**Received:** Feb 3, 2022 **Revised:** Feb 17, 2022 **Accepted:** Apr 4, 2022

\_\_\_\_\_

# Quality of Life of Thai Employees under COVID-19 Pandemic คุณภาพชีวิตของพนักงานไทยในสถานการณ์โรคระบาดไวรัสโคโรนาสายพันธ์ใหม่ 2019 (COVID-19)

Nuchjaree Pookkaman นุชจรีย์ พุกกะมาน International College Burapha University วิทยาลัยนานาชาติ มหาวิทยาลัยบูรพา Nuchjaree@go.buu.ac.th

#### Abstract

This research aims to 1) study the level of quality of life of employees in Thailand during the novel coronavirus disease 2019 (COVID-19) epidemic, and 2) to compare the quality of life in terms of physical health, psychological health, social relationship, and environmental of government officers and private sector employee in Thailand in the situation of the novel coronavirus disease 2019 (COVID-19) by collecting data from 385 government officers and private sector employees in Thailand who cooperated in collecting data. From the results, it can be concluded that 1) overall, staff in Thailand have a moderate quality of life ( $\bar{x}$  =3.62, SD=0.47). 2) Occupational variables (government officers and private sector employees) did not affect quality of life overall and in terms of physical health, psychological health, social relationship, and environmental with a statistically significant difference at 0.05 level.

Keywords: Quality of life, Thai Employee, COVID-19 pandemic

# บทคัดย่อ

การวิจัยในครั้งนี้มีวัตถุประสงค์ 1) เพื่อศึกษาระดับคุณภาพชีวิตของพนักงานในประเทศไทยในสถานการณ์โรค ระบาดไวรัสโคโรนาสายพันธ์ใหม่ 2019 (COVID-19) และ 2) เพื่อเปรียบเทียบระดับคุณภาพชีวิตในด้านสุขภาพกาย ด้าน จิตใจ ด้านสัมพันธภาพทางสังคม และด้านสิ่งแวดล้อมของพนักงานภาครัฐ และภาคเอกชนในประเทศไทยในสถานการณ์โรค ระบาดไวรัสโคโรนาสายพันธ์ใหม่ 2019 (COVID-19) โดยดำเนินการเก็บข้อมูลจากพนักงานพนักงานมาครัฐ และภาคเอกชน ในประเทศไทยที่ให้ความร่วมมือในการเก็บข้อมูลจำนวนทั้งสิ้น 385 คน ผลการวิเคราะห์ พบว่า 1) คุณภาพชีวิตโดยรวมของ พนักงานในสถานการณ์โรคระบาดไวรัสโคโรนาสายพันธ์ใหม่ 2019 (COVID-19) อยู่ในระดับปานกลาง ( $\bar{x}$ =3.62, SD=0.47) 2) ไม่พบความแตกต่างในด้านคุณภาพชีวิตโดยรวมระหว่างพนักงานภาครัฐและเอกชน และในรายด้าน ได้แก่ ด้านสุขภาพ กาย ด้านจิตใจ ด้านสัมพันธภาพทางสังคม และด้านสิ่งแวดล้อม อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05

**คำสำคัญ**: คุณภาพชีวิต, พนักงานของไทย, การระบาดของไวรัสโคโรนาสายพันธ์ใหม่ 2019

#### Introduction

The office of the national economic and social development board (1997) has defined quality of life as the living of human beings at an appropriate level according to the basic needs in a society at a certain time. Elements of a suitable foundation are at least enough food, clothes, proper housing, good physical and mental health, a primary education, safety of life and property, and the necessary essential economic and social services for a fair livelihood. Quality of life is overall general well-being, consisting of objective descriptors and subjective evaluations of physical, material, social, and emotional well-being plus levels of personal development and purposeful activity, all of which are considered by personal values (Karimi & Brazier, 2016). Besides, economic conditions that are very uncertain because of the crisis have caused employees to experience mental health problems and quality of life problems (Drydakis, 2015).

The new coronavirus or the COVID-19 virus is spreading in countries worldwide and has many infected people. COVID-19 is a virus in the coronavirus family that can spread through objects contaminated with germs. It lasts for days without cleaning. Severe patients will also have pneumonia. If the symptoms are severe, it can lead to internal organ failure (Department of Disease Control, 2020). Although during the past year 2020, the number of infected people in Thailand is not much compared to countries in Europe, America, or Asia. However, by the end of 2020, the number of infected people has increased considerably, especially the new wave of infection that started in Samut Sakhon province. There are still many infected people every day (Department of Disease Control, 2021). This situation has had a significant impact on the business sector in Thailand. Some had to close their businesses, and others let their employees go without financial aid. The National Statistical Office (Office of the National Economic and Social Development Board, 2022) has collected data on the unemployment rate of Thai people. From 2019 to 2020, the unemployment rate was between 2.25 and 1.64 percent, higher than before the outbreak of COVID-19. And for employees who have not been laid off. Some organizations choose to cut employee salaries instead of closing the business. Employees in such organizations have had to drastically alter their lifestyles to survive the ongoing epidemic, such as changing work patterns, stress, rising costs, and the risk of infection. These adjustments will undoubtedly affect their quality of life. Quality of life is an important and desirable goal in life. Having a good quality of life shows that a person can live everyday life. Therefore, the organization's executives or the human resource management department must focus on especially when employees come to work in unusual situations. Consequently, organizations must have the information to plan and support or enhance the quality of life of their employees. When employees are satisfied with their lives, it will lead to efficient work, job satisfaction, and further engagement with the organization.

Since 2019, the Thai government has supported employees in the private sector affected by the COVID-19 situation, such as providing short-term financial support, reducing the payment rate for social security funds, etc. But many people still struggle to live their lives, provide for their families, and prevent themselves from COVID-19 at the same time. On the contrary, those working in the public sector may not be affected much compared to the private sector. This corresponds to Kramer and Kramer (2020) suggestion that the impact of the Covid-19 pandemic is widespread and may result in the temporal disappearance of some occupations and dramatic growth in other occupations, and the changes in the status of some occupations and their value proposition.

For the above reasons, the researcher wants to study the Quality of Life of employees in Thailand during the COVID-19 pandemic. Therefore, the organization can use the research results as data for assessing the situation and be prepared to deal with similar problems or similar situations in the future.

# Objectives of the Study

- (1) To study the quality of life of employees in Thailand in the COVID-19 pandemic.
- (2) To compare the quality of life of employees in Thailand in the COVID-19 pandemic.

# **Expected Benefits**

- (1) To be beneficial to the organization for preparing a plan to improve employees' quality of life in Thailand in the COVID-19 pandemic.
- (2) To be helpful for the researcher interested in the quality of life of employees in Thailand in the COVID-19 pandemic.

## Literature review

#### Quality of life

Quality of life is highly subjective. Whereas one person may define quality of life according to wealth or satisfaction with life, another person may define it in terms of capabilities (e.g., having the ability to live a good life in terms of emotional and physical well-being). For example, a disabled person may report a high quality of life, whereas a healthy person who recently lost a job may report a low quality of life. Within the arena of health care, quality of life is viewed as multidimensional, encompassing emotional, physical, material, and social well-being (Britannica, 2021). It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs, and relationship to salient features of their environment (The World Health Organization, 2020). Quality of life can cause a person to feel happy (Sense of Well-being), which results from feelings of satisfaction or dissatisfaction in each aspect of life that is important to that person (Ferrans & Powers, 1992).

Abraham Maslow's human developmental perspective inspired a quality of life theory. It is stated that people of developed cultures are primarily concerned with meeting higher-order needs (social, esteem, and self-actualization), whereas members of less-developed civilizations are primarily concerned with meeting lower-order needs (biological and safety related needs). The hierarchical need satisfaction level of the majority of a society's members is used to determine quality of life. The better the satisfaction of the majority's needs in a given society, the higher the society's quality of life (Sirgy M. J., 1986).

The most popular quality of life assessment concept is an assessment based on the concept by (Power, M., Harper, A., Bullinger, M., & The WHOQOL Group, 1999) found that the quality of life consisted of four components: 1) physical domain: the perception of a person's physical condition, which affects daily life such as physical fitness, feeling of comfort, ability to deal with physical pain, awareness to freedom of independence, etc.

- 2) Psychological domain: the perception of person's mental state such as perception of positive feelings person has about himself, perception of self-image, self-awareness, self-confidence, etc.
- 3) Social relationships: the perception of a person's relationship with other people, the perception of being helped by others in society, recognizing that they are contributors, help other people in the community, including perceptions of sexual emotions or having sex.
- 4) Environment: the perception of the environment that affects life. For example, the perception that a person lives independently, not imprisoned, safe and secure in life.

## Occupational status

COVID-19 brought the country to a halt, affecting the socioeconomically disadvantaged by closing local and small businesses, restaurants, open food markets, service sectors, food industries, and food supplies. Food and other commodity prices have risen, many jobs have been lost, and massive cost cutbacks have become unavoidable, affecting development money and humanitarian programs, and ultimately affecting household earnings. These components of the epidemic have produced mental stress in people from many areas of life. An occupational status, a key measure of socioeconomic status, is traditionally defined as the power privilege, and prestige that are associated with a specific occupation (Lin, Ensel, & Vaughn, 1981). A broader definition of occupational status also includes the level institutional social recognition an occupation receives (Zhou, 2007).

Many research have examined the severity of COVID-19 and the ways in which individuals, the business and public sectors, and society as a whole have dealt with the condition and its consequences. (McKibbin and Fernando, 2020), for example, stated that the coronavirus epidemic had harmed the global economy in the short run. According to (Anderson et al., 2020), deaths and huge economic damage caused by COVID-19 have astonished international leaders.

Thai government issued policies to stop and fix the pandemic of COVID-19 from the lockdown or close the area where many people gather. Refraining from moving people both within and between countries, including a ban on foreign tourists from entering Thailand, has had a wide range of impacts, such as people changing their health behaviors by reducing their outings. In addition, it affects the economy to slow down and raise the unemployment rate. There were 0.75 million unemployed people—one time increase from the standard unemployment rate (Human resource policy research department, Thailand Development Research Institute, 2020). and new graduates in 2020 who are entering the labor market 0.52 million are likely to find work, making it more difficult, or it may take longer to find a job than usual. The ratio of household debt to GDP is 80.1 percentages, the highest in 4 years since the second quarter of 2016. In terms of the social security system, workers with social security under Section 39 and Section 40 still received benefits. Still, income loss from the lockdown or close the area from the Covid-19 pandemic has to rely on the state welfare (Office of the National Economic and Social Development Council, 2020). In total, there are 6.1 million Thai workers directly affected. Businesses that are fully affected, whether in full or lenient lockdown cases include arts, entertainment, recreation, and education groups. Still, in other businesses, impact level from full lockdown cases is higher, such as hotels, restaurants, and other service activities.

From government assistance Measures different in each sector may not be covered and equal. Therefore, it may result in employees with different occupations having varying levels of quality of life.

According to the literature review, the authors propose the following hypothesis.

H1: Employee in Thailand with different occupation have different level of quality of life.

# Research Methodology

The study of the Quality of life of Thai employee in Thailand under the COVID-19 pandemic is quantitative research. Research methods are as follows:

# Population and sample

The population used in the study was employees working in various establishments or agencies in Thailand. They are divided into two groups: 1) Government officers: those who work in government organizations such as the military, police, civil servants, and others, including employees of state enterprises. 2) Employees in the private sector: a person who works or is employed in a private organization. The sample size was determined by a computational method using the formula of W.G. (Cochran, 1953), when the exact population was unknown. Determined at the 95% confidence level with an error of  $\pm 5\%$ . The sample size was 385 people. The researcher conducted data collection of 400 people, divided by 200 Government and private employees each, and selected the sample by convenience sampling due to the COVID-19 pandemic. In addition, the researcher collected data from the respondents who cooperated in answering the questionnaire. With regard to the questionnaire gathering in this study applies the purposive sampling technique. As a result, a total of 400 questionnaires were received. Due to 15 that were found incomplete and with response errors, they were deducted from further analysis of the surveys completed and received, so that only 385 were usable.

#### Research instrument

In this research, the researcher used a questionnaire as an instrument to collect data, divided into two parts:

Part 1: Respondents' demographic is a multiple-choice question, seven items, namely gender, age, marital status, minor or child in custody, Education, occupation, and place of work during the COVID-19 pandemic.

Part 2: Quality of Life Assessment Form. The researcher used the quality of life standard questionnaire of the World Health Organization (Thai version) (WHOQOL - BREF - THAI) 26 indicators by the (Department of Mental Health, 2002) Ministry of Health. It consists of 23 positive questions and three negative questions: item numbers 2, 9, and 11. Each question has a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely).

# Reliability and Validity

The researcher used a standard questionnaire of the World Health Organization's Quality of Life Measurement Tool (WHOQOL - BREF - THAI) 26 indicators by the (Department of Mental Health, 2002) Ministry of Health. The constructs have construct reliability of factor loading at 0.6515, which exceeds 0.7 for good reliability and validity (Hair, Babin, & Anderson, 2010). Researcher brought the questionnaire to ask for advice and opinions from 3 experts to check the content validity, ensure that the respondents understood the questions, and be used for research studies that match the intended purpose. As a result, the constructs have construct reliability of factor loading at 0.948. After that, the questionnaire was adjusted before use.

The World Health Organization's Quality of Life Measurement Tool (WHOQOL - BREF - THAI) 26 indicators by the Department of Mental Health, Ministry of Health has reliability with an alpha Cronbach coefficient at 0.8406. WHO officially recognized this Thai version of the WHOQOL-100 measurement.

#### Data Collection

- (1) Questionnaires were distributed to employees working in various establishments or agencies in Thailand who consented to the information and voluntarily answered the questionnaire via google form.
- (2) The obtained questionnaires were used to verify the integrity of the questionnaires and lead to the statistical analysis process.

# Statistical Techniques

The statistics used in the data analysis were mean, standard deviation (SD), percentage, and One-Way MANOVA to compare the quality of life of the two sample groups.

# Ethical issues

All procedures were conducted in accordance with the ethical standards of the Helsinki Declaration of 1975, as revised in 2013. The study protocol was reviewed and approved by the Research Ethics Committee of Burapha university (approved on June 10, 2020; approval number HU050/2564(C1)).

## Results

385 respondents had demographic data as follows; 1) Most of the respondents were female at 41% 2) Age range between 31-40 years old, at 58.2% 3) Having single status and married in the similar amount, being single at 48.6%, married/living together, 48.3% 4) Most of the respondents had no minors or children in custody at 71.5% 5) Having the highest education at the postgraduate level at 51.2%, followed by bachelor's degree at 45.5% 6) Occupation, divided into Government officers 195 people (50.6%) Private sector employee 190 people (49.4%) and 7) Most of them were working from various places such as home, work, and other places at 41.5% during the COVID-19 pandemic.

The descriptive statistics are provided as shown in Table 1-2

ผ่านการรับรองคุณภาพจากศนย์ดัชนีการอ้างอิงวารสารไทย (TCI.) อยู่ในกลุ่ม 1 | วารสารมนุษยศาสตร์และสังคมศาสตร์มหาวิทยาลัยธนบุรี Vol 16 NO 2 May - August 2022

Table 1: Quality of life of employees in Thailand in the COVID-19 pandemic (Divided by components)

Components	Questions	$\overline{x}$	SD	Interpret
physical health	Body pain such as headaches,	3.13	0.85	moderate quality of life
	stomachaches, and body aches			
	keep you from doing what you			
	want.			
	Do you have the strength to do	3.89	0.67	good quality of life
	things each day?			
	(both work or daily life)			
	How satisfied are you with your	3.57	0.93	moderate quality of life
	sleep?			
	How satisfied are you with being	3.78	0.43	good quality of life
	able to get through the day?			
	How much medical care do you	3.17	0.96	moderate quality of life
	need? to work or live each day.			
	How much are you satisfied with	3.66	0.67	moderate quality of life
	your ability to work as before.			
	How well are you able to get	4.27	0.71	good quality of life
	around by yourself?			
Total		3.64	0.40	moderate quality of life
psychological health	How satisfied are you with your	3.69	0.48	good quality of life
	life (for example; happiness,			
	peace, hope)?			
	How well do you concentrate on	3.76	0.61	good quality of life
	various tasks?			
	How satisfied are you with	3.96	0.49	good quality of life
	yourself?			
	Can you accept your appearance?		0.38	good quality of life
	Do you have bad feelings, such as	2.90	0.94	moderate quality of life
	loneliness, sadness, depression,			
	hopelessness, anxiety?			
	How meaningful do you feel abou	t3.96	0.68	good quality of life
	your life?			
Total		3.71	0.39	good quality of life

Components	Questions	$\overline{x}$	SD	Interpret
Social relationship	How satisfied are you with making	3.96	0.74	good quality of life
	friends or getting along with others	;		
	as before?			
	How satisfied are you with the	3.93	0.87	good quality of life
	help you have received from your			
	friends?			
	How satisfied are you with your	4.03	0.61	good quality of life
	sex life? (Sex life means that once			
	sexual sensations arise, you can			
	manage to relax them, including			
	masturbation or having sex)			
Total		3.77	0.55	good quality of life
Environmental	Do you feel that your life is safe	3.50	0.81	moderate quality of life
	and secure each day?			
	How satisfied are you with the	3.92	0.80	good quality of life
	condition of the houses you are in			
	now?			
	How much money do you have to	3.47	0.68	moderate quality of life
	spend as needed?			
	How satisfied are you with being	3.07	0.72	moderate quality of life
	able to use public health services			
	as needed?			
	How much do you know about	3.78	0.79	good quality of life
	the essential news in your daily			
	life?			
	How many opportunities have you	3.02	0.86	moderate quality of life
	had to relax and unwind?			
	How much is the environment	3.25	0.67	moderate quality of life
	good for your health?			
	How satisfied are you with your	3.28	0.88	moderate quality of life
	journey (meaning transportation)?			
Total		3.37	0.57	moderate quality of life
Grand Total		3.62	0.47	moderate quality of life

Table 2: Indicators of the quality of life and overall health

Indicators of the quality of life and overall health		SD	Interpret
How satisfied are you with your health now?	3.56	0.51	moderate quality of life
Do you think you have quality of life? (living life) at		0.87	good quality of life
what level?			
Total	3.64	0.69	moderate quality of life

As shown in Table 1-2, the overall quality of life average was moderate ( $\bar{x}$ =3.62, SD=0.47). Classified by components, quality of life in psychological health components average was good ( $\bar{x}$ =3.71, SD=0.39), quality of life in social relationships ( $\bar{x}$ =3.77, SD=0.55), and physical health components average was moderate ( $\bar{x}$ =3.64, SD=0.40), quality of life in environmental components was moderate ( $\bar{x}$ =3.37, SD=0.47). Considering the average of the indicators in the quality of life and overall health, overall, the quality of life and health indicators were at a moderate level (( $\bar{x}$  =3.64, SD=0.69), quality of life indicators was at a good level (( $\bar{x}$ =3.72, SD=0.87) health quality indicators was at a moderate level (( $\bar{x}$ =3.56, SD=0.51)

The researchers compared the average quality of life according to physical health, psychological health, social relationship, and environmental according to the occupation of government officers, private sector employee. The researcher tested the research hypothesis with the One-Way MANOVA test. Using box's m-test to check the equality of multiple variance-covariance matrices. Results showed that covariance matrix of both groups have no difference. (Box's M=17.77, F=1.69, df1=10, df2=36341.89, Sig=0.077). And test the relationship between dependent variables using Bartlett's Test of Sphericity. Results showed that dependent variables between components of quality of life: physical health, psychological health, social relationship, and environmental had relationships with a statistically significant difference at 0.05 level (Approx. Chi-Square=172.67, df=9, Sig=0.00) that meets the preliminary agreement of Multivariate Analysis of Variance: MANOVA. Researcher, therefore, performed a one-way multivariate analysis of variance. (One-Way MANOVA) found that occupation did not affect the quality of life in terms of physical health, psychological health, social relationship environmental with a statistically significant difference at 0.05 level (df=4.00, F=1.64, Sig=0.117).

# Conclusions and Discussions

From the results, it can be concluded that overall, staff in Thailand have a moderate quality of life. Still, when considering each component, it is found that environmental component has the lowest average score at a moderate level ( $\bar{x}$ =3.37). Question "Do you have bad feelings, such as loneliness, sadness, depression, hopelessness, anxiety?" has the lowest average score ( $\bar{x}$ =2.90), followed by "How many opportunities have you had to relax and unwind?" ( $\bar{x}$ = 3.02) and "How satisfied are you with being able to use public health services as needed?" ( $\bar{x}$ =3.07). These results show that employees in Thailand, although the quality of life is moderate. But when going into the details, most of them have mental health and environmental problems at a moderately low level due to the work patterns in the COVID-19 pandemic situation constantly changing according to the government's policy to prevent disease outbreaks. When employees have to work at a distance from other people for safety for a long time, it inevitably causes loneliness, sadness, depression, hopelessness, and anxiety. Which corresponds to (Mental Health Foundation, UK, 2021) found that amid COVID-19 restrictions, people are struggling with their mental health. Almost half (45%) of the UK population had felt anxious or worried, and almost one in five (18%) of the population reported feeling hopeless, and a half (49%) reported feeling frustrated. Quarantined people in Canada during the 2004 SARS epidemics experienced discomfort and isolation as a result of the restricted physical contact with friends and family members, according to a web-based survey. Furthermore, they were unable to go to stores to buy food, groceries, or medications due to their commitment to preventive measures like as wearing a facemask and social isolation, which increased their feelings of loneliness (Hawryluck, L.; Gold, W.L.; Robinson, et al., 2004).

In addition, the situation of the COVID-19 pandemic remains uncertain, despite various safety measures from the government. Most of the employees in Thailand still hesitate to take vacations or relieve stress from daily life, even though the majority of the population has been vaccinated to alleviate severe symptoms of the disease. Furthermore, a systematic review study conducted before the COVID-19 pandemic demonstrated the negative effects of social isolation on individuals' physical health and psychological wellness (Leigh-Hunt, N. et al., 2017). During the COVID-19 pandemic, this risk multiplied due to more stringent physical restrictions and isolation as primary preventive measures (Saltzman, L.Y.; Hansel, T.C.; Bordnick, P.S., 2020). In Thailand, (Suan Dusit Poll, Suan Dusit University, 2021) the results of a nationwide public opinion poll on the case "Thai people and tourism at the end of 2021." During the long holidays and the New Year, revealed that 40.57% of people will not travel because they are worried about COVID-19 Omicron and their finances are not ready.

Most of the employees in Thailand are satisfied at a moderate level when they have to use public health services as needed. Maybe because most public health facilities, especially government services, are often considered many users, causing people not to access such service. It also causes a high risk of contracting COVID-19.

Human resource management departments in the public and private sectors should consider adding activities that encourage employees to relieve stress, build relationships, and reduce loneliness, such as health and wellness programs that will be implemented in the coming months to deal with the current and impending effects of this local and global crisis, or recreational activities.

Under health-safety regulations, recreational activities might be divided into smaller groups. Furthermore, the firm may create appropriate and private channels for employees to seek expert treatment when they discover they have mental health difficulties, etc., so that they can get through this circumstance with a better quality of life and execute their tasks efficiently.

#### Future Research

Occupational variables (government officers, private sector employee) did not affect the quality of life in terms of physical health, psychological health, social relationship, and environmental. Therefore, other issues should be considered, such as income, opportunities or should be studied in a specific group in depth and breadth. The composition of quality of life should be taken into account in four different areas (physical health, psychological health, social relationships, and environment) to complete all dimensions and maximize the benefit to promote the quality of life of Thai people in the situation of the COVID-19 pandemic.

# References

- Anderson, R.M.; Heesterbeek, H.; Klinkenberg, D.; Hollingsworth, T.D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? Lancet. 395, 931-934.
- Britannica. (2021) "Quality Of Life". Retrieved 15 January 2021. From https://www.britannica.com/topic/quality-of-life. Cochran, W.G. (1953). Sampling Techniques. New York: John Wiley & Sons.
- Department of Disease Control. (2020). Coronavirus disease 2019 (COVID-19). Retrieved March 10, 2021, from https://ddc.moph.go.th/viralpneumonia/file/introduction/introduction01.pdf
- Department of Disease Control. (2021). Guidelines for the prevention of coronavirus disease 2019 (COVID-19) or COVID-19 for the general public and at risk groups. Retrieved March 10, 2021, From https://ddc.moph. go.th/viralpneumonia/file/int protection/int protection 030164.pdf
- Department of Mental Health. (2002). World Health Organization Quality of Life Brief Thai, WHOQOL-BREF-THAI). Retrieved March 10, 2021, from https://www.dmh.go.th/test/whoqo/
- Drydakis, Nick. (2015). The effect of unemployment on self-reported health and mental health in Greece from 2008 to 2013: A longitudinal study before and during the financial crisis. Social Science & Medicine. 128.
- Ferrans, C. E., & Powers, M. J. (1992). Psychometric assessment of the Quality of Life Index. Research in Nursing & Health, 15(1), 29-38.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis* 7<sup>th</sup>ed. New Jersey: Pearson Prentice Hall.
- Hawryluck, L.; Gold, W.L.; Robinson, S.; Pogorski, S.; Galea, S.; Styra, R. (2004). SARS Control and Psychological Effects of Quarantine, Toronto, Canada. Emerg. Infect. Dis. 10: 1206–1212.
- Human resource policy research department, Thailand Development Research Institute. (2020). "The impact of COVID-19 on employment work in the service sector of Thailand". TDRI Insight, Retrieved December 13, 2021, from https://tdri.or.th/2020/09/services-sectors-affected-by-the-covid-19/
- Karimi, M. and Brazier, J. (2016) Health, Health-Related Quality of Life, and Quality of Life: What Is the Difference? PharmacoEconomics. 34: 645-649.
- Kramer, A. and Kramer, K.Z. (2020). The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility, Journal of Vocational Behavior. 119: 103442.

- Leigh-Hunt, N.; Bagguley, D.; Bash, K.; Turner, V.; Turnbull, S.; Valtorta, N.K.; Caan, W. (2017). An overview of systematic reviews on the public health consequences of social isolation and loneliness. Public Health. 152: 157-171.
- Lin, N., Ensel, W. and Vaughn, J. (1981). Social resources and strength of ties: Structural factors in occupational status attainment. American Soci-ological Review. 46: 393-405.
- McKibbin, W. and Fernando, R. (2020). The global macroeconomic impacts of COVID-19: Seven scenarios. Asian Econ. Pap. 20: 1-30.
- Mental Health Foundation. (2021). Coronavirus: Mental Health in the Pandemic. Retrieved December 10, 2021, from https://www.mentalhealth.org.uk/our-work/research/coronavirus-mental-health-pandemic
- Office of the National Economic and Social Development Board. (1997). The Concept of Well-Being and Happiness. Development Evaluation Division Newsletter. 1(1): 1-12.
- Office of the National Economic and Social Development Board. (2022). The fourth quarter of Thai society and the overview of the year 2021 [PowerPoint slides]. Retrieved March 30, 2022, from https://www.nesdc.go. th/ewt dl link.php?nid=5492
- Office of the National Economic and Social Development Council. (2020). "Major social situations". Social situation and outlook Q2. 18(3): 3-5.
- Power, M., Harper, A., Bullinger, M., & The WHOQOL Group. (1999). The World Health Organization WHOQOL-100: Tests of the universality of quality of life in 15 different cultural groups worldwide. Health Psychology. 18: 495-505.
- Saltzman, L.Y.; Hansel, T.C.; Bordnick, P.S. (2020). Loneliness, isolation, and social support factors in post-COVID-19 mental health. Psychol. Trauma Theory Res. Pract. Policy. 12: S55-S57.
- Sirgy M. J. (1986). A quality-of-life theory derived from Maslow's developmental perspective: 'Quality' is related to progressive satisfaction of a hierarchy of needs, lower order and higher. American Journal of Economics and Sociology. 45(3): 329-342.
- Suan Dusit Poll, Suan Dusit University. (2021). the results of a nationwide public opinion poll on the case "Thai people and tourism at the end of 2021". Retrieved December 13, 2021, from https://suandusitpoll. dusit.ac.th/WEB/list-poll-thumb.php?Search=Y&y=2564
- World Health Organization. (2020). WHOQOL: Measuring Quality of Life. Retrieved 22 May 2020, from https:// www.who.int/toolkits/whogol
- Zhou, Z., Yang, L., Chen, Z., Chen, X., Guo, Y., Wang, X., Dong, X., Wang, T., Zhang, L., Qiu, Z., & Yang, R. (2007). Healthrelated quality of life measured by the Short Form 3.6 in immune thrombocytopenic purpura: a crosssectional survey in China. European journal of haematology, 78(6), 518-523.