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The Impact and Adaptation of the Thai Households in the Corona Virus Disease (Covid-19) Pandemic Situation

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Abstract:- The goals of this study were to 1) investigate the impact of Thai households in the COVID-19 pandemic situation and 2) investigate the adaptation of Thai households in the COVID-19 pandemic situation. The sample consisted of participants aged 20 years and over who were heads of private households or household members who could give information about their households (n = 31,394). The unit of analysis was private households in 77provinces of Thailand by collecting data from at least 400 households per province. The research instrument was a questionnaire. The two statistics used in the research were number and percentage. The results showed that 1) for the impact of the COVID-19 pandemic on the economic aspect, household incomes were reduced and savings were reduced. As a result, spending on consumer goods has decreased. For the health aspect, they required protection from infection and additional health care. Furthermore, the majority of them were concerned about infecting themselves and their family members.For the social aspect, it was found that it would affect meeting with neighbors or people in the community, participating in community activities, as well as various social events. However, it also made people learn to use new technologies more and they were at risk of receiving false information from various technological media. Mental health problems caused by anxiety when receiving information from various technological media and physical health problems from the use of communication devices were found. It also affected the educational activities of each household as a whole, causing more burdens, obstacles, or problems than normal conditions in all activities. As for the adaptation in various aspects, it was found that the participants had a new adaptation known as the "New Normal" way of life, which had caused social and economic changes in Thai households, such as having to reduce the size of their businesses. On the other hand, the participants had more self-improvement through online self-learning. They turned to cooking food for the family; furthermore, they grew vegetables for household consumption. Online shopping has also been increasing. There was a financial plan and a career plan to adapt to their lives. Most of them have adapted their health behaviors to prevent further infection with COVID-19. There were ways to relieve anxiety by maintaining normal social relationships among members of the households, communicating through the smartphone channel and increasing social networks. Households are increasingly adapting to learning technology. In terms of education, it was found that teaching and caring for children and grandchildren of family members had to be allocated to online learning.

Keywords:- *Impact, Adaptation, COVID-19, Thailand.*

I. INTRODUCTION

Thailand has confirmed cases of corona virus infection. They found the first cases on January 13, 2020 and February 29, 2020. According to the announcement of the Ministry of Public Health, Re: Names and Significant Symptoms of Dangerous Communicable Diseases (No. 3) B.E. 2563 (Ministry of Public Health, 2020), Corona virus Disease 2019 (COVID-19) has been declared a dangerous communicable disease under the Communicable Diseases Act B.E. 2558 (Ministry of Public Health, 2020). The first wave of outbreaks in Thailand The Prime Minister declared a state of emergency in all areas of Thailand on March 26, 2020, following the Emergency Decree on Public Administration enforcing the state of emergency from the announcement date until April 30, 2020. Moreover, it was necessary to extend the period for another month under the Communicable Diseases Act by B.E. 2558 (Government Gazette, 2020). By some measures, Thailand has been recognized worldwide for the prevention and control of corona virus disease 2019, but it was found that at the end of 2020 (December 17, 2020), there was a new wave of viral infectious disease outbreaks. COVID-19 case in Samut Sakhon Province's Bang Kung Central Market. Most of the risk groups or infected people are foreign workers and those who have traveled to such markets. The Ministry of Public Health and related agencies have been able to prevent and control the disease in this outbreak until the situation improved and almost returned to normal in early March 2021. However, a new wave of COVID-19 has been found, with most patients having a history of using entertainment facilities since March 25, 2021, and the infection has spread rapidly all over the country (Bangkok Biznews, 2020; Thai PBS News, 2021).

According to the abovementioned situation, it can be seen that the situation of COVID-19 has not been able to control the spread of the pandemic. It had a huge impact on the overall improvement of the country. Although there were precautionary measures, prevention and control of the infectious disease delicately, there was still a risk of spreading the virus, affecting the livelihoods of people who had to change their way of life (New Normal) to be in line with the situation of disruptive change. Therefore, if there was

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information about the impact and adaptation in the COVID-19 pandemic situation, this would allow relevant agencies to have information to use in management as a guideline for coping with the situation or preparing for changes in households. He said that they could live a new way of life (the "New Normal").

A. RESEEARCH OBJECTIVES

- Study the impact of Thai households in the COVID-19 pandemic situation
- Study the adaptation of Thai households to the COVID-19 pandemic situation

B. RESEEARCH BENEFITS

The relevant agencies are aware of the impact and adaptation of Thai households in the COVID-19 pandemic situation and are using the information as a guideline for planning a household's lifestyle to prevent and solve the problem of the spread of COVID-19 effectively. Research conceptual framework.

The review of documents and research related to the COVID-19 pandemic situation, it was found that the impact and adaptation occurred in 5 main areas according to the research conceptual framework as shown in Figure 1.

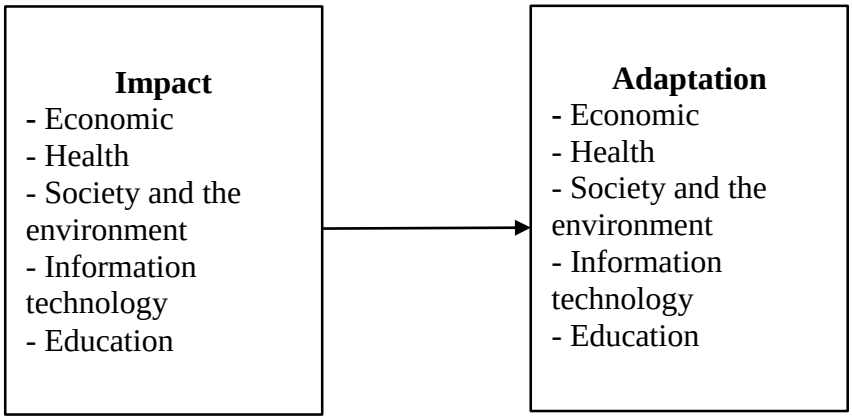

Fig. 1: Research conceptual framework

II. METHOD

According to the review of relevant documents and literature, this study examines the impact and adaptation of households in the COVID-19 pandemic situation in Thailand in the aspects of economic, health, social and the environmental aspect, information technology, and education by collecting data between December 2020 and January 2021, which is the period after the first round of pandemic in Thailand and the start of the second wave of the pandemic.

A. Population and sample

- The population consists of participants aged 20 and over who are either heads of private households or members of households who can give information about their household. The unit of analysis was private households in 77 provinces of Thailand, totaling 21,875,204 households (National Statistical Office, 2020, p. 8).
- The sample group includes participants aged 20 years and over who are heads of private households or members of households who can provide information about their households using the unit of analysis related to the households in 77 provinces in Thailand and collect data from at least 400 households per province. The data collected at this stage contained complete information, totaling 31,394 households, which were divided into 18,031 households in the municipality (57.43%) and 13,363 households in the non-municipal areas (42.57%). The multi-stage random sampling was used as follows: 1) In each province, random districts were sampled using stratified random sampling based on district size, which was divided into large, medium, and small based on population, and then randomly assigned to 1 large district, 1 medium-sized district, and 1 small district, for a total of 3 districts per province out of 77 provinces.2) In each district randomly sampled 2 sub-districts, the sub-district was randomly sampled by simple random sampling by drawing lots for 2 sub-districts as sub-districts in the municipality and outside the municipality. A total of 462 sub-districts were randomly assigned. 3) Collecting households from each sub-district, which is the sample in each district based on the proportion of households in each sub-district, through random sampling of household units (accidental sampling) and willing to provide information aged 20 and up. In the total sample of 31,394 households.

B. Instruments and instrument validity/reliability

The research instrument was a questionnaire consisting of 3 parts, as follows:

- Part 1: (Household Information) It is a questionnaire that requires choosing an answer and filling in the blanks. The information is associated with the number of household members, educational status of household members, the main occupation, and supplementary occupation of the head of the household expenditure or income.
- Part 2: (Impact on Households) It is a questionnaire that represents the level of the impacts that can be divided into economic, health, social, and environmental impacts on technology, information, and education.
- Part 3: (Household Adaptation) It is a questionnaire that shows the adaptation from the COVID-19 situation that can be divided into economic, health, social and environmental adaptation, information technology, and education by making adaptations in the following areas.

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C. Instrument quality

Check the quality of the instrument in this study. The content validity was examined according to the objectives of the study by having experts check the consistency between the questions and the objectives. Content, using the language following the aspects studied for 5 participants, was used to find the IOC by selecting questions with an IOC value of 0.60-1.00 and adapting the text according to the experts' feedback. The questionnaire used in the research was obtained through the Human Research Ethics Committee of Nakhon Ratchasima Rajabhat University, with the certificate number HE-138-2563, based on the declaration criteria of Helsinki (Declaration of Helsinki) and complies with international ethical principles and laws, regulations, and domestic requirements.

D. Data collection

The collected information by providing a network of 38 Rajabhat Universities with service areas covering all 77 provinces of Thailand, the local data collection (onsite) by allowing the teachers in charge of the project to be utilized. Students in the project were the people who collected the specified amount of information. After that, encoding the information in the developed online system so that the project manager could check data in real-time to check or know information immediately when receiving data into the system was conducted. Moreover, the system can be shut down immediately when the data is complete according to the specified sample group.

E. Data analysis and statistics

The statistics used in the descriptive data analysis were descriptive statistics such as frequency and percentage.

III. RESULT

The collected data covers all provinces of Thailand. Of the 31,394 households in the study, the highest number of household members who lived today was 48.61%, of which 56.24% were in the kitchen. The head of the household has the main occupation, which is agriculture the most, accounted for 28.90%, traded for 19.71%, employed or hired on a daily basis for 18.98%, and supplementary occupation for 42.69%.42.14 In terms of the total income of household members per month, the total income of household members does not exceed 30,000 baht when comparing income with household expenses. The finding that the income was sufficient to meet the expenditure but not left as a reserve accounted for 42.14%. Households borrowed money from both the formal and informal sectors, accounting for 22.34% of their total, the results of which can be summarized as follows.

Impact and adaptation in five areas: economics, health, social and environmental, information technology, and education. The results of each research aspect are as follows.

A. Impact and economic adaptation

The economic impact on income, expenditure, debt burden, and savings of the sample households found that, on the income side, their income was reduced by 65.40%. Spending on consumer goods was found to have decreased by 38.34%. Most of the liabilities were unaffected or partly affected by the debt burden in the system, which increased by 26.74%. Illegal liabilities increased by 11.99%, while savings decreased by 47.87% and were unaffected by 45.23%, as shown in Table 1.

Table 2 shows the economic adaptation of household members of the sample group. Most of the household members did not create new occupations to increase their income. Furthermore, the business continued to operate as usual for 63.19%, but the size of the business was reduced by 23.34%, and the business closed by 6.48%. In terms of self-improvement, it was found that there was no increase in self-improvement by 58.55% and self-improvement by 41.45%. In terms of the method of self-improvement, it was found that there was self-learning through an online system of 48.34%, followed by learning from experts/specialists by 21.00%, and learning by reading. Documents and books were used for 20.49 % of the research. In terms of household spending/consuming behavior as a result of the COVID-19 situation, it was found that 43.64% made their own meals in the household, followed by 30.39% of vegetables grown for household consumption and 14.41% of online shopping. 77.86% of households are planning to spend money as a result of the COVID-19 pandemic situation, and 65.27% of those households have career planning as a result of the COVID-19 pandemic situation.

B. Health impact and adaptation

The health effects found that the spread of COVID-19. As a result, the majority of household members were affected, which required an increase in infection prevention and health care by 89.80%. It also caused family members to have stress or anxiety, accounting for 78.58% of the total as shown in Table 3.

As for the health adaptation of household members, it was found that most of the household members had adapted their health behaviors to prevent infection with COVID-19. The top five most practiced behaviors, which were found to be the most practiced in self-defense, were: 1) wearing a surgical mask or fabric mask all the time when with others 77.13%, followed by 75.98% eating freshly cooked food, 75.69% thoroughly washing hands with soap and water or alcohol-based gel, 64.19% separating personal items and not sharing personal items with others, 64.19% accessing government-mandated disease prevention measures, and 63.03% checking service users' temperatures. However, 64.14% of household members had anxiety about living a normal life, while 35.85% had no anxiety about living a normal life by adapting themselves to relieving anxiety through exercise (17.25%), followed by listening to music (17.02%), and watching movies (15.57%). Moreover, if they were worried, 52.07% of them would consult their family/relatives the most (37.55%), followed by friends (16.18%), boyfriends/lovers (15.52%), and public health worker/public health volunteers (13.68%).

C. Social and environmental impact and adaptation

More than 80.0% of household members were not affected, regardless of the quarrel, family violence, or not being teased/humiliated/disgusted by others. However, some

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were sometimes affected by concerns about the safety of life and property, 34.34% of them. 39.88% of them are concerned about dealing with people around them. The jointing activities of household members accounted for 40.79% of them. Participating in community activities such as traditional merit making, 48.31% of them. Meeting with neighbors or people in the community (general) by 53.97% and social activities by 40.79%, as shown in Table 4.

Table 5 demonstrates that, for most of the family's adaptation, the relationship was normal. However, it was found that the method of maintaining social relationships amongst members of the household in increasing numbers was by using the phone, accounting for 31.05%, followed by the use of social media, accounting for 30.57%, and talking accounted for 24.81%. Doing activities together in the family accounted for 18.04%, respectively.

economic impact (n=31,394)	Impact					
	Increase		Decrease		No effect	
	n	%	n	%	n	%
1. Incomes	2,798	8.91	20,531	65.40	8,065	25.69
2. Expenditures for consumption of various products	9,863	31.42	12,037	38.34	9,494	30.24
3. Legal liability	8,395	26.74	3,529	11.24	19,470	62.02
4. Illegal liability	3,764	11.99	3,359	10.7	24,271	77.31
5. Savings	2,167	6.90	15,027	47.87	14,200	45.23

Table 1: Number and percentage of household members' economic impact

Economic adaptation (n=31,394)	n	%
Creating new careers for household members to increase income		
Yes (Having new careers)	28,959	92.24
No(Having no new careers)	2,435	7.76
Expanding, reducing, or liquidation		
Continuing as usual	7,089	63.19
Expanding	169	1.51
Reducing	2,619	23.34
Liquidation	727	6.48
Others	615	5.48
Non-increasing in self-improvement	18,382	58.55
Increasing in self-improvement	13,012	41.45
Self-improvement method		
Online self-study	10,357	48.34
Learning from experts/specialists	4,499	21.00
Learning by reading and searching from documents and books	4,389	20.49
Attending training	1,994	9.31
Others	185	0.86
Household spending/consumption behavior as a result of theCOVID-19 pandemic situation		
Growing vegetables for household consumption	18,422	30.39
Home cooking	26,457	43.64
Online shopping	8,734	14.41
Food ordering through applications	3,854	6.36
Electronic transaction	2,768	4.57
Others	386	0.64
Planning for the use of household money as a result of the COVID-19 situation		
Yes	24,443	77.86
No	6,951	22.14
Household career planning as a result of the COVID-19 situation		
Yes	20,490	65.27
No	10,904	34.73

Table 2: Number and percentage of household members' economic adaptation

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Health Impacts (n=31,394)	Increase		Decrease		No Impacts	
	n	%	n	%	n	%
1. The spread of COVID-19 provides household members with infection prevention and health care.	28,193	89.80	982	3.13	2,219	7.07
2. The spread of COVID-19 causes an impact causing stress/anxiety to household members	24,670	78.58	1,524	4.85	5,200	16.56

Table 3: Number and percentage of the sample classified by health impacts

Social and environmental impacts	Often		Sometimes		No impact		Not specified	
	n	%	n	%	n	%	n	%
1.Family quarrel	174	0.55	5,696	18.14	25,404	80.92	120	0.38
2.Family Violence	81	0.26	2,113	6.73	29,081	92.63	119	0.38
3.Being teased/humiliated/disgusted by others	117	0.37	2,102	6.70	29,057	92.56	118	0.38
4.Being concerned about the safety of life and property	1,402	4.47	10,782	34.34	19,089	60.80	121	0.39
5.Being concerned about dealing with people around	2,044	6.51	12,519	39.88	16,719	53.26	112	0.36
6.Jointing activities of household members	2,330	7.42	12,805	40.79	178	0.57	16,081	51.22
7.Participating in community activities such as traditional merit making	1,889	6.02	15,165	48.31	14,195	45.22	145	0.46
8.Meeting with neighbors/people in the community (general)	2,072	6.60	16,943	53.97	12,246	39.01	133	0.42
9.Social activities	1,318	4.20	12,807	40.79	17,020	54.21	249	0.79
10.Others	231	0.74	812	2.59	1,707	5.44	28,644	91.24

Table 4: Number and percentage of household members affected by social and environmental impacts

Methods	Increase		Same		Decrease		Not specified	
	n	%	n	%	n	%	n	%
1.Oral communication	7,789	24.81	21,099	67.21	2,360	7.52	146	0.47
2.Doing activities together in the family	5,663	18.04	23,514	74.90	2,030	6.47	187	0.60
3.Doing activities together in the community	2,761	8.79	18,054	57.51	10,426	33.21	153	0.49
4.Using the phone	9,748	31.05	20,175	64.26	1,156	3.68	315	1.00
5.Using Social Media	9,596	30.57	19,374	61.71	1,737	5.53	687	2.19
6.Others	74	0.24	2,802	8.93	336	1.07	28,182	89.77

Table 5: Number and percentage of household members' social relations methods maintained

D. Impact And Adaptation In Information Technology

In terms of information technology impact, it was found that the impact of technology usage among household members was greater compared to normal conditions, including learning to use new technologies more (45.85%). 37.84% of the participants had an increased risk of receiving false information from technology media; 36.74% of the participants had mental health problems from anxiety when receiving information from technology media; and 36.74% of the participants had physical health problems from using communication devices (such as eye pain, locked fingers, and so forth), by 25.87%, as shown in Table 6.Table 7 shows the adaptation from the COVID-19 pandemic situation. Household members of all ages were adapted to be able to live and do activities in daily life similarly. It was found that household members had more adaptability to learning technology. They learned to use the communication device by themselves (38.9%), gave their children and friends advice on how to use the communication device (37.79%), and learned to receive accurate information from the information media (32.67%).

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E. Impact and adaptation

The study, considering only households in which members were studying or studying, found that the COVID-19 pandemic affected the educational activities of each household, causing more burdens, obstacles, or problems than the norm in all activities, except for the fact that parents have to take time off work to look after their children who are absent from school. However, another 44.31% of households said parents had to take time off to care for their children who had dropped out of school as a greater burden than the norm. The impact can be seen from students having to study online instead of in a regular classroom, which had the greatest impact, at 80.70%. This was followed by the impact of the burden of children's education costs. For example, the cost of the internet was 68.67%, and the cost of purchasing technology equipment increased by 57.24%. As for the impact on students and students in terms of having to study compensation, 59.71% and more than half found that 57.18% of the children had media/games/mobile phones and 52.89% of the children were unable to learn from their peers, as shown in table 8.Table 9 shows that when considering only households whose members were studying, each household had no adaptation to the educational activities of the household members. A majority of household members, 80.12%, said they had never hired more tutors for their children, and 68.10% of them never asked an acquaintance to take care of their children during their school breaks. 65.79% of them never asked an acquaintance to teach a book to their children during their school holidays. This was seen by the majority of households as around 61.06% (the results include those that answer "yes" and "sometimes"). It was found that family members needed to share their time teaching their children and grandchildren.

Technology impact (n=31,394)	Increase		Same		Decrease	
	n	%	n	%	n	%
1.Learning to use new technology	14,394	45.85	15,406	49.07	1,089	3.47
2.Physical health problems from using communication devices (such as eye strain, locked fingers, and so forth)	8,123	25.87	20,460	65.17	2,191	6.98
3.Risk of receiving false information from various technological media	11,879	37.84	17,163	54.67	1,742	5.55
4.Mental health problems arising from anxiety when receiving information from various technological media	11,533	36.74	17,025	54.23	1,499	4.77
5.Others	348	1.11	2,133	6.79	314	1.0

Table 6: Number and percentage of household members' use of technology compared to normal conditions

Technology adaptation (n=31,394)	Yes		Sometimes		No	
	n	%	n	%	n	%
Asking for advice on how to use communication devices (e.g. asking child(ren)/grandchild(ren)/ friend(s).	11,863	37.79	12,087	38.5	7,440	23.7
Learning to use communication devices by themselves.	12,211	38.9	12,122	38.61	7,058	22.48
Learning to use communication devices from experts/specialists	7,361	23.45	11,310	36.03	12,720	40.52
Learning to receive accurate information from information media	10,257	32.67	12,215	38.91	8,919	28.41
Others	100	0.32	454	1.45	1,772	5.64

Table 7: Number and percentage of household members' technology learning adaptation

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education impacts (n=17,657)	Increase		Decrease		No impact	
	n	%	n	%	n	%
1.Students must take lessons through the online method.	14,250	80.70	541	3.07	2,866	16.23
2.Parents must take sick/personal leave to look after their children.	7,823	44.31	726	4.11	9,108	51.58
3.Parents had to purchase additional technology equipment.	10,107	57.24	592	3.35	6,958	39.41
4.Parents paid for additional expenses related to education such as monthly internet bill.	12,125	68.67	450	2.55	5,082	28.78
5. Participants' children were addicted to social media/games.	10,097	57.18	676	3.83	6,884	38.99
6. Participants' children can't keep up with their friends.	9,339	52.89	666	3.77	7,652	43.34
7.Participants' children had to take make-up classes	10,544	59.71	642	3.64	6,471	36.65
8.Others	315	1.79	214	1.21	17,128	97.00

Table 8: Number and percentage of education impacts to prevent the COVID-19 pandemic of household members compared to normal conditions

educational adaptation (n=17,657)	Yes		Sometimes		No	
	n	%	n	%	n	%
1.Hiring additional tutors for children/grandchildren	1,384	7.84	2,127	12.05	14,146	80.12
2.Asking your acquaintances to take care of your children/grandchildren during school breaks.	1,688	9.56	3,928	22.25	12,041	68.19
3.Asking acquaintances to teach children/grandchildren	1,895	10.73	4,145	23.48	11,617	65.79
4.Managing time to teach/take care of children/grandchildren.	5,320	30.13	5,461	30.93	6,876	38.94
5.Others	34	0.19	226	1.28	17,397	98.53

Table 9: Number and percentage of household members' educational adaptation

IV. CONCLUSION AND DISCUSSION

According to the data analysis on the impact of the COVID-19 pandemic, it was found that the average income of the population has decreased. This has caused a lack of income and has reduced savings; thus, spending for consumer goods has decreased and has been affected by the need for protection from infection and increased health care. Furthermore, the majority of them were concerned about infecting themselves and their family members. In terms of the social aspect, it was found that it would affect meeting with neighbors or people in the community, participating in community activities, as well as various social events.

People are increasingly learning to use new technologies, and they are at risk of receiving false information from various technological media. Mental health problems caused by anxiety when receiving information from various technological media and physical health problems from the use of communication devices also affect the educational activities of each household as a whole, causing burdens, obstacles, or problems more than normal conditions in every activity as well. The results of the abovementioned study are consistent with Ratten's (2020) research study on corona virus (COVID-19) and social value co-creation, which claimed that COVID-19 changes society forever because, under the New Normal lifestyle, there are lifestyle changes, including social distancing and working from home. During this pandemic,

there is a greater emphasis on social policy, and entrepreneurs are trying to find ways to deal with the COVID-19 crisis, which Thosawat & Mahiwan (2020) has identified as COVID-19. It affects the quality of social life and affects a large number of people, causing various problems to follow, whether they are public health problems, economic problems, or mental health problems. Furthermore, Barua (2020), who studied the subject understanding of Coronanomics: The Economic Impact of the Coronavirus (COVID-19) Pandemic, claimed that COVID-19 has pushed many countries into recession and a possible economic downturn. This is due to the rapid increase in the number of infections and deaths, and recovery from the pandemic remains uncertain, even in developed countries. Moreover, in line with the survey results of the National Statistical Office together with the Thailand Improvement Research Institute, it was found that people have lower incomes during the serious crisis. It affects daily life a lot, and learners are not ready to study online (Prangpraphan & Jitsuchon, 2020).

As for the adaptation in various aspects, it was found that the Thai people had a new adaptation for living, known as the "New Normal way of life." It has caused social and economic changes in Thai households, such as having to reduce the size of their businesses but also having more self-improvement through online self-learning. The tendency to cook food for the family has increased, as has the tendency to grow vegetables for household consumption and use online for food ordering. There is a financial and career plan to adapt to life. Most of them have adapted their health behaviors to prevent infection with COVID-19, and there are ways to alleviate their anxiety by maintaining normal social relationships among members of the household and using communication channels such as the telephone and social media. Households are increasingly adapting to learning technology. In terms of education, it was found that while the behavior of sharing time for teaching and taking care of children and grandchildren within the family is tendentious, there is some adaptation. The results of the above study are consistent with Wae's (2020) research study on COVID-19 and learning to change health behaviors today. Thai people have adapted from "fear to awakening". People should have a lot of learning. To deal with the virus outbreak, learn to take care of yourself and avoid social situations. If it can continue, it will be able to strengthen the people. Kittinaraporn (2021) studied media use and new normal health behavior modification during the Coronavirus (COVID-19) pandemic: a case study in Pathum Thani Province. He found that the participants received news through the internet the most, followed by television, individual media, and specialized media, and made use of the internet media the most, followed by television and personal media, respectively. Teachers and parents have more opportunities to take care of students' learning (Euawong et al., 2021).

V. RECOMMENDATIONS

A. Recommendations from the current study

- From the economic aspect, relevant agencies must urgently promote occupational improvement for the household sector for people to have a career and earn income in the area. This may start by exploring the potential of the community to find a solution that is suitable for the area. Resources available in the community: the ability or aptitude of the community to create a career or generate income in the area where they live. This increases income and prevents household debt problems that may arise.
- For the health aspect, there should be a curriculum to develop health knowledge about COVID-19. It is included in the course of study at all levels, especially in health education for the subject groups and targeted groups of people, both in the community and in the workplace, and includes producing a variety of media following the needs of each target group.
- For social and environmental aspects, there should be confidence in doing activities together in society or adapting activities in society as well as the environment following the COVID-19 pandemic situation.
- For the information technology aspect, the government should have clear plans and guidelines for digital technology implementation and designate the Internet as the country's basic infrastructure to meet the changing environment caused by digital technology (digital disruption), especially in rural areas, to have access to Thailand's basic digital technology. Simultaneously, media literacy must be strengthened.
- Educational institutions should prepare for online teaching to be more effective. Teachers must be developed to have the ability to design online teaching and learning that has learning outcomes that are not different from those in schools. Moreover, parents should be knowledgeable about technology or online learning to properly care for their children.

B. Recommendation for the future study

- Study the impact and adaptation of the vulnerable groups, such as the elderly with dependency, the underprivileged, the handicapped group, and so forth.
- Study the dimension of the strength of the community and the potential of the people in the community to create a new way of community.

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