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The Model of COVID–19 Prevention in the Critical Situations of Thai Society

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Abstract

The purposes of this research were: (1) to study the negative impacts of the COVID–19 pandemic; (2) to study the practices used to prevent the COVID–19 pandemic; and (3) to present the model of COVID–19 prevention in the critical situations of Thai society. A mixed–research methodology was applied in this study. The samples used in this study were 350 people and five key informants who are university personnel in Bangkok and suburban areas. The instruments used to collect data were a research questionnaire and an in–depth interview. The statistics used in this research consisted of percentage, mean, and standard deviation. The research results showed that: (1) the negative impacts of the COVID–19 pandemic, in total, were at a high level. In particular, the negative impacts on human life had the highest mean value, followed by business, happiness, and work respectively; (2) the practices used to prevent the COVID–19 pandemic, in total, were at a high level. In particular, mask wearing had the highest mean value, followed by social distancing, vaccine vaccination, and hand washing respectively; and (3) the model of COVID–19 prevention in the critical situations of Thai society consisted of being aware of the COVID–19, understanding the causes of the COVID–19, understanding the impacts of the COVID–19, applying preventive approaches, mask wearing, social distancing, hand washing, refraining from traveling to risky places, vaccine vaccination, creating morale and courage, and having a good planning.

Keywords: COVID–19 pandemic; preventive measures; mask wearing; social distancing

Introduction

At the present, people around the world are full of stress and suffering caused by the outbreak of the COVID–19 pandemic. Even though the vaccine had been developed to stop its outbreak and infection, but a number of dead and infected people caused by the COVID–19 in some countries are still increasing. The BBC News (2020) reported that the outbreak of the COVID–19 was firstly found in Wuhan, China, the city which is the residence of 11 million people. After data were collected for investigation and test, it was reported that this virus was known as coronavirus which is the same as the Severe Acute Respiratory Syndrome (SARS). Such epidemic had ever been happened once in every hundred year such as Spanish flu, which spread in the year 1918–1920, and caused a death of 50 million people of the world populations. Scientist and historians believed that 1 out of 3 of the world populations or around 1.8 billion were infected by Spanish flu. In addition, The World Health Organization (WHO) (2021) had announced the COVID–19 as the pandemic, which caused a huge damage to human life in this era. It is believed that this virus can transmit from animals to human beings, and from human beings to human beings.

Brown and Nading (2019) found that the emergence of the Coronavirus Disease (COVID–19) that is spreading quickly throughout the world among the complicated context of the economy, society and culture indicates that this virus can mutate and resist drug action. This leads to difficulty for medical professions and scientists to heal and cure it at immediate time. Wongwassana (2021) found that there were negative influential factors from COVID–19 towards the work of employees. The first negative impact of COVID–19 was happiness at work, followed by economic condition, social condition, and working environments. The COVID–19 pandemic has changed the ways of peoples' lives from usual to unusual, and from normal to new normal. People have to adjust their ways of lives in order to cope with the outbreak of the COVID–19. Keadplang (2021), and Setkhumbong (2022) found that the COVID–19 that emerged in the year 2019 had destroyed the economic system and well–being of people living in both developed and developing countries. The outbreak of the massive COVID–19 affects the educational systems and processes continuously. Students have to take online class from home. In order to control the spread of the COVID–19, the Thai government declares the primarily preventive measures such as wearing face shields, wearing masks, keeping social distancing, hand washing and avoiding crowded places. The government also locks down some risky areas which are the sources of disease spreading. People have to stay home, learn from home and work from home. In addition, World Health Organization (WHO) (2021) also

suggested preventive measures for the COVID–19 such as getting vaccinated as soon as it's your turn and follow local guidance on vaccination, keeping physical distance at least 1 meter from others, avoiding crowds and close contact, wearing a properly fitted mask, cleaning hand frequently with alcohol, and if you develop symptoms or test positive for COVID–19, self–isolate until you recover.

Therefore, the researchers conducted this research in order to find the practices used to prevent the COVID–19 pandemic in Thailand and to present the model of COVID–19 prevention in the critical situations of Thai Society.

Research Objectives

1. To study the negative impacts of the COVID–19 pandemic
2. To find the practices used to prevent the COVID–19 pandemic
3. To present the model of the COVID–19 prevention in the critical situations of Thai society

Scope of Research

Scope of Content; This study focuses on the negative impacts of the COVID–19 pandemic on Thai society consisting of negative impacts on life, business, work and happiness, and COVID–19 prevention consisting of social distancing, mask wearing, hand washing and vaccine vaccination.

Scope of Populations; The populations used in this study were 15,100 employees working in the selected Thai universities in Bangkok and suburban areas.

Scope of Time; The time used to conduct this research was from October 25, 2020 to October 25, 2021 with a total period of 12 months.

Literature Review

The COVID–19 is the unprecedented event, which spread out and has a sudden change in Thailand and elsewhere (Sombultawee, Boon–itt, and Bussanit, 2021). COVID–19 has had a devasting global effect. Despite it originated in Wuhan, China in the end of 2019, it began to spread in late January and early February 2020, and became a global pandemic by the early spring 2020 (Ciotti et al., 2020). The pandemic means the situation of disease outbreak which occurs in some specific regions and spread through other countries around the world. Some diseases can transmit from human beings to human beings and from animals to human beings. Some microorganisms can

be the causes and contagions of some diseases such as Spanish influenza and dengue fever. The atmosphere is related to the outbreak of this pandemic. Thus, people have to be well–prepared and planned to cope with this pandemic (Puekpuang, 2018; Nguyen, 2017). Qiu et al. (2017) stated that the pandemic had a long history and caused a severe negative impact on human life, society, economy and business. So medical professions must try to develop a new vaccine to stop its outbreak and protect human life. Since each pandemic originated from a different virus, the existing vaccine cannot be applied to cope with all epidemics.

Jungsathiensap (2020) found that the coronavirus disease (COVID–19) that we are facing now is the emerging disease which can spread and transmit immediately in the globalization age and borderless world which people communicate, travel, do business and trade among each other across the world without boundary. The Bangkokbiznews (2020) reported that the World Health Organization (WHO) had warned that the situation of the COVID–19 epidemic will not cease within a short period; its outbreak seems to increase in some countries especially in Africa, Eastern Europe, Latin America and some countries in Asia. With regard to the preventive measures for the COVID–19, Phrakhrusripariyativitan (Phramaha Maen Kuppatarangsi/Thongvijit) (2020) suggested preventive approaches for the COVID–19 according the four noble truth principles such as being aware of the COVID–19, understanding the impact of the COVOD–19, avoidance and prevention of the causes of the COVOD–19, setting goals in prevention and treatment of the COVOD–19. He also suggested the appropriate measures to prevent the Coronavirus COVOD–19 epidemic such as wearing mask, social distancing, avoidance of going to crowded places, and strengthening the mind, and so on. In addition, Sombultawee, Boon–itt and Bussanit (2021) found that protective health behavior of Thai residents against COVID–19 was influenced by perceived risk, communication surrounding COVID–19, and perceptions of government responses. Individuals need to understand their risk, through accurate communication and a strong government response to encourage adoption of protective health behavior.

The outbreak of the COVID–19 has a huge negative impact on human life. It has a devasting effect on economy, business, society, happiness and well–being of the people. The COVID–19 can transmit from human beings to human beings, and from animals to human beings. Medical professions must continuously develop the new vaccine to stop the COVID–19 outbreak and protect human life from infection and death. People are required to follow the appropriate preventive

measures such as wearing mask, keeping social distance, washing hand, and getting vaccine vaccination.

Research Methods

A mixed–research methodology was applied in this study. The quantitative data were collected through the research questionnaire and qualitative data were collected through in–depth interview with the following details:

1. Populations and Samples

Populations used in this study were 15,100 employees working in five Thai higher institutions in Bangkok and suburban areas, which can be divided as lecturers at the amount of 9,750 persons and supporting staff at the amount of 5,350 persons. The researchers used a formula of Taro Yamane to calculate the sample size from the whole populations, and 392 samples were obtained. The selected Thai higher institutions in this study consisted of Chulalongkorn University, Mahidol University, Thammasat University, Kasetsart University and Silpakorn University.

2. Instrument Used to Collect Data

1) Quantitative research. The instrument used to collect data in this study was a research questionnaire. In developing the research questionnaire, the researchers have studied the concepts, theories and knowledge about the pandemic, its impact and preventive approaches from articles, books, journals, newspapers and related documents. The questionnaire structure was divided into three parts: Part one was a research questionnaire containing six questions with regard to gender, age, marital status, educational level, work experience and monthly income. Part two was a research questionnaire containing 12 questions with regard to the negative impacts of the COVID–19 pandemic. Part three was a research questionnaire containing 12 questions with regard to the practices used to prevent the COVID–19 pandemic.

2) Qualitative research. The researchers had interviewed five key informants who have knowledge and expertise about COVID–19 pandemic. Purposive sampling technique was used to select the key informants.

3. Criteria Used to Interpret Data

The researchers analyzed the collected data, using Statistical Package for Social Science (SPSS) program. The criteria used to interpret data were as follows: 5 = very strongly agree; 4 = strongly agree; 3 = agree; 2 = disagree; and 1 = strongly disagree

The criteria used to interpret the mean value were as follows: 4.21–5.00 = very strongly agree; 3.41–4.20 = strongly agree; 2.61–3.40 = agree; 1.81–2.60 = disagree; and 1.00–1.80 = strongly disagree

4. Content Validity and Reliability Test

1) The research questionnaires were checked by three research scholars in order to find the content validity using Item Objective Congruence Index (IOC), and the IOC value of 0.95 was obtained.

2) The researchers have conducted a try–out by distributing the research questionnaires to 30 people who were not the samples in this study in order to find the reliability value of the questionnaire, and the reliability value of 0.93 was obtained.

3) The researchers have corrected the research questionnaire according to the comments and suggestions of research scholars before distribution to the targeted samples.

5. Data Collection

1) The researchers had distributed 392 research questionnaires to the targeted samples during July 1, 2021 to September 30, 2021, and 350 questionnaires were returned which can be calculated as 89 percent. Convenience sampling was applied in this study.

2) The researchers have checked the rightness and completion of the research questionnaires before conducting statistical analysis.

6. Statistics Used to Analyze Data in this Study

Descriptive statistics was used in this study. Frequency and percentage were used to analyze general information of respondents. Mean and standard deviation were used to analyze the negative impacts of the COVID–19 pandemic and the practices used to prevent the COVID–19 pandemic.

Research Results

The research results on general information of respondents showed that the majority of respondents were males at 60.26 percent, and females at 39.74 percent. The ages of the majority of respondents were between 36–45 years old at 39.74 percent, followed by ages between 46–55 years old at 19.87 percent, ages between 26–35 years old at 16.56 percent, ages more than 56 years old at 13.90, and ages less than 25 years old at 9.95 percent. The majority of respondents were single at 49.67 percent, followed by married at 43.05 percent, widowed at 3.97 percent, and divorced at 3.31 percent. The majority of respondents finished bachelor's degree at 43.05 percent, followed by degree lower than bachelor's degree at 36.42 percent, master's degree at 13.25 percent, and doctoral degree at 7.28 percent. The majority of respondents had work experience between 5–15 years at 33.11 percent, followed by work experience less than 5 years at 23.18 percent, work experience between 16–25 years at 19.87, work experience between 26–35 years at 13.25 percent, and work experience more than 36 years at 10.60 percent. The majority of respondents received monthly income between 25,001–35,000 baht at 46.36, followed by monthly income between 15,001–25,000 baht at 23.19 percent, monthly income between 5,000–15,000 baht at 16.56 percent, monthly income between 35,001–45,000 baht at 9.93 percent, and monthly income more than 45,000 baht at 3.97 percent.

Research objective 1: To study the negative impacts of the COVID–19 pandemic. The research results showed that the negative impacts of the COVID–19 pandemic, in total, were at high level ($\bar{X}$ = 4.16, S.D. = 0.92). In particular, the negative impacts on human life had the highest mean value ($\bar{X}$ = 4.35, S.D. = 0.94), followed by business ($\bar{X}$ = 4.25, S.D. = 0.91), happiness ($\bar{X}$ = 4.21, S.D. = 0.93), and work ($\bar{X}$ = 3.85, S.D. = 0.93) respectively (Table 1).

Table 1 The Negative Impacts of the COVID–19 Pandemic

The Negative Impacts of the COVID–19	$\bar{X}$	S.D.	Translation	Ranking
1. Human life	4.35	0.94	Highest	1
2. Business	4.25	0.91	Highest	2
3. Work	3.85	0.93	High	4
4. Happiness	4.21	0.93	Highest	3
Total	4.16	0.92	High	

Research objective 2: To study the practices used to prevent the COVID–19 pandemic. The research results showed that the practices used to prevent the COVID–19 pandemic, in total, were at high level ($\overline{X}$ = 4.07, S.D. = 0.93). In particular, mask wearing had the highest mean value ($\overline{X}$ = 4.35, S.D. = 0.91), followed by social distancing ($\overline{X}$ = 4.30, S.D. = 0.95), vaccine vaccination ($\overline{X}$ = 4.15, S.D. = 0.94), and hand washing ($\overline{X}$ = 3.50, S.D. = 0.93) respectively (Table 2).

Table 2 The Practices Used to Prevent the COVID–19 Pandemic

The Practices Used to Prevent the COVID–19	$\overline{X}$	S.D.	Translation	Ranking
1. Social distancing	4.30	0.95	Highest	2
2. Mask wearing	4.35	0.91	Highest	1
3. Hand washing	3.50	0.93	High	4
3. Vaccine vaccination	4.15	0.94	High	3
Total	4.07	0.93	High	

The Research Results from Interview with Five Key Informants.

The researchers had interviewed five key informants who have knowledge and experience in preventive measures for the COVID–19 pandemic, the results of interview can be summarized as follows:

With regard to the negative impacts of the COVID–19 pandemic, the key informants stated that the current COVID–19 pandemic has direct impacts on human life and economy. People cannot live their lives as usual and cannot do business, trade among each other, and have difficulties travelling to other countries. Lives of the world populations are at risk. Many business companies are temporarily closed and some are permanently closed due to a lack of cash flow to run the business. It is reported that, starting from the origination of the COVID–19 pandemic in Wuhan, China in 1919 until November 2021, there were more than 255 million of the world populations infected by the COVID–19 pandemic, and five million died.

With regard to the preventive measures or practices used to prevent the COVID–19 pandemic, the key informants suggested that people should wear mask anywhere and anytime when contacting with other people. People should be aware of the outbreak of the COVID–19 pandemic that is easily infected through inhaling and exhaling, through sneezing and coughing, and

touching the infected materials. Social distancing is important because closing together is risky to be infected and it is hard to prevent the COVID–19 pandemic in the crowded places. People should have a distance of at least one meter from other people at all the times. Hand washing should be conducted all the time as it can kill this virus and stop its breakout and infection to other people. Vaccine vaccination is highly recommended by the government of each country as it can increase physical immunity and stop the outbreak and transmission of the COVID–19 pandemic from one to another. Moreover, people should use alcohol to clean their hands frequently when touching other materials in the public.

Research objective 3: To present the model of COVID–19 prevention in the critical situations of Thai Society. The research results incurred a new body of knowledge regarding the causes of COVID–19 consisting of coronaviruses, respiratory droplets, coughing, sneezing, breathing, singing, talking and close contact; negative impacts of COVID–19 consisting of sickness, death, mental health problem, economic disruption, social disruption, starvation, poverty, loss of job employment and loss of income; and preventive measures for the COVID–19 pandemic consisting of being aware of COVID–19, understanding the causes of COVID–19, understanding the impacts of COVID–19, applying preventive approaches, mask wearing, social distancing, hand washing, refraining from traveling to risky places, vaccine vaccination, creating morale and courage, and having a good planning. These preventive measures, if implemented appropriately, can lead to life safety, mental health, physical health, good environment, economic growth, and happiness at work (Figure 1).

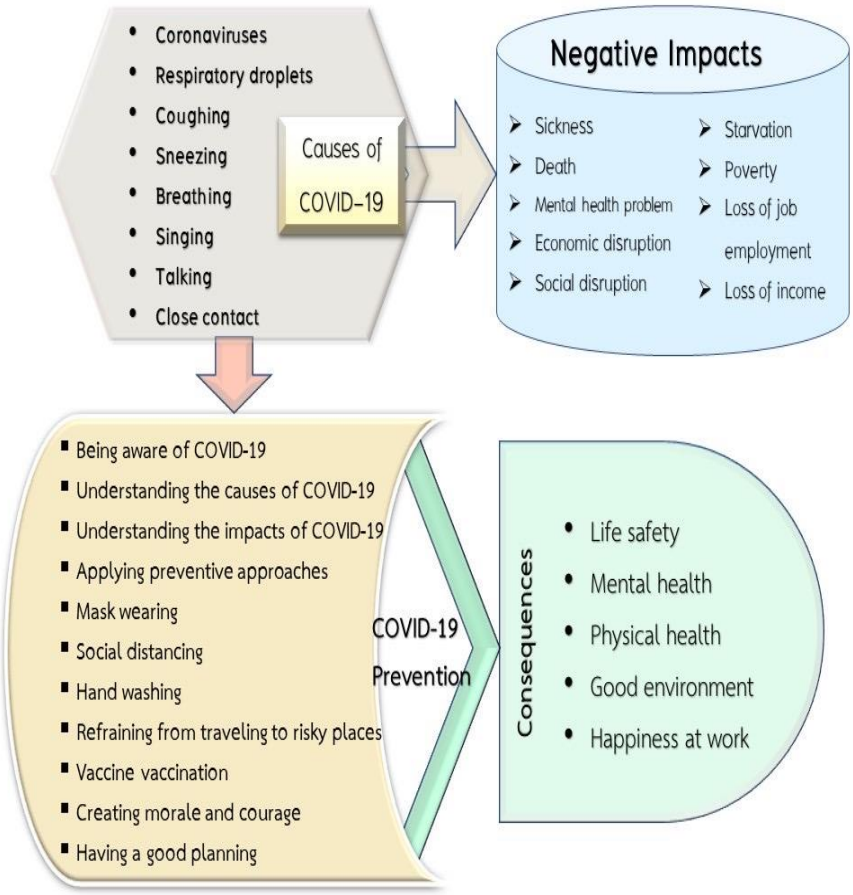

Figure. 1 The Model of COVID–19 Prevention in the Critical Situations of Thai Society

Discussion

Research objective 1: To study the negative impacts of the COVID–19 pandemic. The negative impacts of the COVID–19 pandemic, in total, were at high level. The results of this research are relevant to a study of Wongwassana (2021) which found that the outbreak of the COVID–19 has a negative impact on human life and health, job employment, work life quality and happiness at work. Moreover, the COVID–19 also has a direct impact on economic status, social condition and working environments. In this regard, World Health Organization (WHO) (2021) reported that the COVID–19 pandemic has led to a dramatic loss of human life such as sickness, death, economic and social disruption, poverty and starvation, border closures, trade restriction, loss of employment, loss of income, disruption of domestic and international food supply chains, and reducing access to healthy, safe and diverse diets. De Los Santos and Labraque (2021) found that the outbreak of the COVID–19 has numerous negative impacts on human life. It is considered as a

dangerous disease and hard to prevent as it can transmit from one to another through respiratory droplet, sneezing and coughing. In addition, Leela–Adisorn (2021) summarized some risky factors causing death to people infected by the COVID–19 from many researches such as respiratory disease, high blood cholesterol, high blood pressure, obesity, chronic renal disease and diabetes. The results of this research are also relevant to a study of Rothan and Byrareddy (2020) which found that people who have less physical immunity will die within 6 to 41 days with an average of 14 days after the first day of the COVID–19 infection.

Research objective 2: To study the practices used to prevent the COVID–19 pandemic. With regard to the practices used to prevent the outbreak of the COVID–19 pandemic, the research results showed that most Thai people follow the preventive measures for the COVID–19 such as mask wearing, social distancing, vaccine vaccination, and hand washing respectively. The results of this research are relevant to a study of Phrakhrusripariyativitan (Phramaha Maen Kuppatarangsi/Thongvijit) (2020) which found that the ways to prevent the COVID–19 according the four noble truth principles consisted of being aware and understanding the COVOD–19, avoidance and prevention of the causes of the COVOD–19, applying appropriate preventive approaches such as mask wearing, hand washing and social distancing, and setting goals in prevention and treatment of the COVOD–19 pandemic. The results of this research are also relevant to a study of Ketdao, Thiengtrongdee and Thoin (2021) which found that the ways to prevent the COVID–19 consisted of wearing mask, screening patients, investigation of disease, analyzing symptom of disease, quarantining, covering coughs and sneezes, washing hand, and keeping unwashed hands away from the face.

Conclusion

The research results according to the research objectives showed that the negative impacts of the COVID–19 pandemic, in total, were at high level. In particular, the negative impacts on human life had the highest mean value, followed by business, happiness, and work respectively. The practices used to prevent the outbreak of the COVID–19 pandemic, in total, were at high level. In particular, mask wearing had the highest mean value, followed by social distancing, vaccine vaccination, and hand washing respectively. People should strictly follow preventive measures for the COVID–19 such as wearing mask anywhere and anytime when meeting with other people face

to face. People should have a social distancing and hand washing frequently. Using alcohol to kill the virus is also highly recommended.

Recommendations

Recommendations from this research

1. People should be aware of the COVID–19 pandemic as it has a direct negative impact on human life, health, economy, business, work and happiness.

2. People should strictly follow the preventive measures for the COVID–19 such as mask wearing, hand washing, social distancing, and refraining from traveling to risky places.

3. People should be encouraged to get vaccine vaccination for the COVID–19 as it can create physical immunity and stop the COVID–19 outbreak.

4. People should strictly follow the COVID–19 prevention standard issued by the government and each province.

Recommendations for future research

1. There should be a future study about using Thai herbal medicine to prevent and heal the COVID–19 pandemic.

2. There should be a future study about a development of Thai vaccine to cope with the COVID–19 pandemic.

3. There should be a future study about physical immunity to resist the COVID–19 of people after getting vaccine vaccination.

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