**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. 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. 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.

The Northeast of Thailand consists of 20 provinces and 15 district offices of secondary education which administered the total of 933 secondary schools. A research study indicated that depression, anxiety and general well-being had influences on QOL of high school students in the Northeast. 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. 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 forth 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) |
| **Position**                   |        |         |
| Staff                          | 642    | 58.47   |
| Head of section                | 245    | 22.31   |
| Manager                        | 211    | 19.22   |
| **Job security**               |        |         |
| 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)**         | 20,000 (0:100,000) |
| **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 |
| Mean ±SD | 7.04 (±1.29) |
| Median (Min : Max) | 7 (1: 12) |

### 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 (0-15 points) | 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 |

### 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 |
| Mean ±SD | 23.56 (±3.72) |
| Median (Min : Max) | 23.43 (13.55: 38.28) |

### Perceived importance of children GPA for their future

| Very important | 137 | 12.48 |
| Important | 263 | 23.95 |
| Indifference | 309 | 28.14 |
| Little importance | 217 | 19.76 |
| Not important | 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 |
QOL. In addition, most of the parents had moderate level of QOL (68.12%, 95% CI: 65.30 - 70.81) (Table 2).

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.\(^{10,14}\)
The study found one third of the parents had moderate level of stress (26.50%), this figure was higher than the global average.\textsuperscript{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.\textsuperscript{17,18} 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.\textsuperscript{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.\textsuperscript{23,24} It was also in line with the finding on burden of chronic diseases and mental health illness on QOL.\textsuperscript{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.\textsuperscript{25} High level of stress had high impact on overall QOL.\textsuperscript{26} In addition, chronic stress may lead to depression, which is harmful to health and had adverse impact on quality of life.\textsuperscript{17,18}

Children education was found having strong associated with poor quality of life among parents of 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.\textsuperscript{27} This finding was similar with a study on QOL of professional nurses which illustrated that income was related with the QOL.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.

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REFERENCES

1. Bouchard G. A dyadic examination of marital quality at the empty-nest phase. The International Journal of Aging and Human Development. 2018;86(1):34-50.

2. Supat Assana, Loahasiriwong W, Rangseekajee P. Quality of life, mental health and educational stress of high school students in the northeast of Thailand. Journal of clinical and diagnostic research: JCDDR. 2017;11(8):VC01.

3. Lisa J. Cohen. The Handy Psychology Answer Book. 2nd ed: Visible Link Press; 2016.

4. Chuchoui K PS, Nutadee N, Permsuwan A. Stress and quality of life of grade 12 high school students in Muang District, Chiang Mai Province. Psychiatri Assoc Thail. 2010;26(1).

5. Ruangkanchanasetr S PA, Hettrakul P, Kongsaokon R. Youth risk behavior survey: Bangkok, Thailand. Adolesc Health. 2005;36(3).

6. Pattanajak N. The factors of choosing academic instruction of high school student at Khon Kaen Municipality: Khon Kaen 2012.

7. Kirby Deater-Deckard NC, Sherreen EI Mallah. Parenting Stress 2017 [Available from: https://www.oxfordbibliographies.com/view/document/obo-9780199828340/obo-9780199828340-0142.xml.

8. Lorenzo Rampazzo. MM, Ruth J. Davis, Sara Carbone, Alexandra Mocanu, Jonathan Campion. Join Action on Mental Health and Well-Being: Mental Health and Schools. 2015.

9. Ministry of Education T. Government Regulations of Ministry of Education Act. 2010.

10. World Health Organization. WHOQOL-BREF: introduction, administration, scoring and generic version of the assessment: field trial version, December 1996. Geneva: World Health Organization; 1996.

11. Radloff LS. The CES-D scale: A self-report depression scale for research in the general population. Applied psychological measurement. 1977;1(3):385-401.

12. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. Journal of health and social behavior. 1983:385-96.

13. Moons P, Budts W, De Geest S. Critique on the conceptualisation of quality of life: a review and evaluation of different conceptual approaches. International journal of nursing studies. 2006;43(7):891-901.

14. Liddle J, McKenna K. Quality of life: An overview of issues for use in occupational therapy outcome measurement. Australian Occupational Therapy Journal. 2000;47(2):77-85.

15. Parker L, Moran GM, Roberts LM, Calvert M, McCahon D. The burden of common chronic disease on health-related quality of life in an elderly community-dwelling population in the UK. Family Practice. 2014;31(5):557-63.

16. Hannah Ritchie and Max Roser. Mental Health OurWorldInData.org; 2018 [Available from: https://ourworldindata.org/mental-health.

17. Nadim W, AlOtaibi A, Al-Mohairneed M, Ewida M, Sarhandi M, Saqilb J, et al. Depression among migrant workers in Al-Qassim, Saudi Arabia. Journal of affective disorders. 2016;206:103-8.

18. Ramos AK, Carlo G, Grant K, Trinidad N, Correa A. Stress, depression, and occupational injury among migrant farmworkers in Nebraska. Safety. 2016;2(4):23.

19. Bureau of Labor Statistics. Employment characteristics of families summary 2017 [Available from: www.bls.gov/news.release/famee.nr0.htm.

20. European Public Health Alliance. MHe. Mental health: boost for economic recovery in Europe Towards a European Implementation Program for Mental Health. 2014.

21. World Health Organization. Orientation programme on adolescent health for health care providers. 2006.

22. Birditt KS, Antonucci TC, Tighe L. Enacted support during stressful life events in middle and older adulthood: An examination of the interpersonal context. Psychology and aging. 2012;27(3):728.

23. mak Bl. Quality of Life and Stress at Work that Affecting Performance Efficiency of Employees in Air-Conditioning and Refrigerating Industry Rajamangala University of Technology Thanyaburi.; 2015.

24. Wong WK, Chou K-L, Chow NW. Correlates of quality of life in new migrants to Hong Kong from mainland China. Social Indicators Research. 2012;107(2):373-91.

25. Yanipa Janbamrung. Job performance factors associated with employee stress: a case study of Bangkok Glass Company Limited: Rajamangala University of Technology Thanyaburi.; 2012.

26. Quick JC, Quick JD. Organizational stress and preventive management: McGraw-Hill College; 1984.

27. Ferguson HB, Bovaird S, Mueller MP. The impact of poverty on educational outcomes for children. Paediatrics and child health. 2007;12(8):701-6.

28. Kanlaya Kangsan. VK. Quality of Life of Registered Nurses in Community Hospital: Chulalongkorn University 2017.

29. Kooij DT, De Lange AH, Jansen PG, Kanfer R, Dikkers JS. Age and work-related motives: Results of a meta-analysis. Journal of Organizational Behavior. 2011;32(2):197-225.

30. Prangthip Pukdikiripriwan. Quality of Life of the People in Ban Saentor Village, Village No. 11, Thapha Sub District, Ko Kha District, Lampaang Province Thammassat University. 2016.

31. Phanchanok Dechsingh. The study about quality of life and work balance in registered nurses of King Chulalongkorn Memorial Hospital: Chulalongkorn University 2017.

32. Kumar S, Preetha G. Health promotion: an effective tool for global health. Indian journal of community medicine: official publication of Indian Association of Preventive and Social Medicine. 2012;37(1):5.

33. Kan Nuengphongthawonkamon. PLD, Pornphanuan Worodom., Wan Kan Ratchwong. The Relationship between Social Support Financial Status Health Promotion Behaviors and Quality of Life in Breast Cancer Women Undergoing Radiation Treatment. Journal of Nursing Mahidol University. 2014;32(1).