CI: 1.54 - 3.14), had average to poor health status (adj.OR=1.98 95% CI: 1.15 - 3.41), had monthly expense ≤ 10,000 Baht (adj.OR=1.63; 95% CI: 1.11 - 2.38), had 2 or more children currently studying (adj.OR= 1.62; 95% CI:1.00 - 2.64), did not receive health promotion services (adj.OR= 1.60; 95% CI: 1.16 - 2.22), had average to high levels of concern on child's poor school performance (adj.OR=1.51; 95% CI: 1.06 - 2.15), had problem at work (adj.OR=1.40; 95% CI: 1.01-1.93) (Table 3).

DISCUSSION

Nearly one third of parents of the high school students in the Northeast of Thailand had poor QOL (28.78%). The reasons that could explain were that health status both physical and mental health have impact on quality of life.³ This study observed that 24.23% of the parents had chronic diseases and 36.43% reported having mild to severe illness which were similar with previous study.¹³⁻¹⁵ In addition, more than half never received health promotion services as well as physical checkup during the past one year. Therefore, their health problems might not well aware and managed which could deteriorate their QOL.^{10,14}

Table 3. The multivariable analysis of factors associated with quality of life among senior high schools' parents in the Northeast of Thailand, using the multilevel logistic regression presenting odds ratios, adjusted odds ratios, 95% CI and P-value (n=1,113)

Factors	Number	% Poor QOL	OR	adj.OR	95% CI	P-value
Depressive symptoms						
Non- mild	846	18.68	1			<0.001
Moderate - severe	252	62.70	7.31	5.72	4.01 - 8.16	
Stress Level						
Low level	794	20.28	1			< 0.001
Fair-high level	304	50.99	4.08	2.32	1.64 - 3.29	
Expected child to get bachelor's degree						
Yes	957	27.06	1			<0.001
No	141	40.43	1.82	2.59	1.74 - 3.84	
Perceived significant of children grade point average						
Importance to very importance	400	21.75	1			<0.001
Not importance to minimal importance	698	32.81	1.75	2.20	1.54 - 3.14	
Parents' concern of children poor examination scores						
No-minimal	753	26.43	1			0.020
Fair-extremely	345	33.91	1.42	1.51	1.06 - 2.15	
Number of children who are studying						
≤ 2	988	27.63	1			0.049
> 2	110	39.09	1.68	1.62	1.00 - 2.64	
Current health status						
Good	698	22.06	1			0.002
Minor illness	309	37.86	2.15	1.72	1.21 - 2.44	
Middle -extreme ill	91	49.45	3.45	1.98	1.15 - 3.41	
Monthly expense (Baht)						
> 20,000	371	23.18	1			0.020
10,001 - 20,000	287	30.66	1.46	1.63	1.07 - 2.49	
≤ 10,000	440	32.27	1.57	1.63	1.11 - 2.38	
Received health promotion services						
Access	492	25.20	1			0.004
Not access	606	31.68	1.37	1.60	1.16 - 2.22	
Problem at workplace						
No	515	22.72	1			0.040
Yes	583	34.13	1.76	1.40	1.01 - 1.93	

The study found one third of the parents had moderate level of stress (26.50%), this figure was higher than the global average.¹⁶ It might be that most of the parents were in middle age group which has a lot of responsibilities covering family issues such as household income, children education and work.¹⁷⁻²⁰ High level of stress can stimulate depressive disorder. In addition, about 15% of the parents had moderate to severe depressive symptoms. It might be that many of the parents who were in working age group lived and worked in an inappropriate environment such as unsafe and unfavorable contexts which had negative impact on mental health.^{21,22}

Depressive symptoms and high stress were found strongly associated with poor quality of life among parents of high school students in the Northeast of Thailand. It was similar with the result from other studies on QOL and work stress, as well as the relationship of QOL among Hong Kong migrant workers in China.^{23,24} It was also in line with the finding on burden of chronic diseases and mental health illness on QOL.¹⁵ The explanation could be due to characteristics of the jobs, job responsibility, workload, and relationship in the work place that cause stress and depression.²⁵ High level of stress had high impact on overall QOL.²⁶ In addition, chronic stress may lead to depression, which is harmful to health and had adverse impact on quality of life.^{17,18}

Children education was found having strong associated with poor quality of life among parents of the high school students. The result showed that having more than 2 children currently studying were associated with poor QOL. Parents had more economic burden on normal and extra class of their children, especially those with limited income. Literature indicated that households with low incomes or with debt, the quality of life was greatly affected.²⁷ This finding was similar with a study on QOL of professional nurses which illustrated that income was related with the QOL.²⁸ In addition, parents who had more concern on children poor examination score were more likely to have poor quality of life. This might be that their children had already had poor performance which could make them worries and stress to find ways to improve. This result was support by the study of quality of life of single parents in Bangkok which indicated that child behavioral problems and stress in their life were correlated with overall quality of life.²⁶ In contract parents who perceived that GDP of children was not important for their future as well as were not expect their children to study in undergraduate level were more likely to have poor QOL. It might be that they were encounters with more serious problems such as economic hardships, and work which had adverse impact on their QOL.

Socioeconomic status had low monthly expense was associated with poor quality of life of the parents. Since the parents had a lot of responsibilities for families and work,

having limited money to spend could increase their stress and frustration.²⁹ This finding was similar with a study on QOL of professional nurses at community hospital in Nakhon Si Thammarat province, reported that income was associated with QOL.²⁸ In addition, a study of the quality of life of people in Ban Saen community found that those with different incomes have a different levels of overall quality of life.³⁰

This study also found that having problems at workplace was associated with poor quality of life. Problems at workplace could lead to dissatisfaction with their job, working under unhappiness circumstance and low productivity which impaired their QOL.^{19,31} Health status was also had influence on poor quality of life of these parents. The parents with poor health status were more likely to have poor QOL, since they might suffer from disease symptoms.^{13,14} It was in line with the finding of a study on the burden of chronic illness and mental illness on QOL among elderly which observed that illness conditions had influenced on QOL.¹⁵ In addition, did not received health promotion services also associated with poor quality of life of the parents. Lack of health education information, advice and behavior modification training from health promotion services might resulted in poor control of their chronic diseases which deteriorate their QOL.³² It was similar with the study on the relationship between social support, financial situation, health promotion behaviors and QOL which found that the overall QOL has positive relationships with health promoting behaviors.³³

To enhance quality of life of the parents of high school students in the Northeast of Thailand, it is importance to improve health services especially health promotion services which will help improving both their mental and physical health status. School should pay more attention on students with poor performances and work closely with the parents concerning their children education.

CONCLUSION

Nearly one-third of parents of high school students in the Northeast of Thailand had poor quality of life. Depression, stress, children issues as well as physical health status and work-related problems had influence on QOL.

ACKNOWLEDGEMENT

The authors would like to express our sincere appreciation to all parents of the high school students, high school teachers for the data collection. Special thanks to the Faculty of Public Health, Khon Kaen University and the Training Center for Enhancing Quality of Life for Working Age People, Khon Kaen University, Thailand for the supports.

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