Factors Influencing Online Information Seeking
during Covid-19 Outbreak in Thailand

Adchara Panthanuwong[1]

[1]Faculty of Journalism and Mass Communication, Thammasat University, Thailand

Abstract

The present study aims to investigate factors that influenced online information seeking during Covid-19 pandemic in Thailand. Survey research method using online questionnaire was used to collect data from 950 participants. Findings show high level of information seeking among respondents, with professional online news media being the most used source. Respondents' information processing was high across all information channels. Hypothesis testing shows that psychological risk, social risk and safety risk perception were determinants of affective response which in turn, along with informational subjective norms, predicted perceived information sufficiency. Factors found to influence information seeking from professional online news media included perceived information gathering capacity and perceived information sufficiency. For online media of famous online personalities and general public, only perceived information sufficiency was found to affect information seeking of the Thai people. For government's online media, two factors affecting information seeking were perceived information sufficiency and relevant channel beliefs.

Keywords: 1) Factors Influencing 2) Online Information Seeking 3) Health Risk Communication 4) Covid-19

---

1 Assistant Professor, Lecturer, Department of Corporate Communication; Email: padchara@tu.ac.th

Introduction

Covid-19 is acute infectious disease that first emerged in China in December 2019 (Bchetnia, et al., 2020, p. 1602). The disease which escalated into global pandemic had brought about unprecedented challenges to public health, causing massive loss of lives and devastating impacts on social wellbeing and economy in countries around the globe. Governments in affected countries introduced all measures possible—lockdowns, social distancing, vaccination, etc. to curb spreading of the disease. In times of such mega crisis in health and public safety, cooperation from the public is crucial for the administrators to contain infections and minimize impacts on public health, as well as social and economic stability. However, amidst chaotic and pressing situation of outbreak controlling, another challenge emerged—infodemic, or an overload of information that includes false or misleading information during the outbreak (Eysenbach, 2020). Confusion and panic among the public was partly due to receiving and sharing of misinformation and fake news about Covid-19. The impact of infodemic had a far reaching affect, whether it be unintentional use of misinformaion by professional news media, sharing content from fake news sources by online media of famous personalites who had large number of followers, and even by ordinary people. Among key Covid-19 information sources were national and lcoal governments, who played central roles in managing and controling the pandemic. Given such situation in which overflow of inaccurate information seeking and sharing, people's behavior in exposing themselves to information about Covid-19 was likely to be influenced by certain factors. Since the beginning of the Covid-19 outbreak, numerous studies were conducted to identify factors influencing information seeking. Results suggest that there were several factors that could affect information behavior of people in times of Covid-19 pandemic-- risk perception, social norms, affective responses and information gap. Accordingly, the present study was aimed to investigate how Thai people sought and processed information about Covid-19 pandemic from online channels and to identify relevant factors influencing such behavior.

Literature Review

1. Risk Perception and Risk Perception Theories

1.1 Risk perception is one of the key concepts studied by health communication scholars. Defnition of risk perceptions vary from one context to another. Among all definitions used, risk perception can be defined as individuals' perceived dangers or hazards that have potential to harm oneself and others important to them. In another context, risk perception is expected loss of expectancy, or probability of premature fataility. (Fischhoff, Bostrom and Quadrel, 1993, p. 190) Risk perception is the subjective judgment that people create regarding the characteristics, severity, and way in which the risk is managed. (Cori, et al., 2020)

Measurement of risk perception is important as it can be used in planning strategies of risk communication. However, measurement of risk perception can be done by mul-

tidimensional grouping of risk characteristics (Slovic, 1992, as cited in Griffin, Dunwoody and Neuwirth, 1999, p. S235)

1.2 Risk Perception Theories

Theoretical explanation of risk perceptions include diverse perspectives of factors contributing to how individuals perceive risks. These theories include knowledge theory, personality theory, economic theory, political theory, and culturalist theory (Wildavsky and Dake, 1990, pp. 41-46).

The concept of risk perception served as theoretical background for the present study in measurement of risk perception based on characteristics or dimensions of perception. Also relevant to the present study is knowledge theory of risk perception that informed discussion of research findings with regards to people's perception of risks in the context of Covid-19 pandemic in Thailand where insuffiicient knowledge about the disease could affect public sentiment and negative responses to the pandemic.

2. Theories and Model of Information Seeking and Processing

As the present study's mian focus is to investige factors influencing information seeking during Covid-19 pandemic, a number of theories and model relevant to the study were reviewed as follows: uses and gratificaions theory, channel complementarity theory, and risk information seeking and processing (RISP) model.

Uses and gratifications theory was developed by Elihu Katz in 1959 (Littlejohn, Foss and Oetzel, 2017, p. 174) The theory, and related theories, focus on audiences rather than the message. Audiences have more active role in using media and messages to serve their own needs and objectives. This theory is relevant to the present study in that audiences seek information based on a number of factors including their needs and motivations. This is particularly useful for the present study which aims to examine how people sought information to serve their needs about Covid-19 outbreak.

Channel complementarity theory,which was proposed by Mohan-Dutta Bergman (Mohan-Dutta Bergman, 2004 as cited in Littlejohn, Foss and Oetsel, 2017, p. 177), states that people, based on gratifications received, are able to choose what channels of communication they expose themselves to. The theory, which is based on both selective exposure and uses and gratifications theory, goes on to posit that choices of media is based on the motivation for or functionaltity of the medium rather than its nature. Therefore, an individual may use one channel and another at the same time—one media serving as a complement to the other. (Littlejohn, Foss and Oetzel, 2017, p. 177). Accordingly, a person can use Twitter to check on latest news update and at the same time switch on TV to watch news report for more detailed analysis of that news. This theory serves as guideline in the present study in investigating how people seek information about Covid-19 from different channels.

Risk information seeking and processing model or RISP proposes 7 factors that might predispose an individual to seek risk information. These factors are individual characteristics, peceived hazard characteristics, affective

response, perceived social pressure to possess information, information sufficiency, capacity to learn, and beliefs in usefulness of information in various channels. (Griffin, Dunwoody and Neurwirth, 1999, p. S230)

The present study adapted the RISP model by focusing only on 6 factors, adding dimensions of risk perceptions or perceived hazard characteristics, and adjusting measurement of information sufficiency to be based on individual's holistic perception of sufficiency.

3. Related Studies

Numerous studies on factors influencing information seeking and processing were conducted. Liu, et al. (2021) used the Planned Risk Information Seeking Model or PRISM to investigate risk Information seeking and avoidance in China during early stages of Covid-19 outbreak, and found that information seeking and avoidance was influenced by informational subjective norms and perceived information gathering capacity. Also found in the study was relationship between risk perception and affective respones.

Kahlor, et al. (2006, pp. 163-176) partially used the RISP model by testing influence of informational subjective norms on information seeking and found that the factor might be predictor of information seeking and processing when people faced risk. Similarly, Li and Zheng (2022, pp. 69-84) examined factors derieved from parts of the RISP model including perceived risk, affective responses, informational subjective norms and information gap or insufficiency. The study found that perceived severity and perceived susceptibility was positively related with affective reponses.

Moreover, affective reponses, informational subjective norms and information gap were found to be positively related to Covid-19 information seeking. Additionally, a study added new variable to the RISP model. Ford, Douglas and Barrett (2022, pp. 1-14) added a new variable of pandemic fatigue in their study using the RISP framework and introduced some changes of measurements. The study found that pandemic fatigue influenecd information seeking and avoidance.

These previous studies on Covid-19 information seeking demonstrated that a number of factors including risk perception, affective responses, informational subjective norms, information gap could, to a certain degree, affect people's Covid-19 information seeking and processing. Therefore, the present study was aimed to investigate influence of these factors studied by previous research as well as other factors proposed in the RISP Model (Griffin, Dunwoody and Neuwirth, 1999, p. s232) on how Thai people sought information about Covid-19 pandemic. Research objectives of the present study were 1) to examine information seeking from online channel of the Thai public during Covid-19 outbreak, and 2) to investigate factors that influence information seeking from online channels of the Thai public during Covid-19 outbreak.

Accordingly, following hypotheses were tested in the study:

H1: Perception of safety, social and psychological risk influence affective response.

H2: Affective response and informational subjective norms influence perceived information sufficiency.

H3.1: Perceived information sufficiency, relevant channel beliefs, and perceived information gathering capacity influence information seeking from professional online news media.

H3.2: Perceived information sufficiency, relevant channel beliefs, and perceived information gathering capacity influence information seeking from online media of famous online personalities and general public.

H3.3: Perceived information sufficiency, relevant channel beliefs, and perceived information gathering capacity influence information seeking from government's online media.

Methods

Method used was survey research in which 950 respondents participated. Data were collected using self-administered online questionnaire verfied for validity by Item Objective Congruence (IOC), of which IOC value ranged from 6 to 10. Reliability was tested on Cronbach's alpha reliability coefficient for each variable measurement: risk perception (α =.794), affective response (α =.823), informational subjective norm (α =.995), perceived information sufficiency (α =.740), relevant channel beliefs (α =.857), perceived information gathering capacity (α =.880), and information processing (α =.895) Analysis of survey results were done using descriptive statistics of frequency, percentage, mean and standard deviation. Inferential statistics of multiple regressions were used to test all hypotheses.
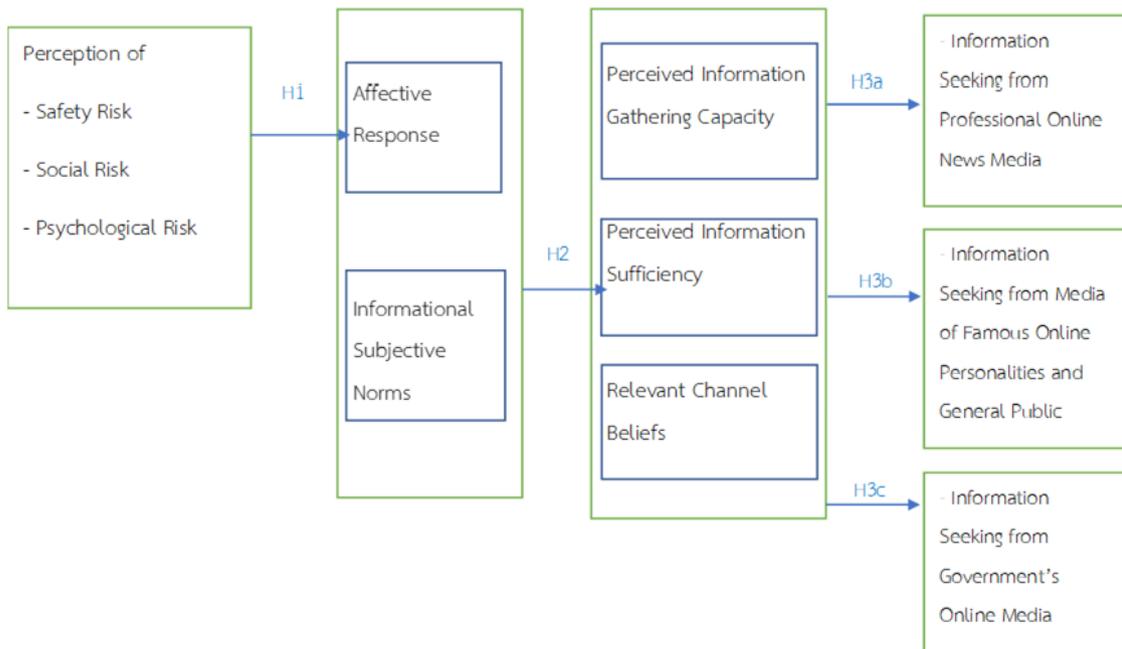

Figure 1 Conceptual Framework

Results

Descriptive statistical analysis results are as follows:

Respondents had moderate overall risk perception (x̄ = 2.74), with highest level of perception for safety risk (x̄ = 2.58), followed by social risk (x̄ = 2.63) and psychological risk (x̄ = 3.00) respectively. For affective response measurement, results show high level of negative feelings or concerns (x̄ = 2.19), and high social pressure was reflected through informational subjective norm (x̄ = 3.61).

Respondents' level of perceived information sufficiency was high (x̄ = 3.97). However, their opinion towards credibility of channels was only moderate (x̄ = 3.16). Respondents had high level of perceived information gathering capacity (x̄ = 3.94).

By average, respondents had high level of information seeking from all channels, with professional news media outlets being most used (x̄ = 7.13), followed by online media of famous online personalities and general public (x̄ = 7.03), and government's online media (x̄ = 6.66) respectively.

As for processing dimension of information seeking, study shows that respondents had high level of processing in all aspects from all three channels. (x̄ = 3.9)

Hypotheses Testing

H1: Perception of safe, social, and psychological risk influence affective response.

Table 1 Effect of perception of safety risk, social risk, and psychological risk on affective response.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	.237	.081		2.928**	.003
Safety risk	.426	.032	.413	13.228***	.000
Social risk	.230	.030	.256	7.743***	.000
Psychological risk	.082	.026	.092	3.120**	.002
R = .657 / Adjusted R^2 = .429 / F = 239.034***, p = .000					

Note: **$p < .01$, ***$p < .001$

Table 1 indicates that perception of safety risk, social risk and psychological risk had positive affect on affective response at 4.29 percent (R= .657, Adj R^2 = .429). Therefore, H1 was supported. Interestingly, each dimension of risk perception had varying impacts on dependent variable of information seeking. Perception of safety risk had the highest effect (β = .413), followed by social risk (β = .256) and psychological risk (β = .092) respectively.

H2: Affective response and informational subjective norms influence perceived information sufficiency.

Table 2 Effects of informational subjective norms and affective response on perceived information sufficiency.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	3.040	.081		37.610***	.000
Informational subjective norms	.278	.019	.438	15.018***	.000
Affective response	-.036	.017	-.063	-2.156*	.031
Psychological risk	.082	.026	.092	3.120**	.002
R = .449 / Adjusted R^2 = .200 / F = 119.539***, p = .000					

Note: *$p < .05$, ***$p < .001$

Table 2 indicates that informational subjective norm and affective response were determinants of perceived information sufficiency at 20 percent (R = .449, Adj. R^2 = .200), while the remaining 80 percent were affected by other factors not studied in this research. However, affective response had negative affect on perceived information sufficiency (β = -.036), which means that the more people were concerned about the pandemic, the more they perceived themselves as not having enough information about Covid-19. H2 was supported.

H3a Perceived information sufficiency, relevant channel beliefs, and perceived information gathering capacity influence information seeking from professional online news media.

Table 3 Effect of perceived information sufficiency and perceived information gathering capacity on information seeking from professional online news media.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	1.118	.105		10.636***	.000
Perceived information sufficiency	.111	.029	.140	3.773***	.000
Perceived information gathering capacity	0.52	.023	.084	2.274*	.023
R = .197 / Adjusted R^2 = .037 / F = 19.127***, p = .000					

Note: *$p < .05$, ***$p < .001$

From Table 3, it shows that only perceived information sufficiency and perceived information gathering capacity had effect on information seeking from professional online news media at 3.7 percent. (R=.197, Adj R^2= .037) H3.1 was thus partly supported.

H3b: Perceived information sufficiency, relevant channel belief, and perceived information gathering capacity influence information seeking from online media of famous online personalities and general public.

Table 4 Effect of perceived information sufficiency on information seeking from online media of famous online personalities and general public.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	1.308	.102		12.879***	.000
Perceived information sufficiency	.115	.025	.145	4.518***	.000
R = .145 / Adjusted R^2 = .020 / F = 20.411***, p = .000					

Note: ***p < .001

Table 4 shows that only one factor of perceived information sufficiency had an effect on information seeking from online media of famous online personalities and general public at 2.0 percent. (R=.145, Adj R^2=0.20) H3.2 was partly confirmed.

H3c: Perceived information sufficiency, relevant channel beliefs, and perceived information gathering capacity influence information seeking from government's online media.

Table 5 Effect of perceived information sufficiency and relevant channel beliefs on information seeking from government's online media.

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	1.132	.116		9.752***	.000
Perceived information sufficiency	.097	.028	.114	3.518***	.000
Relevant Channel Belief	.059	.019	.103	3.166**	.002
R = .166 / Adjusted R^2 = .025 / F = 13.411***, p = .000					

Note: **p < .01, ***p < .001

From Table 5, it shows that for government's online media, only two factors of perceived information sufficiency and perceived information gathering capacity influenced information seeking at 2.5 percent. (R = .166, Adj R^2= .025). Hypothesis 3.3 was partly supported.

Conclusion and Discussion

The present study attempted to examine information seeking behavior of the Thai public during Covid-19 outbreak. Results show that overall online information seeking was high, with professional media outlet being the most sought channel, followed by online media of famous online personalities and general public, and government's online media respectively. This finding differs from Limsringam, Sasithanakornkaew and Apisupachoke, (2021, p. 23) which found moderate Covid-19 information exposure among residents of Bangkok. However, even though level of public's information seeking from all three

online channels are at the same level, it was found that government's online media such as Facebook, Twitter, and YouTube were less used, when compared to professional online news media and online media of famous online personalities and general public. This implies that Thai people used more of professional news media and online media of famous online personalities than government's online sources. These findings are consistent with te Poel, et al. (2021, pp. 29-34) which found that people in the Netherlands sought information about Covid-19 pandemic from both online and offline news media, suggesting that professional news media were regarded as important source of Covid-19 information in the Netherlands.

Findings indicate that perception of safety, social and psychological risk were factors contributing to affective responses. This is in line with Liu, et al. (2021) which found that risk perception was related to affective response and also with Li and Zheng (2022, pp. 69-84) which found that risk perception in the dimension of perceived severity, and perceived susceptibility were positively related with affective response. Clearly, risk perception, especially the safety dimension of risk perception could influence people's feelings and emotions in the times of such major pandemic as Covid-19.

Even though affective response and informational subjective norm were found to predict perceived information sufficiency, findings show that affective response had negative relationship with dependent variable. This suggests that the more individuals were worried or concerned, the more they would perceive themselves to have insufficient information. This is partly consistent with the RISP model (Griffin, Dunwoody and Neuwirth, 1999, p. s232) which proposed that worry or concern could predict information gap. However, the findings of positive relationship between informational subjective norms and perceived information sufficiency imply that felt social pressure did not lead to perception of information gap, while RISP model proposes that social pressure could lead to people's need to search for more information. Such findings need to be further investigated in next research since there might be unidentified cultural or social context of Covid-19 pandemic in Thailand.

Factors that influenced online information seeking from professional news media were perceived information sufficiency and perceived information gathering capacity. This is inconsistent with findings from previous research which found that news media were highly used as source for Covid-19 information (te Poel, et al., 2021, pp. 29-34; Limsringam, Sasithanakornkaew and Apisupachoke, (2021, p. 24). In other words, relevant channel beliefs or news media trustworthiness was not found to be impactful or influential to information seeking from professional news media. This finding is interesting as it suggests that, in times of Covid-19 crisis, people did not consider much of the trustworthiness or effectiveness of the professional news media when seeking information from this channel. Since Covid-19 has been an unprecedented public health crisis that took the world by storm, public concern to obtain necessary information to survive

the pandemic prompted people to take in any information at hand. This was especially true during the early stages of the outbreak when little was known about the virus and spreading of infections and death tolls skyrocketed everywhere. Amidst such circumstances, even government and professional media had to struggle and cope with overflow of information from myriad sources which often were not completely reliable sources of accurate, verified information. Moreover, the present study was conducted during the second year since Covid-19 outbreak first began. At that time, massive vaccination was just introduced and became limitedly available to the world population. Confusion caused by information overload, fake news and misinformation was still major issue. Professional news media were somehow affected by this situation of information inaccuracy and infodemic as illustrated by the case of Thai PBS, Thailand's public broadcasting corporation, who reported a news story about side effects of vaccination that eventually turned out to be inaccurate. (Isara News, 2021) Such incident is an example of situational factor that might have caused public distrust for Thai professional media organizations, viewing them as unreliable information source about Covid-19. Moreover, as Lambert and Loiselle (2007, p. 1015) state, there are a number of factors that lead to information seeking-- personal factors, social and other related contexts. Therefore, it is possible that there were other influential factors that could affect the public's information seeking from professional news media, which in this case the infodemic.

Credibility and convenience were not factors that caused people to search for information about Covid-19 from unofficial sources like online media of famous online personalities and general public. The only factor that contributed to people seeking information from this type of channel was their perception of how much information they already had. This part of findings might be explained by uses and gratifications theory which posits that individuals have motivations and needs to expose themselves to media and messages. Therefore, as shown in this study, the public obtained information from online media of famous online personalities and general public because they felt the need to get as much necessary information as possible. Source and information credibility and accessibility were not considered as top priority in their information seeking.

Surprisingly, relevant channel beliefs were one of the two determinants of information seeking from government's online media. This suggests that trust of public in government's communication played an important role in Covid-19 information seeking. Situational context might explain this finding (Lambert and Loiselle, 2007, p. 1015). During the time of data collection of this study, the Thai national and local governments used myriad channels of communications, especially social network media, to communicate measures, programs of actions, rules and regulations for the public to follow all through the period of Covid-19 outbreak. This is why accessibility and abundance of information given by the government could explain that situational factors could affect on how people seek information in differing con-

texts (Lambert and Loiselle, 2007, pp. 1015-1016)

By overall, findings of the study indicate that there were many factors involved to truly understand public information seeking of Covid-19 in Thailand. Safety was the main issue when it came to pandemic or health risk as it affects people's emotional stress, which in turn, led to how much people thought they knew about Covid-19 pandemic. Informational subjective norms, as social pressure, was also another factor affecting Thai people's confidence in their knowledge of the pandemic.

Credibility of information channel was also important. Even though this study revealed that media credibility impacted only information seeking from government's online media, and not from the other two channels studied, this suggests that communication from government was well trusted by the public. But for professional online news media which were, by principles, obliged to have high credibility, channel beliefs factor did not influence people's seeking information. It can be concluded that people sought information from professional online news media, not because of credibility, but from their information needs and channel accessibility. Such findings are different from previous research (te Poel, et al., 2021, pp. 29-34; Liu, et al., 2021) which found that people placed more trust on professional news media.

Similarly, for unofficial sources like online media of famous online personalities and general public, credibility and channel accessibility were not determinants of people's information seeking from this channel,

too. This clearly indicates that people sought information from this unofficial source out of their information need, rather than credibility of the source and channel accessibility of the information.

However, it can be noted that perceived information sufficiency was found to influence information seeking from all types of channels. It might be explained by the fact that Covid-19 pandemic crisis was a a major disruption in countries around the world, including Thailand. Misinformation, lack of information, fake news, disinformation, and information fatigue were factors that deeply and intensely impacted all aspects of life of the entire population of Thailand. The feeling of lack of control, fear and concern about the pandemic that had been so life threatening to all led to a sense of need for information. Perceived information sufficiency was thus a key factor that influenced information seeking from all channels.

Recommendations

1. As credibility is the factor that led public to seek information from government sources, the government should continue to focus on building public trust through communication in times of Covid-19 pandemic and beyond. Similarly, professional news media should strive to improve their trustworthiness and effectiveness as it is the foundation of the media profession to serve as indispensable, reliable source of information for the public.

2. Channel accessibility and convenience for the public should be considered as important factor in designing health risk communication media and tools.

3. Understanding of people's needs and motivations to seek information, including personal and contextual factors are essential part of effective communication in times of health crisis.

4. Affective factor including emotions, concerns and worries are important factor to be considered in health risk communication. More studies should be done to better understand the effects of these factors on information behavior of the public.

5. To examine overall influence of multidimensional factors influencing information seeking about Covid-19 outbreak in Thailand, future research may apply multivariate statistical analysis of structural equation modeling or SEM to investigate structural relationships among various independent variables of risk perception, affective response, informational subjective norms, perceived information sufficiency, and other related variables to identify multiple and interrelated dependence in a single analysis of factors.

Bibliography

Bchetnia, M., Girard, C., Duchaine, C. and Laprise, C. (2020). The outbreak of the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2): A review of the current global status. **Journal of Infection and Public Health,** 13(11), 1601-1610.

Cori, L., Bianchi, F., Cadum, E. and Anthonj, C. (2020). Risk perception and COVID-19. **International Journal of Environmental Research and Public Health,** 17(9), 3114.

Eysenbach, G. (2020). How to fight an infodemic: The four pillars of infodemic management. **Journal of medical Internet research,** 22(6), e21820.

Fischhoff, B., Bostrom, A. and Quadrel, M. J. (1993). Risk perception and communication. **Annual Review of Public Health,** 14(1), 183-203.

Ford, J. L., Douglas, M. and Barrett, A. K. (2022). The role of pandemic fatigue in seeking and avoiding information on COVID-19 among young adults. **Health Communication,** 1-14.

Griffin, R. J., Dunwoody, S. and Neuwirth, K. (1999). Proposed model of the relationship of risk information seeking and processing to the development of preventive behaviors. **Environmental Research,** 80(2), S230-S245.

Kahlor, L., Dunwoody, S., Griffin, R. J. and Neuwirth, K. (2006). Seeking and processing information about impersonal risk. **Science Communication,** 28(2), 163-194.

Lambert, S. D. and Loiselle, C. G. (2007). Health information—seeking behavior. **Qualitative Health Research,** 17(8), 1006-1019.

Li, J. and Zheng, H. (2022). Online information seeking and disease prevention intent during COVID-19 outbreak. **Journalism & Mass Communication Quarterly,** 99(1), 69-88.

Limsringam, P., Sasithanakornkaew, S. and Apisupachoke, W. (2021). Information pereption concerning novel coronavirus (Covid-19) through social media on the attitudes and preventive behaviors of citizens in Bangkok. **Journal of MCU Nakhondhat,** 8(9), 18–33.

Littlejohn, S. W., Foss, K. A. and Oetzel, J. G. (2017). **Theories of human communication** (11th ed.). Long Grove: Waveland Press.

Liu, M., Chen, Y., Shi, D. and Yan, T. (2021). The public's risk information seeking and avoidance in China during early stages of the COVID-19 outbreak. **Frontiers in Psychology,** 12, 649180.

te Poel, F., Linn, A. J., Baumgartner, S. E., van Dijk, L. and Smit, E. S. (2021). Sick for information?: Information needs and media use of the Dutch public during the Covid-19 pandemic. **European Journal of Health Communication,** 2(3), 24-43.

Isara News. (12 May 2021). **Thai PBS issues apology statement, designating investigation team on news editor assistant reporting fake news about vaccine side affects Udonthani**. Retrieved December 10, 2021 from https://www.isranews.org/article/isranews-other-news/98491-isranews-cov.html

Wildavsky, A. and Dake, K. (1990). Theories of risk perception: Who fears what and why?. **Daedalus,** 119(4), 41-60.