Quality of life in the outbreak of COVID-19 and related factors in public health students in Thailand. A Case Study of Public Health Students, Faculty of Science, Buriram Rajabhat University.

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ABSTRACT

A cross-sectional survey was conducted to study the quality of life and factors affecting the quality of life of 83 students majoring in Public Health at Buriram Rajabhat University during the COVID-19 pandemic. A random sample of 83 students was selected from a population of 350 students. The World Health Organization Quality of Life-BREF Thai version (WHOQOL-BREF-THAI) was used to measure the quality of life. Descriptive statistics, percentages, and Fisher's Exact Test were used to analyze the data.

The results showed that the overall quality of life of the students was relatively good, with 42 (50.61%) of the students reporting a good quality of life. When considering the individual domains, the psychological and social relationship domains had a good quality of life, with 50 and 46 students, respectively (60.24% and 55.42% respectively). However, the environmental and physical health domains had a poor quality of life, with 50 and 46 students, respectively (60.24% and 55.42% respectively). Only the body mass index factor was found to be statistically significantly correlated with the level of the social relationship domain ($p < 0.05$).

Keywords: quality of life, public health students, Coronaviruss -2019

บทคัดย่อ

    การวิจัยเชิงสำรวจแบบภาคตัดขวาง เพื่อศึกษาระดับคุณภาพชีวิตและศึกษาปัจจัยที่มีผลต่อ
คุณภาพชีวิตของนักศึกษาสาขาวิชาสาธารณสุขศาสตร์ คณะวิทยาศาสตร์ มหาวิทยาลัยราชภัฏบุรีรัมย์
ในสถานการณ์การแพร่ระบาดของเชื้อไวรัสโคโรนา 2019 ในประเทศไทย เก็บรวบรวมข้อมูลจากกลุ่ม
ตัวอย่าง จำนวน 83 คน ด้วยวิธีการสุ่มตัวอย่างแบบกลุ่มจากประชากรทั้งหมด 350 คน โดยใช้เครื่องมือ
ชี้วัดคุณภาพชีวิตขององค์การอนามัยโลกชุดย่อ ฉบับภาษาไทย (WHOQOL-BREF-THAI) นำเสนอผล
ด้วยสถิติเชิงพรรณนา ได้แก่ ความถี่ ร้อยละ และสถิติเชิงอนุมาน Fisher's Exact Test

    การวิจัย พบว่านักศึกษามีคุณภาพชีวิตโดยรวมอยู่ในระดับดี จำนวน 42 คน (50.61%)
เมื่อพิจารณาองค์ประกอบเป็นรายด้าน พบว่า ด้านจิตใจและด้านสัมพันธภาพทางสังคมมีคุณภาพชีวิต
อยู่ในระดับดี จำนวน 50 คน และ 46 คน ตามลำดับ (60.24%, 55.42% ตามลำดับ) ส่วนด้าน
สิ่งแวดล้อมและด้านสุขภาพกายมีคุณภาพชีวิตอยู่ในระดับไม่ดี จำนวน 50 คน และ 46 คน ตามลำดับ
(60.24%, 55.42% ตามลำดับ) และมีเพียงปัจจัยดัชนีมวลกายที่มีความสัมพันธ์กับระดับองค์ประกอบ
ด้านสัมพันธภาพทางสังคมอย่างมีนัยสำคัญทางสถิติ ($p < 0.05$)

คำสำคัญ: คุณภาพชีวิต นักศึกษาสาธารณสุขศาสตร์ เชื้อไวรัสโคโรนา 2019

Introduction

    The United Nations (1997) defined quality of life in notion of human welfare (well-being) measured by social indicators rather than by "quantitative" measured of incomes and production. Quality of Life defined by the World Health Organization (2012) as an "individuals" perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concern". It is a brand ranging concept incorporating in a complex way the person's physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationships to salient features of the environments. As a matter of fact; quality of life is very important to the country development. This is because it is development in an individual, family and community levels having relationships to each other. Consequently, it has an effect on the country development as a whole. The measurement of people's quality of life has tools of both an individual

and the country overview. In Thailand, the overall quality of life indicators are based on basic needs which are data used for the determination of minimum standards in basis household necessities. People can develop their livelihoods which at least must pass criteria of basic needs and the minimum benchmark is considered to be revised every five years. This is by setting up indicators on health, environment, education, employment and incomes, and value (Ministry of Interior, 2016). Meanwhile, Thai version of the world health organization's Quality of Life indicators (WHOQOL-BREF-THAI or WHOQOL-26) is popular to apply and it was developed by Mahatnirunkul et al. (2002) from the quality-of-life indicators of the World Health Organization. It is the assessment of quality of life based on 4 aspects: physical health, mind, social relationships and environment. This is under the conceptual framework of level measuring by valuing the subjective values that are ingrained in the contexts of culture, society and environment. It focused on the perceived quality of life of the respondents. In fact, it is not expected to be a method for measuring the details of any disease or condition but it is an assessment of the effect of disease and treatment on the quality of chevron in a given situation.

According to the current situation of the Corona virus 2019 pandemic, it is found that throughout the world, as well as Thailand, there are impacts of the Corona virus 2019 pandemic. The number of infected people until August 5, 2022, will be 586,517,091 cases, 6,430,411 deaths, and 556,549,727 recoveries. An epidemic has been found in Thailand since 2020 and has severely spread across the country. According to data on the number of infected people from Thailand's COVID Situation Administration Center, there were 4,600,978 infected people, 32,529 deaths, and 4,548,639 recoveries (Trueid, 2022). Initially, it was expected that Thailand would be able to control the epidemic in 2021, but the epidemic was heavily spread and mutated into several subspecies. Also, it was expected that there would be a continual epidemic up to 2023. For the control of the epidemic, Thailand has measures for public health in terms of control according to the guidelines of the World Health Organization, such as maintaining social distance, wearing a protective mask, and speeding up vaccination. For the well-being of the people, the government sector has measures to stimulate the economy, such as a one trillion baht loan to solve the problem of public health and alleviate the suffering of people, as well as the country's economic rehabilitation. It is expected that 44 million

Thai people will benefit from the government sector's project during the COVID-19 pandemic.

Due to the ongoing outbreak, it is expected that the economy will not recover to the same level as before the epidemic, thus affecting vulnerable people who have to bear the burden of living. According to a World Bank survey and Gallup Poll (World Bank Blog, 2021) which conducted an urgent telephone survey of 2,000 people aged 18 years and older between April 27 and June 15, 2021 (using personal and family data such as occupation, income, food, access to health services, and vaccination), it was found that since the outbreak of the disease, Thailand has had 68% overall employment. It was found that employment in urban areas is declining but increasing in rural areas. This is because some of the population moved out of the city to return to the agricultural sector, which was their original hometown. Besides, more than 50 percent of people affected by the epidemic were forced to quit their full-time jobs. Also, some people had to reduce their working hours or compensation. These changes affected low-income households and had a significant impact on the education sector. Women with families and children had to bear the additional burden of care during the outbreak. More than 70 percent of people had decreased household incomes. With women burdened with additional care during the pandemic, the number of people receiving government welfare benefits nearly doubled from 2019.

In light of the aforementioned situation, the government has implemented a project to help the non-agricultural sector. Farming households will receive compensation from the "We Don't Leave You Behind" project for informal and independent workers. This includes other farmer assistance programs that cover 63 percent of farmers. Besides, it is found that low-income households and women having children (more than 60%) lack food to sustain life. About 40% have to endure starvation and worry about not having money to buy food to sustain life. This includes medical access, which was also limited during the epidemic, although these are community-based COVID-19 testing centers. It is because of limited operations that vaccination rates are still low since groups of people are not confident in side effects. Furthermore, the outbreak also affects education conditions in which attendance in online and on-site formats is normally restricted. In rural areas, few students go to school since they are worried about the risk of infection and lack of concentration while studying. Not only this, but some students cannot access learning equipment due to poverty (World Bank Blog, 2021).

Due to the aforementioned situation, different levels of educational institutions need to conduct teaching and learning in order to prepare quality personnel for the country under the limitations of the epidemic. Luckily, the government sector has integrated all sectors to be able to move forward in economy, society, education, livelihoods, and way of life in a universal form (the New Normal) for a better life. In the current situation, it has begun to relax the strictness of disease prevention and control and prepare to declare it an endemic disease. Meanwhile, the educational institutions had adapted themselves to be suitable for teaching and learning. This is particularly true for higher education institutions that produce professional personnel, like public health. There is improvement in teaching and learning forms (both theories and practice) to produce quality personnel in health services, health promotion, disease prevention and control, health care, health rehabilitation, and consumer protection. Therefore, this study can well reflect the needs of health personnel in the future. This will help create a learning process from self-assessment for development based on professional knowledge and skills and a better quality of life.

Materials and Research Methodology

This study was cross-sectional survey research aimed at exploring the quality level and factors related to quality of life among public health students at the Faculty of Science at Buriram Rajabhat University. This was under the epidemic situation of the Corona virus 2019 in Thailand and measures of teaching and learning facilitation at Buriram Rajabhat University. This was in accordance with the approach of the government sector and the Ministry of Public Health. Due to the easing of the epidemic, teaching and learning facilitation became on-site again.

An abbreviated Thai version of the World Health Organization's Quality of Life indicators by Mahatnirunkul et al. (2002) was developed from the WHOQOL-BREF-100, with reliability (Cronbach's alpha coefficient) at 0.8406 and validity at 0.6515. Compared to the Thai version of the WHOQOL-100 measurement, there were 26 items (WHOQOL-26) that the World Health Organization formally recognized. It consisted of two types of questions: the perceived objective and the self-reported subjective, used for inquiring about a level of feeling during the past two weeks. It involved quality of life components such as physical health, mental health, social relationships, the environment, and overall quality of life.

The team of researchers organized the questions into categories and rated them into two groups: the not-good group and the good group for each component, including overall quality of life. Then, determining the health of the Department of Health, Ministry of Public Health. It was divided into internal factors and external factors (Ministry of Public Health, 2013). The former included sex, body mass index, and learning outcomes. The latter included domicile, current residence, marital status of guardians, main occupation of guardians, and average monthly incomes of guardians. Hypothesis that internal and external factors affect the quality of life of the public health students at the Faculty of Science, Buriram Rajabhat University. This study was conducted in the first semester of the academic year 2022, during June–September 2022. Eighty-three samples out of 350 third-year public health students were obtained by cluster random sampling (Office of Academic Promoting and Registration, Buriram Rajabhat University, 2022).

A set of questionnaires was used for data collection based on components of quality of life level measurement in four aspects: 1) Physical: the questions involved perception of physical fitness condition, ability in daily life practice, and non-reliance on drugs or medical treatment; 2) Mental: the questions involved perception of self-image, self-esteem, self-confidence, and the ability to manage sadness or worry; 3) Social relationship: the question involved perception of their relationships with other people in society, getting help from other people, and sexual mood; and 4) Environmental : the question involved perception of the environment having an effect on lifestyle, independent living, safety and security in life, living in a good physical environment, convenient transportation, financial benefits, health service, and social welfare places, an opportunity to receive information or training, and recreation or pastime activities. The questionnaire asked about experiences over the past two weeks. The respondents must explore and assess their own experiences or feelings in various aspects and choose the most appropriate true answer.

The questionnaires had 5 possible answers: 1) Lowest (no feeling at all); 2) Low (seldom have the feeling); 3) Moderate (moderate satisfaction); 4) High (often have such a feeling); and 5) Highest (always have such a feeling or feel good). Scoring for the quality of life was measured using a total of 26 question items. It was a 5-rating scale comprising 23 positive question items and 3 negative question items (items 1, 5 and 12). In other words, there were 2 groups, as follows:

Group 1 (Positive questions)			Group 2 (Negative questions)		
Level		Score	Level		Score
Lowest	=	1	Lowest	=	5
Low	=	2	Low	=	4
Moderate	=	3	Moderate	=	3
High	=	4	High	=	2
Highest	=	5	Highest	=	1

The interpretation of quality-of-life levels was applied by dividing into 2 groups: not good and good groups (adapted from Mahatnirunkul et al., 2002).

Physical health-score 7-26 = not good, 27-35 = good

Mental health-score 6-22 = not good, 23-30 = good

Social relationship-score 3-11 = not good, 12-15 = good

Environment-score 8-29 = not good, 30-40 = good

Overall quality of life-score 26-95 = not good, 96-130 = good

The data were analyzed using descriptive statistics (frequency and percentage) and inferential statistics (finding relationships between factors affecting the quality of life level of the respondents, Fisher's Exact Test).

Results of the Study

The results of the study on the level of quality of life of the respondents (83 public health students) are shown in Tables 1–3.

Table 1. General data and quality of life levels of the respondents (n=83)

General data	n	percent
Sex		
Male	7	8.43
Female	76	91.57
Body Mass Index (Department of Disease Control, 2022) (kg./m^2)		
Underweight (Less than 18.5)	20	24.10

Table 1. (Continue)

General data	n	percent
Normal range (18.5-22.9)	38	45.78
Obese class I (23.0-24.9)	7	8.43
Obese class II (25.0-29.9)	10	12.05
Obese class III (30.0 ขึ้นไป)	8	9.64
Grade point average (Grade Point Average, 2022)		
Poor (1.50 – 1.99)	3	3.61
Rather poor (2.00 – 2.49)	34	40.96
Fair (2.50 – 2.99)	30	36.14
Good (3.00 – 3.49)	12	14.46
Excellent (3.50 – 3.99)	4	4.82
Province		
Buriram	56	67.47
Surin	13	15.66
Nakhon Ratchasima	7	8.43
Roi-Et	3	3.61
Sisaket	1	1.21
Maha Sarakham	2	2.41
Chonburi	1	1.21
Current residence		
The university dormitory	2	2.41
Private dormitory	56	67.47
Apartment	7	8.43
Rent a house	8	9.64
Stay at a relative's house	2	2.41
Stay at home	8	9.64
Marital status of guardians		
Married	64	77.11
Divorced	16	19.28

Table 1. (Continue)

General data	n	percent
Widowed	3	3.61
Main occupation of guardians		
Farmer	52	62.65
Hired worker	17	20.48
Merchant	6	7.23
Government service	7	8.43
Own business	1	1.21
Family average monthly income		
$\geq$ 6,000 baht	9	10.84
6,001-8,000 baht	15	18.07
8,001-10,000 baht	21	25.30
10,001-12,000 baht	20	24.10
More than 12,000 baht	18	21.69
Quality of Life Level		
Physical health		
Not good (7 – 26 scores)	46	55.42
Good (27 – 35 scores)	37	44.58
Mental health		
Not good (6 – 22 scores)	33	39.76
Good (23 – 30 scores)	50	60.24
Social relationships		
Not good (3 – 11 scores)	37	44.58
Good (12 – 15 ค scores)	46	55.42
Environment		
Not good (8 – 29 scores)	50	60.24
Good (30 – 40 scores)	33	39.76

Table 1. (Continue)

General data	n	percent
Overall quality of life		
Not good (26 – 95 scores)	41	49.40
Good (96 – 130 scores)	42	50.61

According to Table 1, it was found that most of the respondents were females (91.57%), with an 18.5-22.9 body mass index (kg/m^2). Their grade point average range was 2.00-2.49. Their domicile was in Buriram Province, and they mostly stayed in private dormitories outside the campus. Most of the respondent's guardians were farmers and married, with an average monthly income range of 8,001–12,000 baht. The respondents had a high level of quality of life in terms of social relationships and their minds. However, it was found at a low level in terms of the environment and physical health. As a whole, the respondents had a high level of quality of life.

Table 2. The number and percentage of feeling levels of the respondents in the past two weeks (n=83)

Item	Feeling towards situation during the past two weeks	Feeling level					Description
		Lowest (%)	Low (%)	Moderate (%)	High (%)	Highest (%)	
Physical Health							
1	Body pain such as head ache or stomach ache makes you unable to do what you want.	14 (16.87)	24 (28.92)	28 (33.73)	14 (16.87)	3 (3.61)	**Moderate**
2	You have enough energy to do things each day. (Leaving and daily life activities)	2 (2.41)	4 (4.82)	25 (30.12)	38 (45.78)	14 (16.87)	**High**
3	You are satisfied with your sleep.	3 (3.61)	17 (20.48)	34 (40.97)	19 (22.89)	10 (12.05)	**Moderate**

Table 2. (Continue)

Item	Feeling towards situation during the past two weeks	Feeling level					Description
		Lowest (%)	Low (%)	Moderate (%)	High (%)	Highest (%)	
4	You are satisfied with what you have done each day.	2 (2.41)	2 (2.41)	32 (38.55)	31 (37.35)	16 (19.28)	**Moderate**
5	You need to get medical care in order to work or live.	34 (40.97)	30 (36.14)	12 (14.46)	5 (6.02)	2 (2.41)	**Lowest**
6	You are as satisfied with your learning ability as before.	0 (0.00)	13 (15.66)	39 (46.99)	25 (30.12)	6 (7.23)	**Moderate**
7	You can go anywhere by yourself.	0 (0.00)	2 (2.41)	7 (8.43)	22 (26.51)	52 (62.65)	**Highest**
Mental Health (Mind)							
8	You are satisfied with your life in terms of calm, happiness, and hope.	1 (1.21)	2 (2.41)	25 (30.12)	36 (43.37)	19 (22.89)	**High**
9	You concentrate on studying and working.	1 (1.21)	4 (4.82)	47 (56.62)	24 (28.92)	7 (8.43)	**Moderate**
10	You are satisfied with yourself.	1 (1.21)	3 (3.61)	25 (30.12)	27 (32.53)	27 (32.53)	**Highest**
11	You accept your appearance.	1 (1.21)	3 (3.61)	22 (26.51)	32 (38.55)	25 (30.12)	**High**
12	You have a bad feeling such as loneliness, sadness, dismalness, and despair.	9 (10.84)	40 (48.19)	18 (21.70)	13 (15.66)	3 (3.61)	**Low**
13	You feel that your life is meaningful.	2 (2.41)	3 (3.61)	11 (13.25)	28 (33.73)	39 (47.00)	**Highest**
Social relationships							
14	You are satisfied with befriending or getting along with others.	1 (1.21)	6 (7.23)	23 (27.70)	34 (40.97)	19 (22.89)	**High**
15	You are satisfied with the help of a friend.	1 (1.21)	3 (3.61)	8 (9.64)	32 (38.55)	39 (46.99)	**Highest**

Table 2. (Continue)

Item	Feeling towards situation during the past two weeks	Feeling level					Description
		Lowest (%)	Low (%)	Moderate (%)	High (%)	Highest (%)	
16	You are satisfied with your sexual life. (sexual feelings and how to deal with them)	4 (4.82)	4 (4.82)	35 (42.17)	21 (25.30)	19 (22.89)	**Moderate**
Environment							
17	You feel like your life is safe each day.	0 (0.00)	1 (1.21)	33 (39.75)	35 (42.17)	14 (16.87)	**High**
18	You are satisfied with the condition of the house where you live.	1 (1.21)	5 (6.02)	20 (24.10)	27 (32.53)	30 (36.14)	**Highest**
19	You have enough money to spend as needed.	3 (3.61)	16 (19.27)	40 (48.19)	18 (21.70)	6 (7.23)	**Moderate**
20	You are satisfied that you can go to public health services as needed.	0 (0.00)	5 (6.02)	34 (40.97)	37 (44.58)	7 (8.43)	**High**
21	You perceive news and information as needed in daily life.	0 (0.00)	6 (7.23)	39 (46.99)	29 (34.94)	9 (10.84)	**Moderate**
22	You have the opportunity to relax and unwind.	3 (3.61)	9 (10.84)	44 (53.01)	23 (27.72)	4 (4.82)	**Moderate**
23	The environment is good for your health.	0 (0.00)	6 (7.23)	20 (24.10)	40 (48.19)	17 (20.48)	**High**
24	You are satisfied with your journey.	0 (0.00)	4 (4.82)	39 (46.99)	29 (34.94)	11 (13.25)	**Moderate**
Overall health and wellbeing							
25	You are satisfied with your health.	3 (3.61)	8 (9.64)	31 (37.35)	31 (37.35)	10 (12.05)	**High**
26	What level of quality of life do you think you have?	0 (0.00)	4 (4.82)	32 (38.55)	31 (37.35)	16 (19.28)	**Moderate**

According to Table 2, the respondents had the highest level of physical health. That meant they were able to go anywhere as needed and had no need to be hospitalized. The following were found at a moderate level: leaving ability, sleeping or relaxation, satisfaction with daily life activities, and body pain, respectively. Regarding mental health, the respondents had the highest level of self-satisfaction and a meaningful life. Learning/working level concentration was found at a moderate level, but loneliness, worry, sadness, and despair were found at a low level. For social relationships, the respondents were most satisfied with help from friends, while sexual feelings were found at a moderate level. In terms of the environment, the respondents were most satisfied with their houses. These following factors were found at a moderate level: relaxation (stress relief), having the necessary expenses, and journey ability, respectively. It was also found that the respondents were satisfied with their health at a moderate level, but their quality of life was at a moderate level.

Table 3: Data on the determination of relationships between factors and the level of quality of life of the respondents (n = 83)

Factor	Level of quality of life components (%)									
	Physical health		Mental health		Social relationships		Environment		Overall quality of life	
	Not good (7-26 score)	Good (27-35 score)	Not good (6-22 score)	Good (23-30 score)	Not good (3-11 score)	Good (12-15 score)	Not good (8-29 score)	Good (30-40 score)	Not good (26-95 score)	Good (96-130 score)
Body Mass Index										
Underweight (less than 18.5 kg./m^2) 20 persons	12 (60.00)	8 (40.00)	7 (35.00)	13 (65.00)	6 (30.00)	14 (70.00)	13 (65.00)	7 (35.00)	8 (40.00)	12 (60.00)
Normal range (18.5-22.9 kg./m^2) 38 persons	23 (60.53)	15 (39.47)	16 (42.11)	22 (57.89)	22 (57.89)	16 (42.11)	23 (60.53)	15 (39.47)	21 (55.26)	17 (44.74)
Obese class I (23.0-24.9 kg./m^2) 7 persons	2 (28.57)	5 (71.43)	3 (42.86)	4 (57.14)	3 (42.86)	4 (57.14)	5 (71.43)	2 (28.57)	4 (57.14)	3 (42.86)
Obese class II (25.0-29.9 kg./m^2) 10 persons	5 (50.00)	5 (50.00)	4 (40.00)	6 (60.00)	5 (50.00)	5 (50.00)	6 (60.00)	4 (40.00)	6 (60.00)	4 (40.00)
Obese class III (more than 30.0 kg./m^2) 8 persons	4 (50.00)	4 (50.00)	3 (37.50)	5 (62.50)	1 (12.50)	7 (87.50)	3 (37.50)	5 (62.50)	2 (25.00)	6 (75.00)

Table 3: (Continue)

Factor	Level of quality of life components (%)									
	Physical health		Mental health		Social relationships		Environment		Overall quality of life	
	Not good (7-26 score)	Good (27-35 score)	Not good (6-22 score)	Good (23-30 score)	Not good (3-11 score)	Good (12-15 score)	Not good (8-29 score)	Good (30-40 score)	Not good (26-95 score)	Good (96-130 score)
Fisher's Exact Test	2.941		0.256		8.248		2.101		3.002	
Exact Sig	0.417		0.986		0.041*		0.567		0.409	

*p-value < 0.05

According to Table 3, it was found that there was a statistically significant relationship between the body mass index factor with the components on social relationships ($p<0.05$). This conformed to the hypothesis as set. However, there was no relationship between the level of quality of life of the respondents with the following factors including: sex, learning outcome, domicile, current residence, marital status of guardians, main occupation of guardians, and their average monthly income. Therefore, the results of this study rejected the hypothesis as set.

Discussions

The measurement of quality of life was based on satisfaction or perception of an individual. The team of researcher employ the quality-of-life indicators of Thai version of the World Health Organization for this study. The sample group consisted of 83 Public Health students of the Faculty of Science, Buriram Rajabhat University. It was found that the female students had body mass index below standard (less than 18.5 kg./m^2) and their learning achievement was fair (G.P.A.=2.50-2.99). Most of the students stayed in the private dormitory outside the campus. Most of their guardians were farmers and married with an average monthly income of 8,001 baht and above. Most of the students had good quality of life comparison with those in the same group. Based on its details, the components on mind and social relationships were found at a high level (Good). This conformed to a study of Junaidi Budi Prihanto, et al. (2021) which found that Surabaya University students (Indonesia) had a high level of quality of life on the basis of mental and social aspects. However they had a low level in terms of physical health and environment. This also conformed to a study of Wittayawongsaruji (2007) which found

that the students were dissatisfied with the university dormitory in terms of management and privacy. Although the government had easing measures disease control but relaxation, having money to spend as needed, information perception and transportation were found at a moderate level, respectively. Aside from the Corona virus 2019 pandemic, there was a war situation between Russian and Ukraine which it had impacts on Thailand. The rising price of oil had caused even more declines in household incomes at the former income level. This study had impacts on travelling for relaxation, daily expenses, and transportation.

In addition, restricting access to necessary information and receiving fake information resulted in misunderstanding. With regards to the component or physical health of the student, it was found at a low level even though they had received at least three doses of the prophylactics vaccine. Their health was not good in terms of the followings: learning ability, not enough sleeping, and ability to use daily life. Limitations that prevent students from developing their physical potential, such as concerns about exercising in sport fields and parks, as well as being restricted in activities, prevent them from developing their potential. However, mind and social relationships were found at a high level because the students understood and accepted their own work. Besides, it was found that the students were warried and sad about learning concentration and various daily life practices. For social relationships they were satisfied with help from friends but worried about proper sexual orientation.

According to factors having a relationship with quality of life, it was found that only body mass index had a statistically significant relationship with social relationship ($p<0.05$). This conformed to a study of Naim Nur, Ahmet Kibik, Esma Kilic, and Haldun Sumer (2017) and Junaidi Budi Prihanto et.al. (2021) which found that body mass index had a relationship with the mental health and social relationships components (particularly on those having underweight)

This study showed that the students having body mass index below the standard (less than 18.5 kg./m^2) and above the standard (more than 30 kg./m^2) had the mental component better than those having other body mass index. This conformed to the mental question item which found that the students were satisfied with help from friends at a highest level and followed by making friends on getting along with others (High level). This denoted that the students having little body weight (Thin) and those having much weight receive good care and attention from society. The following did not have relationships with the level of quality of life of the students; sex, grade point average, domicile, current residence, and personal data of their guardians. This

conformed to a study of Mohd Rizal Abdul Manaf et al. (2021) which found that only age had a relationship with all components effecting quality of life of university staff in Malaysia.

According to results of the study as a whole, the students had a high level of quality of life. This might be because the quality of life level of health profession students in Thailand understood and accepted the current situations mainly under the measures of the government section. The clear measures based on that of the World Health Organization included wearing mask, vaccination and providing services to key groups such as group with underlying disease. At present, it is found that the number of vaccinations worldwide up to July,2020 is 12,314,269,121 or an average of 11,099,125 injections per day (Trueid, 2022). Besides there is integration with key ministries such as Ministry of Higher Education, Science, Research and Innovation having strict measures on teaching and learning facilitation. This include : selection of important activities for students to join under activity holding measures to prevent disease pandemic; community leader participation in the disease prevention and control; village health volunteers are strong in performing their duties; and individual measures by self-screening for infection.

Although the overall of the study showed that the students had a high level of quality of life during the Corona virus 2019 pandemic but now there is an incidence of disease-monkey pox in Europe and found in Thailand on 5th August,2022. (3 patients) (Thaipbs, 2022). This had impacts on the quality of life level of students and people. Hence, concerned international agencies such as World Health Organization and the United Nations needed to accelerate the processing of information rapidly. This included research and development of good innovation and safe for life for a better quality of life of the world community. In Thailand, the government played vital roles to create stability in economy, society and environment for sustainable happiness and prosperity of people. This was under the vision of the 20-year National Strategic Framework - "Thailand is stable, prosperous and sustainable" (Thaigov, 2006). It aimed to make Thailand be developed country according to the principles of sufficiency economy that are adapted accordingly.

Conclusions

During the period of Corona virus 2019 pandemic in Thailand, as a whole, it was found that about one-half of the Public Health students of the Faculty of Science had a high level of quality of life. Their mental health and social relationship components were found at a high level but physical health and environment were found at a low level (60.24% and 55.42%, respectively). Their body mass index was found to have a statistically significant relationship with the social relationship components (*p<0.05*).

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