

# Work-Related Quality of Life among Medical Residents at a University Hospital in Northeastern Thailand

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**Objective:** 1) To assess work-related quality of life (WRQOL) among medical residents at a university hospital in northeast Thailand. 2) To determine the strength of the association between personal and working condition components and WRQOL among medical residents.

**Material and Method:** A descriptive study was used to describe the WRQOL among medical residents. The study population comprised of all 375 residents affiliated with the university hospital. The Thai version of a self-administered work-related quality of life scale-2 was used for data collection.

**Results:** Testing the reliability revealed a Cronbach's alpha of 0.908. Questionnaires were completed by 259 of 375 (68.3%). The study found that the mean rating by residents for overall WRQOL was 113.8 out of 170 (SD 14.8). Most rated WRQOL as moderate (76.6%). The seven sub-factors were rated as moderate to high for employee engagement and control at work, moderate for home/work interface, general well-being and working conditions, high-moderate for job career satisfaction, and low-moderate for stress at work. Relationships between the personal and working condition components and WRQOL were analyzed using binary logistic regression. Residents in minor specialties had a higher WRQOL than those in major specialties (OR 2.522, 95% CI: 1.37, 4.63). Residents who had less than eight duty shifts/week had a higher WRQOL than those with more than eight duty shifts/week (OR 2.263, 95% CI: 1.16, 4.41). Similarly, residents working with less than 80 hours/week had a higher WRQOL than those working more than 80 hours/week (OR 2.344, 95% CI: 1.17, 4.72). A subgroup analyses of those working in minor specialties showed the trend that working less than eight shifts/month and working less than 80 hours/week had the potential association with good quality of work-life (QWL). This phenomenon is presented in the subgroup analyses of those working in major specialties. Therefore, working hours and number of shifts might have played important role in contributing good QWL.

**Conclusion:** To increase QWL, the residents and institutions should be better managed to have the appropriate number of working hours and to increase work-life balance, working condition, general well-being, and job-career satisfaction. On the other hand, stress at work must be reduced.

**Keywords:** Quality of work-life, Residents, Work-related quality of life, Engagement, Working condition

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Good quality of life is something we all desire. Among adults, work comprises of the main part of their lives. In any 24-hour period, one in three adults will be at work. If there is quality of work-life (QWL) and the worker is satisfied in his work, his/her overall quality of life will tend to be good. The trend to improve QWL has been accepted in many countries. Thailand is exception as the importance of human resources is consistent with the Tenth National Economic and Social Development Plan<sup>(1)</sup>. In this vein, if the needs

of individuals can be met and satisfaction achieved, it should help to increase productivity<sup>(2)</sup>.

The studies by Williams et al<sup>(3)</sup>, and the Confederation of British Industry found high levels of both physical and psychological ill-health among healthcare workers in the UK<sup>(4)</sup>, suggesting the nature of work is the primary factor<sup>(5)</sup>. One study in a hospital indicated that 60.8% of physicians had underlying stress-related diseases including allergies, high blood pressure, heart diseases, and diabetes<sup>(6)</sup>. These health problems could affect their work as well, especially since the medical profession is exposed to pathogens, chemicals, and radiation<sup>(7,8)</sup>. In the early 19<sup>th</sup> century, many physicians died prematurely due to various exposures. In the 20<sup>th</sup> century, monitoring and medical

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care for physicians helped to decrease mortality<sup>(9)</sup>. Surveys indicate that the primary cause of death among Thai physicians is cancer followed by cardiovascular diseases<sup>(10)</sup>, suggesting heavy workloads resulted in their ignoring their own health needs and missing regular screening. Research from abroad indicates that mental health issues of greater severity are more likely to occur just after graduation. For example, the 10% drop out rate from residency in internal medicine in US due to emotional pressures, which includes 5% of residents who tried to commit suicide and 2% who were successful<sup>(11)</sup>. Residents tend to have more severe emotional pressures in their fourth year<sup>(12,13)</sup>. Other studies indicated that depression and insomnia were associated with the results of stress<sup>(14)</sup>. Long working hours (more than 80 hours/week of hospital work)<sup>(15)</sup> and heavy workloads affect the quality of patient treatment<sup>(16,17)</sup>. The consequence to residents was on skill development and quality of life<sup>(18,19)</sup>.

A study at Ramathibodi Hospital in Thailand revealed that 42.2% of residents experienced stresses resulting in mental health issues. Four statistically significant factors were family issues, work issues, financial problems, and health problems. Moreover, stress could result in guilt motivation for continuing on to be a specialist resulting in a lack of confidence and failure to finish the course<sup>(20)</sup>.

Therefore, being a resident represents a risk for degraded quality of life. The respective number of physicians and residents in the current study was 37,733 and 4,500<sup>(21)</sup>. Those working in the hospitals totaled 10% of all operational physicians. If the QWL of medical residents were negative, it would impact on the medical service for the patients. A present, there was no study about QWL of resident physicians specifically. Currently, there has been a translation of a tool for assessing QWL by Van Laar et al<sup>(21)</sup> into Thai version and testing content validity by six experts. The obtained content validity index was equal to 0.97<sup>(22)</sup>. While considering from the composition of questions, it could be found that coverage in dimensions related to work and might be used to assess QWL in resident physicians. At any rate, we need to assess QWL in order to recognize actual information of problems and lead to increase improvement on QWL.

## **Material and Method**

### ***Study design and setting***

In this descriptive research, we studied a university hospital in northeastern Thailand. Data collection was between September 1 and December

31, 2013. Participants were medical residents at a university hospital in northeastern Thailand. The inclusion criteria were (a) medical residents studying and working at the hospital, (b) for at least three months, or (c) intending to do an internship or be a medical resident. The included population was 375. The representative sample size was:  $n = [(Z^2)(S^2)]/d^2$ ; where 'n' is the size of the representative sample; Z is the confidence 95% interval ( $Z = 1.96$ ); S is the standard deviation ( $S = 13.64$ ); and D is the acceptable difference ( $D = 1$ ). The result was 714.7. The sampling frame formula is  $n = (n_0)/[1+(n_0/N)]$ . The expected loss of subjects was 30% so that the expected 'n' was 352. However, the study was collected from 375 participants because we needed to reserve data collection.

### ***Tools***

The work-related quality of life scale-2 (WRQLS-2) has seven subscales with 34 items in total. Each question uses a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The negative items (i.e., #15, 24, 25, 26, 27, 28) were recoded and the total scores and subscale scores were calculated. The total score of the QWL was divided into three levels, low (34-79 points), moderate (80-125 points), and high (126-170 points), and seven subscales (i.e., employee engagement, control at work, home-work interface, general well-being, job and career satisfaction, working condition, stress at work)<sup>(22)</sup>.

### ***Data analysis***

SPSS version 19 for Windows (licensed to Khon Kaen University) was used for the analysis. The principal analyses determine:

- 1) The main outcome - i.e., total score from the WRQOL (average and standard deviation), grouped as high, medium, and low and seven subscale scores.
- 2) The population characteristics (average and standard deviation) of the sample.
- 3) The relationship between the personal and working components by using binary logistic regression and the odds ratio and 95% CI.

### ***Ethical review***

The present research was reviewed and approved by the Ethics Committee for Human Research of the Khon Kaen University (HE561176). The information sheet accompanying the questionnaire introduced the objectives and the rights of the participants. Each respondent provided written, informed

consent. The data collection process was conducted under the permission of the Hospital Director.

## Results

### Characteristics of the participants

The final sample comprised of 256 residents, between 24 and 38-years-old (median, 27), of whom 144 (56.3%) were female, 240 (93.8%) single, 158 (69.9%) interns, 146 (68.5%) studied in major specialties, and 173 (67.6%) performed surgical procedure. Most (98.4%) participants worked shifts (range, 0-30; median: 8).

The range of monthly income was between 20,001 and 30,000 baht [~614 and 921 USD, respectively] and 68.9% of participants felt they had sufficient income, 4.3% were able to save, and 71.9% had debt (Table 1).

One-third (78) of residents had some disease, allergy in 64 (25.0%), migraine in nine (3.5%), peptic ulcer in six (2.3%), and others (viz., gastroesophageal reflux disease, asthma, hepatitis B, nephropathy, obstructive sleep apnea, attention deficit hyperactivity disorder, hyperlipidemia, and cancer).

### Analysis of work-related quality of life (WRQLS-2)

The categories of work-related quality of life (WRQOL) include employee engagement, control at work, home-work interface, general well-being, job and career satisfaction, working conditions, and stress at work. The analysis of WRQOL among residents revealed that 196 (76.6%) had a medium level and 56 (21.9%) a good level. The average was 113.8/170 with a standard deviation of 14.8 (Fig. 1).

### Seven components to the WRQOL of residents

Job and career satisfaction, employee engagement, and control at work had the highest scores

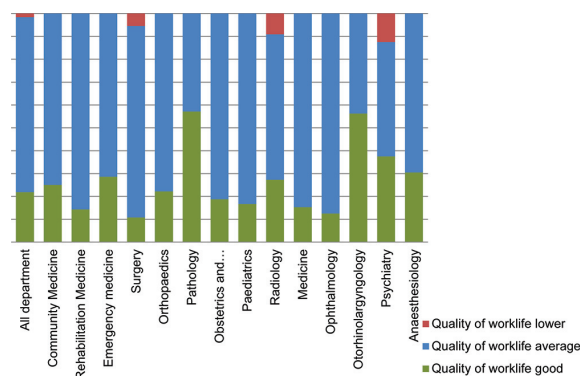


Fig. 1 Level of WRQOL of medical residents.

Table 1. Characteristics of the participants (n = 256)

Characteristics	Proportion, n (%)
<b>Sex</b>	
Male (n = 165)	112 (43.8)
Female (n = 210)	144 (56.3)
<b>Marital status</b>	
Single	240 (93.8)
Married	16 (6.3)
<b>Age (year)</b>	
Median 27, IQR 3	
Range 24-35	
<b>Position</b>	
Internship (n = 226)	158 (69.9)
Resident (n = 149)	98 (65.8)
<b>Specialties</b>	
Major specialties (n = 213)	146 (68.5)
Minor specialties (n = 162)	110 (67.9)
<b>Work practice</b>	
Surgical (n = 240)	173 (67.6)
Non-surgical (n = 135)	83 (32.4)
<b>Years of work</b>	
Median 19, IQR 21	
Range 3-56	
<b>Hours of work/week</b>	
≤80 hours/week	166 (64.8)
>80 hours/week	90 (35.2)
<b>Income (Baht)</b>	
10,001-20,000 (~307-614 USD)	24 (9.3)
20,001-30,000 (~614-912 USD)	128 (49.8)
30,001-40,000 (~912-1,228 USD)	98 (38.1)
40,001-50,000 (~1,228-1,535 USD)	4 (1.6)
>50,000 (>1,535 USD)	2 (0.8)
<b>Finances</b>	
Sufficient	177 (68.9)
Insufficient	68 (26.5)
Saving	11 (4.3)
<b>Debt</b>	
Yes	72 (28.1)
No	184 (71.9)

while the lowest level were stress at work and home-work interface. Overall, the residents had an average level (Table 2).

### Employee engagement

A majority of the sample group were proud to be part of the organization (n = 140, 54.7%), 134 (52.3%) felt success in their careers and 133 participants felt inspired to do their best (52.0%). These results represent a medium to good level of WRQOL in the Employee Engagement dimension.

### Control at work

Residents had a medium to good WRQOL in the control at work dimension, 117 (45.7%) felt

empowered to participate in making decisions affecting their work; while 116 (45.3%) felt they had enough opportunity to consult with their superiors about changes in work.

#### **Home-work interface**

The level of WRQOL in the home-work interface dimension was average. A significant minority (n = 110, 43.0%) agreed that their superiors had prepared tools and equipment well and were flexible enough helping them to connect home and work lives. A smaller group (n = 95, 37.1%) said they were neutral to the current working hours/patterns suited their personal circumstance.

#### **General well-being**

Residents had a medium WRQOL in the general well-being dimension where 55.1% said that they were satisfied with their WRQOL in general and agreed that their current lives were happy while 53.1% said they were satisfied with their lives.

#### **Job and career satisfaction**

Residents had a good level of WRQOL in the job and career satisfaction dimension. The respective majority agreed that “I have a chance to use my abilities

in the workplace” (65.6%), “I have clear goals and objective in my working mission” (64.1%), and “I am satisfied with the training I got that I can apply to my current work” (63.3%).

#### **Working condition**

Residents had a medium level of WRQOL in the working conditions dimension. The largest proportion agreed “they are happy with their physical working conditions”, “superiors are fulfilling their needs in order to work effectively”, and “they are satisfied with their working conditions” (n = 128, 50.0%; n = 126, 49.2% and n = 121, 47.3%).

#### **Stress at work**

The WRQOL of residents in term of stress level was average to low. The majority agreed that there were unrealistic time pressures (48.0%), followed by the residents who felt pressured to work long hours (41.8%) and who felt stressed at work (41.4%) (Table 3).

#### **Binary analysis of a potential between personal component & life working and WRQOL for the residents**

The relationship between personal components & work life and WRQOL for residents showed

**Table 2.** Level of WRQOL (QWL) separated by seven components

Component	WRQOL			Interpretation
	Good, n (%)	Average, n (%)	Lower, n (%)	
Employee engagement	112 (43.8)	142 (55.5)	2 (0.8)	Average to Good
Control at work	70 (27.3)	145 (56.2)	41 (15.9)	Average to Good
Home-work interface	60 (23.4)	136 (52.7)	60 (23.4)	Average to both Good and Lower
General well-being	53 (20.7)	188 (73.4)	15 (5.9)	Average to Good
Job and career satisfaction	162 (63.3)	94 (36.7)	0 (0.0)	Good down to Average
Working condition	53 (20.7)	178 (69.5)	25 (9.8)	Average to Good
Stress at work	24 (9.4)	140 (54.7)	92 (35.9)	Average down to Lower

WRQOL = work-related quality of life; QWL = quality of work-life

**Table 3.** Stress at work

Stress at work	To what extent do you agree with the following?				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I often feel under pressure at work*	5 (2.0)	26 (10.2)	93 (36.3)	106 (41.4)	26 (10.2)
I often feel excessive levels of stress at work*	4 (1.6)	44 (17.2)	105 (41.0)	87 (34.0)	16 (6.3)
I have unachievable deadlines*	10 (3.9)	48 (18.8)	85 (33.2)	95 (37.1)	18 (7.0)
I am pressured to work long hours*	4 (1.6)	34 (13.3)	87 (34.0)	107 (41.8)	24 (9.4)
I have unrealistic time pressures*	1 (0.4)	40 (15.6)	72 (28.1)	123 (48.0)	20 (7.8)

\* Negative questions

statistically significant with regard to (a) their specialties, (b) number of shifts per month, and (c) hours of work per week. Residents in minor specialties had a higher WRQOL than those in major specialties (OR 2.522, 95% CI: 1.37, 4.63). Residents who had less than eight duty shifts/week had a higher WRQOL than those with more than eight duty shifts/week (OR 2.263, 95% CI: 1.16, 4.41). Residents with less than 80 hours/week had a higher WRQOL than those working more than 80 hours/week (OR 2.344, 95% CI: 1.17, 4.72). Other components such as income, marital status, type of practice, income, adequacy of income, debt-to-cost, and personal illness were not associated with WRQOL (Table 4).

#### **Subgroup analysis of the relationship between the work-related factors and WRQOL**

Subgroup analyses of those working in minor specialties showed the trend that working less than eight shifts/month and working less than 80 hours/week had the potential association with good WRQOL. This phenomenon was presented in the

subgroup analyses of those working in major specialties (Table 5, 6). Therefore, working hours and number of shifts might play important roles in contributing good QWL.

#### **Discussion**

The mean rating for overall WRQOL in the current study was 113.8/170 (SD 14.8). Most (76.6%) rated WRQOL as moderate, meaning that residents were fulfilled in the seven work-related dimensions. This approximated as WRQOL reported on medical residents in Iran (i.e., a good and medium level)<sup>(24)</sup>. According to the result of the present study showed that perhaps not all our questionnaires were returned because some of the doctors were too busy to reply all the questionnaires. Nevertheless, when calculating the 95% confidence interval of 74, 78 was a sufficient sample size.

The best levels of work satisfaction were in the dimensions of job and career satisfaction, employee engagement, and control at work. Job and career satisfaction reflected the attitude and emotion of a

**Table 4.** Binary analysis of a potential between personal factors & good WRQOL of the residents

Factors	Good WRQOL	OR	95% CI	p-value
Specialties		2.522	1.37, 4.63	0.003
Minor specialties (n = 110)	34 (30.9)			
Major specialties (n = 146)	22 (15.1)			
Shifts/month		2.263	1.16, 4.41	0.016
≤8 shifts/month (n = 156)	42 (26.9)			
>8 shifts/month (n = 100)	14 (14.0)			
Hour of work/week		2.344	1.17, 4.72	0.017
≤80 hours/week (n = 166)	44 (26.5)			
>80 hours/week (n = 90)	12 (13.3)			
Adequacy of income		1.631	0.79, 3.37	0.188
Sufficient (n = 188)	45 (23.93)			
Insufficient (n = 68)	11 (16.2)			
Practice		1.626	0.88, 3.00	0.120
Non-surgical (n = 83)	23 (27.7)			
Surgical (n = 173)	33 (19.1)			
Income (THB)		1.125	0.62, 2.05	0.700
>30,000 (>912USD) (n = 104)	24 (23.1)			
≤30,000 (≤912USD) (n = 152)	32 (21.1)			
Personal illness		1.257	0.65, 2.44	0.499
No (n = 178)	41 (23.0)			
Yes (n = 78)	15 (19.2)			
Position		1.151	0.62, 2.13	0.655
Internship (n = 158)	36 (22.8)			
Residents (n = 98)	20 (20.4)			
Liability		1.090	0.56, 2.12	0.801
No debt (n = 184)	41 (22.3)			
Debt (n = 72)	15 (20.8)			

**Table 5.** Potential factors related to good WRQOL among those working in minor specialties (n = 110)

Factors	Good WRQOL, n (%)	OR	95% CI	p-value
Practice		0.84	0.34, 2.11	0.847
Non-surgical (n = 71)	21 (29.6)			
Surgical (n = 39)	13 (33.3)			
Shift/month		1.71	0.65, 4.61	0.329
≤8 shifts/month (n = 72)	25 (34.7)			
>8 shifts/month (n = 38)	9 (23.7)			
Hours of work/week		1.90	0.70, 5.28	0.248
≤80 hours/week (n = 74)	26 (35.1)			
>80 hours/week (n = 36)	8 (22.2)			

**Table 6.** Potential factors related to good WRQOL among those working in major specialties (n = 146)

Factors	Good WRQOL, n (%)	OR	95% CI	p-value
Practice		0.14	0.02, 0.86	0.029
Non-surgical (n = 12)	2 (16.7)			
Surgical (n = 134)	20 (14.9)			
Shift/month		2.89	0.92, 9.62	0.072
≤8 shift/month (n = 84)	17 (20.2)			
>8 shift/month (n = 62)	5 (8.1)			
Hour of work/week		3.04	0.89, 11.35	0.081
≤80 hours/week (n = 92)	18 (19.6)			
>80 hours/week (n = 54)	4 (7.4)			

person vis-à-vis work, which significantly determined behavior at work<sup>(23)</sup>.

The dimension of job and career satisfaction comprises questions about satisfaction and chances for self-development at work. Most had good WRQOL in this dimension and proportional scoring agreed in every question. Residents agreed that they had opportunity to use their abilities at work and had clear goals and objectives for work: their work is a source of pride and satisfaction. This agreed with a study by Ruksakom who found 64.1% of doctors had a high satisfaction at work and in their career<sup>(25)</sup>. Relatedly, work and career satisfaction are in direct proportion to organizational engagement and commitment<sup>(26)</sup>; dedicated to making a positive impact on corporate performance.

Employee engagement has the purpose of inquiring about satisfaction in being part of the organization and feelings towards to the organization. The majority of the sample group agreed with all questions. The highest sub-score was pride in telling others that they are a part of the organization. This was similar to a study by personnel in a university hospital organization in which the studied populations were personnel, instructors, supporting departmental staff, office department staff, and professional department staff working in the hospital (including doctors, nurses, and other support personnel): engagement

toward the organization was very good. The highest score was pride in being an officer/employee of the organization, leading to a sense of commitment to the organization and employee retention<sup>(26)</sup>. Personnel showed a willingness to work and were devoted to fully understanding the organization<sup>(27)</sup>.

For control at work, most of the sample group had average to good WRQOL in this dimension. Most residents agreed that they could comment, change things in their work place, and participate in making decisions affecting their work. The greatest problem was “I feel able to voice opinions and influence changes in my area of work”. In the context of a medical career to have the opportunity to decide on the job is somewhat higher than other personnel; perhaps because the residents worked under the supervision of a doctor. If the organization encourages people to leave comments and suggestions and to participate in the policy and procedures in the workplace, employees are likely to feel pride of place and engagement will be high<sup>(27)</sup>. As per Maslow, people thrive with the attention and acceptance of others<sup>(28)</sup>.

For stress at work, most residents felt pressurized if they could not finish their appointed tasks on time. Both an excessive workload and the sense of responsibility for the lives of others puts residents under pressure to work excessive hours<sup>(15)</sup>. The level

of stress at work was moderate to severe, different from the study of the prevalence of stress and stress-related factors among residents at Chulalongkorn Hospital in Bangkok (low or 56.8%)<sup>(29)</sup> perhaps because a different tool was used or the work environment and organizational characteristics were different.

The relationship between the home and the workplace (home-work interface) showed that most residents could manage their working and personal time at an average level, both good and bad tendencies at a similar level. Some residents experienced an overload of working hours (median: 74 hours/week, min-max: 43-151 hours/week). The Accreditation Council for Graduate Medical Education (ACGME) advises that residents should not work more than 80 hours/week<sup>(30)</sup>. The overload working hour may fail to manage their schedule family time so that the relationship between home and work towards are poor. Walton similarly underscored the importance of work-life balance<sup>(31)</sup>. If the doctor can follow this principle, they should experience better job success<sup>(25)</sup>. The questions in this dimension were ambiguous such that “family life” and “home life” do not describe the quality of the relationship between parents and children or between spouses.

Most residents had average to good level of WRQOL in general well-being and working conditions dimensions. Well-being in general has the purpose of querying living conditions and general feelings. Most residents agreed that they feel satisfied with the quality of their work life and were happy and satisfied with their lives, while some were unhappy and depressed. They disagreed or were neutral to the question “My life is similar to the ideal life.”

Work conditions refer to the organization, including the physical environment and the social and psychological conditions that affect the WRQOL: it was moderate in the current study. Residents were satisfied with working conditions and felt that they were working in a safe place. Since the issuing of the Safety, Health, and Environment at Work Act in 2011, occupational health and safety in hospitals has played a determining role in the quality of life, through the monitoring and improving of the workplace environment. Even though most residents are satisfied with the work environment, facility in the hospital is one part of factors to gratify workers by high-quality devices are needed to reduce stress levels among workers and help them work effectively<sup>(32)</sup>.

The study of the relationship between personal component and WRQOL for residents showed that

the different were statistically significant under performance (specialties), number of shift per month, and hours of work per week. Residents in minor specialties had higher WRQOL ratings than those in major specialties. This might be due to many causes such as heavier work load, number of patients, stress on job characteristic, different period of performance, work environment, and the difference in social environment. The study of fatigue in the workplace and factors involved in the King Chulalongkorn Memorial Hospital found that under the operation were factors that make an average rating of fatigue, resulting in a significant difference<sup>(33)</sup>, and the study of mental health problems in residents at Ramathibodi Hospital found that doctors in major specialties had more stress than those working in minor specialties<sup>(19)</sup>. Considering the sample for the whole population, the response rate from major wards and minor wards were not much different. Therefore, subgroup analyses of minor and major specialties showed the possibilities of working hours per week and number of shift per month contributing to good WRQOL. Therefore, optimal working hours and the number of shifts should be considered for the residents’ work timetable. This was supported by Buppasiri who investigated the working hours of doctors, found that if there was no requirement for proper function or duty, long shifts would result in excessive fatigue and stress<sup>(35)</sup>. Similarly, Srikam found that excessive work hours by residents resulted in emotional exhaustion and depersonalization<sup>(33)</sup>.

The ACGME advises that residents should not work more than 80 hours/week<sup>(30)</sup>. Due to the shortage of doctors in Thailand<sup>(20)</sup>, most residents must work long hours: the median being 74 hours/week. Our results agree with Jagsi et al who found that reducing working hours without decreasing the number of patients to reduce the effects of fatigue and reduce errors in patient care<sup>(34)</sup>. A study on duty hours of interns at university hospitals and hospitals in the Ministry of Public Health revealed that doctors who work more than 80 hours/week would adversely affect patient care<sup>(35)</sup>. Srikam found that the workload and prolong working hours were associated with burnout and fatigue<sup>(33)</sup>.

Other factors such as professional status, marital status, type of procedure, income, debt, the sufficiency of income per outcome, and congenital diseases, were not significantly associated with QWL. However, increased income and sufficient income tended to have a better QWL. Notwithstanding, this was a descriptive study, so using binary logistic

regression to determine the relationship between factors may not be appropriated.

### Conclusion and recommendations

The present study helped to elucidate the problems and factors affecting the quality of working life of medical residents. Medical residents have an underlying level of stress due to improper working hours and heavy workload, which paradoxically did not affect personal and family time. The results of this study can be used as a baseline for adjusting performance characteristics and teaching of medical residents benefitting (a) residents, (b) their respective organization, and (c) quality of service and work life.

### What is already known on this topic?

Sirisawasd et al<sup>(22)</sup> mentioned that Thai version of WRQLS-2 showed that the content validity value was high enough to be used for assessing WRQOL. Additionally, Sirisawasd et al<sup>(22)</sup> suggested that the tool is able to be used for assessing WRQOL in Thai health care workers. However, the tools should test validity and reliability before using it. There has been no study of WRQOL among medical residents before.

### What this study adds?

This study confirmed that Thai WRQLS-2 tool could be applied in Thai healthcare workers. In addition, the result of the study has elucidated WRQOL level among Thai medical residents (medical trainees), and the numbers of hours of work play an important role in contributing the good WRQOL. Therefore, an optimal hour of work should be constructed and mandated for Thai medical professional. In addition, the tool, which included seven components, is suitable for all healthcare workers.

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### Potential conflicts of interest

The authors declare no conflicts of interest. This article is original and has not been submitted for

consideration elsewhere. The authors all participated in the design of the study, data collection, data analysis, and writing of the manuscript.

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## คุณภาพชีวิตการทำงานของแพทย์ประจำบ้าน ณ โรงพยาบาลสังกัดมหาวิทยาลัยแห่งหนึ่งในภาคตะวันออกเฉียงเหนือ

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**วัตถุประสงค์:** 1) เพื่อศึกษาคุณภาพชีวิตการทำงานของแพทย์ประจำบ้าน ณ โรงพยาบาลสังกัดมหาวิทยาลัยแห่งหนึ่งในภาคตะวันออกเฉียงเหนือ 2) เพื่อศึกษาปัจจัยที่มีความสัมพันธ์กับคุณภาพชีวิตการทำงานที่ดีของแพทย์ประจำบ้านฯ

**วัตถุประสงค์และวิธีการ:** ทำการศึกษาแบบเชิงพรรณนาและมีกลุ่มประชากรศึกษา คือ แพทย์ประจำบ้าน ณ โรงพยาบาลสังกัดมหาวิทยาลัยแห่งหนึ่งในภาคตะวันออกเฉียงเหนือจำนวน 375 คน โดยทำการศึกษาทั้งหมด และเก็บข้อมูลโดยใช้แบบประเมินคุณภาพชีวิตการทำงานฉบับแปลภาษาไทย

**ผลการศึกษา:** แบบประเมินคุณภาพชีวิตการทำงานฉบับแปลภาษาไทยมีการทดสอบค่าความเที่ยงได้ 0.908 และผลการศึกษาพบว่า มีอัตราการตอบกลับร้อยละ 68.3 (256/375) ทั้งนี้แพทย์ประจำบ้านมีค่าเฉลี่ยของคะแนนคุณภาพชีวิตการทำงานเท่ากับ 113.8 จากคะแนนเต็ม 170 (ส่วนเบี่ยงเบนมาตรฐาน 14.8) และแพทย์ประจำบ้านส่วนใหญ่มีคุณภาพชีวิตในการทำงานระดับปานกลาง (ร้อยละ 76.6) เมื่อพิจารณาในรายมิติทั้ง 7 มิติ พบว่ามีมิติความผูกพันของพนักงาน และมิติการมีโอกาสได้ตัดสินใจในงานมีระดับปานกลางถึงดี ด้านความสัมพันธ์ระหว่างบ้านกับที่ทำงาน ด้านความเป็นอยู่โดยทั่วไปและสภาพแวดล้อมในการทำงานมีระดับปานกลาง ด้านความพึงพอใจในงานมีระดับดีที่มีแนวโน้มไปยังปานกลาง และด้านความเครียดในการทำงานมีระดับไม่ดีถึงปานกลาง เมื่อวิเคราะห์ความสัมพันธ์ระหว่างปัจจัยส่วนบุคคลกับคุณภาพชีวิตการทำงานของแพทย์ประจำบ้านโดยใช้สถิติ *binary logistic regression* พบว่าแพทย์ประจำบ้านที่ปฏิบัติงานในสาขาเชี่ยวชาญรอง (*minor specialties*) มีระดับคุณภาพชีวิตการทำงานระดับดี มีสัดส่วนสูงกว่าแพทย์ประจำบ้านที่ปฏิบัติงานในสาขาเชี่ยวชาญหลัก (*major specialties*) (OR 2.522, 95% CI: 1.37, 4.63) แพทย์ประจำบ้านที่มีจำนวนเวรต่อเดือนที่น้อยกว่าหรือเท่ากับ 8 เวรต่อสัปดาห์ มีสัดส่วนที่มีคุณภาพชีวิตการทำงานระดับดีสูงกว่าแพทย์ประจำบ้านที่มีจำนวนเวรมากกว่า 8 เวรต่อสัปดาห์ (OR 2.263, 95% CI: 1.16, 4.41) และแพทย์ประจำบ้านที่มีชั่วโมงการทำงานน้อยกว่าหรือเท่ากับ 80 ชั่วโมงต่อสัปดาห์ มีสัดส่วนที่มีระดับคุณภาพชีวิตการทำงานดีสูงกว่าแพทย์ประจำบ้านที่มีชั่วโมงการทำงานมากกว่า 80 ชั่วโมงต่อสัปดาห์ (OR 2.344, 95% CI: 1.17, 4.72) จึงนำมาทำการวิเคราะห์กลุ่มย่อย (*subgroup analysis*) พบว่าจำนวนเวรน้อยกว่าหรือเท่ากับ 8 เวรต่อเดือน และจำนวนเวรน้อยกว่าหรือเท่ากับ 80 ชั่วโมงต่อสัปดาห์มีแนวโน้มความสัมพันธ์กับคุณภาพชีวิตในการทำงานในระดับดี ทำให้ชั่วโมงการทำงานมีบทบาทสำคัญที่ส่งผลให้มีคุณภาพชีวิตในการทำงานที่ดี

**สรุป:** แพทย์ประจำบ้านของโรงเรียนแพทย์แห่งหนึ่งมีคุณภาพชีวิตการทำงานในระดับปานกลาง ควรจัดให้แพทย์ประจำบ้านมีจำนวนชั่วโมงการทำงานที่เหมาะสมซึ่งควรไม่เกิน 80 ชั่วโมงต่อสัปดาห์ และควรเพิ่มระดับคุณภาพชีวิตการทำงานโดยเพิ่ม ความผูกพันของพนักงาน ด้านความสัมพันธ์ระหว่างบ้านกับที่ทำงาน ด้านความเป็นอยู่โดยทั่วไปและสภาพแวดล้อมในการทำงานและ ด้านความพึงพอใจในงาน ทั้งนี้ควรจัดการความเครียดในการทำงาน