Understanding University Students' Health Information Seeking Behaviours on Social Media During the COVID-19 Pandemic: A Developing Country Perspective

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Abstract. According to the World Health Organization (WHO), the COVID-19 pandemic is considered the worst global health crisis in the 21st century that caused unprecedented disruption to many sectors around the world (e.g. education, business, and tourism). Misinformation on social media is one of the major issues during the COVID-19 pandemic, which must be carefully considered. To address this issue, people's health information-seeking behaviours play an important role to access accurate and reliable information on social media. In this study, we conducted a questionnaire-based study in Myanmar, which is one of the developing countries according to the United Nations to understand university students' health information-seeking behaviours on social media during the COVID-19 pandemic. The findings suggest that social media plays a vital role to spread reliable and accurate information during the pandemic. The role of governments and authorities is also important to effectively use social media platforms (e.g. Facebook) to reach out to the public so that they can spread timely and accurate information during the COVID-19 pandemic. Lastly, users need to assess and verify the credibility of information related to pandemics on social media when they seek health-related information. This study suggests opportunities for further research in health information seeking on social media.

Keywords: COVID-19 Pandemic, Health Information-Seeking Behaviour, Social Media

1 Introduction

Since the beginning of 2020, the world has experienced the COVID-19 pandemic caused by a new coronavirus (SARS-CoV-2). It became the worst global health crisis since 1918 [1, 2]. According to WHO [3], the COVID-19 pandemic has become a severe global threat and caused unprecedented disruptions and damages to many sectors and activities including education, business (e.g. work from home), social (e.g. stay-at-home), health-related activities (e.g. restrictions on on-site health visit), and tourism (e.g. closures of hotels and restaurants). Moreover, most universities and schools around the world had to temporarily stop their onsite and face-to-face educational activities and moved to online platforms (e.g. using Zoom or MSTeam). Since the

beginning of the COVID-19 pandemic, which has cost the lives of millions of people worldwide [4], people have sought health-related information (e.g. daily infection rates, mortality rate, and COVID-19 disease symptoms) from various sources including print media (e.g. television, radio, or social media channels) and online platforms (e.g. health-related websites and social media).

According to the existing literature, the ways people seek information about their health such as risks, symptoms, illnesses, treatment, and health-protective behaviours can be referred as '*Health Information-Seeking Behaviour'* (HISB) [5,6]. For instance, people use various platforms (e.g. newspapers, online media, TV, and radio) to seek, obtain, and verify health-related information to deal with their health problems. Generally, HISB refers to the individual's discretionary actions to seek, obtain, and verify health-related information, as well as sources of information they use. Some discretionary actions of information seeking include reading (e.g. blogs), browsing (e.g. websites), listening (e.g. health talks), direct questioning (e.g. forum), asking for clarifications (e.g. chatbot), discussion (e.g. forum), and exchanging information with others (e.g. social media) [7-14].

Concerning people's health-related information-seeking behaviours, the existing literature shows that the internet, particularly social media, is the primary source for users to seek, obtain, and verify health-related information in order to make decisions on their health-related issues [15]. Furthermore, in recent years, social media platforms (e.g. Facebook and Twitter) have become a vital communication tool for people to identify health-related data. For instance, people seek information related to the outbreaks of infectious diseases and daily mortality rates during the COVID-19 pandemic. Furthermore, they analyse, verify, and interpret such health information on social media when they share it with others (e.g. friends on social media) [16-19]. The literature also points out that people usually seek health-related information mostly on social media to understand a particular health problem (e.g. symptoms and treatments). Furthermore, they use social media to assess and verify the credibility of health-related information (e.g. effectiveness of different vaccines for COVID-19). Most people have become reliant on social media for health information-seeking because it can provide immediate access to information seekers to have access to a large amount of health information, and the various perspectives on different health topics [20]. Not only do people want to engage in health-seeking from professional medical websites but they may also want to contribute to online health communities [22, 23]. For instance, they write, share, and post COVID-19-related information on social media during the pandemic. As described in [21, 22], among online health information seekers, 16% tried to seek others who may share similar health concerns with them, 30% consulted online health-related reviews or rankings of health care services or treatments, and 26% of them read or watched someone else's experience about health or medical issues. The existing literature also confirms that regarding seeking health information behaviours and resources, social media plays a dominating role, which can empower users in terms of improvements in making decisions and ultimately fostering better public health outcomes.

In the past decade, people have been frequently seeking information on social media including Facebook, Twitter, WeChat, and Weibo [24]. During the recent pandemic, as people were forced to stay under lockdowns and nationwide restrictions, their health-related information-seeking behaviours and activities had moved to the internet,

particularly on social media. For instance, during the pandemic, people shared, exchanged, and acquired COVID-19 health-related information on social media platforms including Facebook and Twitter. Not only do they use social media to obtain up-to-date information, but they also use social media to assess and verify the credibility of COVID-19-related information. Hence, social media had also become an alternative for a personal visit to hospitals and medical centers, as well as face-to-face consultations with health practitioners [25]. In addition, the existing literature also confirms that social media has become the most common platform for users during the COVID-19 pandemic [24, 26]. It is not surprising that over 3.8 billion people are utilizing social media around the world; hence, the vast volume of information that people received through social media has an impact on how they interpret and respond to the current COVID-19 pandemic [27, 28]. During the pandemic, the WHO stated that the largest number of COVID-related talks on Twitter in one day was 548,152,410. Furthermore, COVID-19 was mentioned 40.2 million times on social media between May 12th and May 18th, 2020, according to the online social media tracking platform TalkWalkerTM [29, 30].

More importantly, the literature has also highlighted that misinformation related to the COVID-19 pandemic has caused a major threat to public health [31]. According to [37], misinformation is false or inaccurate information, which is deliberately created, as well as is propagated with or without intention. From the science and health point of view, misinformation is defined as information that is contrary to the epistemic consensus of the scientific community regarding a phenomenon [38, p.434]. Furthermore, the spread of such misinformation about COVID-19 is associated with people's health information-seeking behaviours on social media [32]. In 2020, the WHO announced that the COVID-19 pandemic was accompanied by a contemporary challenge called the '*infodemic*' of misinformation [33]. Furthermore, to properly address rapidly spreading rumours and questions from the public obtained on social media during the COVID-19 pandemic [34], the WHO has used search optimization strategies within the social media platforms to guide questions about the pandemic by redirecting them to reliable sources.

Although the existing research highlights the importance of people's health information-seeking behaviours and the challenge of misinformation being spread on social media during the pandemic, there is limited research on the Covid-19-related information-seeking behaviour of university students, who are known as the largest user group of social networking sites according to [35]. Furthermore, the research is limited to the health information-seeking behaviours of university students particularly in developing countries during the COVID-19 pandemic. To be able to bridge the gaps, this research is important to conduct as the findings from this study can be useful for researchers in health informatics to understand students' information-seeking behaviours on social media during a health crisis (e.g. COVID-19). Hence, in this paper, we aimed to conduct empirical research and perform questionnaire-based research to investigate the HISB of university students in Myanmar. The main objectives of the study are:

- To understand university students' social media usage and their social media self-efficacy during the COVID-19 pandemic,

- To understand their HISB during the COVID-19 pandemic in terms of their trustworthiness, assessment of information credibility, and their fear of COVID-19, and
- To understand how they verify misinformation related to COVID-19 on social media

2 Method

2.1 Participants Recruitment

Regarding the recruitment of participants in this study, we defined the inclusion criteria. For instance, participants must age between 18 and 25 years, as well as they must belong to a particular program (e.g. undergraduate or graduate) in a local university in Myanmar. The participants were recruited through the Myanmar University Network including social media platforms (e.g. Facebook) and instant messaging tools (e.g. Viber). We recruited participants who were interested in voluntarily participating in the study. Upon the participants' agreement, we shared the questionnaire link with the participants via email. The data collection took place for 30 days. The research was conducted according to the university's ethical guidelines.

2.2 Approach and Instruments

In this study, we conducted a web-based questionnaire research to understand university students' HISB on social media (e.g. Facebook and Twitter). Particularly, we were interested in their behaviours in terms of seeking, verifying, and acquiring the COVID-19 related health information on social media during the pandemic. First, we developed an online questionnaire based on the research objectives and the concepts discussed above. The questionnaires consisted of demographic questions (e.g. age, gender, and education background), followed by participants' social media usage. Regarding participants' social media self-efficacy, which was adapted from [34], it focuses on participants' perceived social media skills, their confidence in finding information on social media successfully, social media content production (e.g. writing a post), and consumption of such information (e.g. read a post).

Moreover, we were interested in participants' HISB in social media in terms of their trustworthiness in the credibility of COVID-19 information. Hence, we adopted the questionnaire '*Social Media Trustworthiness*' from [34]. The questionnaire focuses on participants' trustworthiness in COVID-19 information shared by different sources. We were also interested in participants' assessment of the credibility of COVID-19-related information, particularly on social media. Thus, we adopted the '*Social Credibility Assessment*' questionnaire from [34], assessing how much the participants believe in COVID-19-related information posted by people on social media (e.g. friends, non-friends, unknown sources, and governmental pages). In addition, we used the questionnaire for measuring '*Social Media Verification*' by [34] to investigate how participants used social media platforms to verify misinformation related to COVID-19. For instance, the questionnaire asked if participants considered others' opinions when they verified COVID-19 information, as well as when they decided whether it is false or inaccurate information. Also, we used the Fear of COVID-19 questionnaire

developed by [35] to understand participants' fear of getting contracted COVID-19. Lastly, we used open-ended questions to understand participants' perspectives on COVID-19 information-seeking behaviours on social media platforms. We used the *Google Form* to create the online questionnaires. For all questionnaire items, we used a 5-point Likert scale (Strongly Disagree '*1*' to Strongly Agree '*5*').

3   Results

3.1   Demographic Data Analysis

In this research, we distributed a total of 250 invitation links to participants via email to respond to the online questionnaire form. By the deadline, we received 200 responses, of which, 199 responses were qualified while one response was rejected due to the incomplete data. According to the responses to the questionnaire, we found that all participants are currently university students at local universities in Myanmar. Among these participants, there was 124 female (62.31%) and 74 male (37.19%) participants. There were 184 undergraduate students (92.45%), 10 graduate students (5.03%), and 5 others (2.61%). Regarding the participants' age, there were 178 participants aged between 18 and 29 years (92.46%), 17 participants aged between 30 and 49 years (8.54%), and 4 participants aged between 50 and 59 years (2.01%) respectively. Regarding social media platforms use, it was found that 196 participants use Facebook, followed by 73 participants who also use Instagram, 28 participants use Twitter, 7 participants use YouTube, and 14 participants use other social media platforms (e.g. Weibo) respectively. About their HISB related to COVID-19, 175 participants used different social media platforms including Facebook, followed by 85 participants who used TV or radio, 68 participants used social communication applications such as WhatsApp, WeChat, and Messenger, and only 3 participants used Google search engine.

Regarding the participants' social media usage, 141 participants (70.85%) responded that they used '*several times a day*', while 44 participants (22.11%) mentioned that they used '*once a day*', 10 participants (5.03%) answered that they used '*a few times a week*', and 4 participants (2.01%) used '*a few times a month*' respectively. Regarding the duration of social media usage, 76 participants (38.19%) responded that they used approximately 30 minutes every time they used a social media application, while 71 participants (35.68%) used approximately two hours each time they used social media. Furthermore, 21 participants (10.55%) used less than 15 minutes, 19 participants (9.55%) used approximately 4 hours, and 12 participants (6.03%) used more than 4 hours of social media usage every time they used it.

3.2   Social Media Self-Efficacy

In this study, the participants' self-efficacy in using social media platforms was assessed (see Table 1). First, we found that the participants were skillful in using social media platforms (M = 3.41, SD = 0.74). Second, they were good at finding information on social media platforms (M = 3.51, SD = 0.74). Third, they contributed to social media in terms of posts, comments, shares, and like (M = 3.01, SD = 0.89). Lastly, they searched for information on social media such as reading posts and comments (M =

3.5, SD = 0.92) respectively. The overall self-efficacy of the participants in using social media platforms was (M = 3.4, SD = 0.2).

Table 1. Participants' Self-efficacy on Social Media.

Self-efficacy Questionnaire	M	SD
1. How skillful are you in using social media platforms?	3.41	0.74
2. How good are you at finding information on social media platforms?	3.51	0.74
3. How often do you contribute to social media (e.g. post, comment, share, and like)?	3.01	0.89
4. How often do you obtain/look for information on social media (e.g. read posts and comments, watch videos, visit the shared links, and save posts)?	3.5	0.92

3.3 Trustworthiness

Regarding the participant's trustworthiness in COVID-19-related information shared on social media, we found that their trust in information shared by friends on social media was merely above average (M = 2.77, SD = 0.60). Concerning their trustworthiness in COVID-19-related information shared by non-friends on social media, their trust in such information (M = 2.32, SD = 0.81) was below average. Furthermore, they had the least trustworthiness in COVID-19-related information shared by unknown sources on social media (M = 1.88, SD = 0.82). Lastly, they had the highest trust in COVID-19-related information shared by reliable and credible sources such as the government's website and international organizations (e.g. WHO) (M = 3.66, SD = 0.80) on social media. Table 2 shows the participants' trustworthiness in COVID-19 information on social media.

Table 2. Participants' Trustworthiness in COVID-19 information on Social Media.

Social Media Trustworthiness Questionnaire	M	SD
1. How much do you trust information related to COVID-19 posted/shared by friends on social media?	2.77	0.60
2. How much do you trust information related to COVID-19 posted/shared by others (not in your friends' list) on social media?	2.32	0.81
3. How much do you trust information related to COVID-19 from unknown sources on social media?	1.88	0.82
4. How much do you trust information related to COVID-19 from known sources on social media (e.g. WHO, media, and local authorities)?	3.66	0.80

According to Table 3, the participants' trust in COVID-19 information shared by their friends on social media was mostly neutral. However, it can be seen that they did not trust the COVID-19 information shared by non-friends on social media. Apparently, the results also show that the majority of the participants had the least trust in COVID-

19-related information shared by unknown and unreliable sources on social media. On the contrary, most participants trusted COVID-19 information shared by reliable and credible sources on social media.

Table 3. Participants' Trustworthiness in COVID-19 information on Social Media in Percentages

Social Media Trustworthiness Questionnaire	Not at all (%)	Not so much (%)	Neutral (%)	Very much (%)	Extremely very much (%)
1. How much do you trust information related to COVID-19 posted/shared by friends on social media?	2.51	24.62	65.83	7.04	0.00
2. How much do you trust information related to COVID-19 posted/shared by others (not in your friends' list) on social media?	17.59	36.68	42.21	3.02	0.50
3. How much do you trust information related to COVID-19 from unknown sources on social media?	38.69	36.18	23.62	1.51	0.00
4. How much do you trust information related to COVID-19 from known sources on social media (e.g. WHO, media, and local authorities)?	0.00	6.03	36.68	42.21	15.08

3.4 Information Credibility Assessment

We also investigated the participants' assessment of the credibility of COVID-19-related information on social media. First, when the participants sought COVID-19-related information on social media, they believed the credibility of particular information just because their friends on social media shared it (M = 2.66, SD = 0.69), which was above average. The mean score was below average (M = 2.26, SD = 0.80) for the credibility of information shared by non-friends on social media. Also, the results show that the COVID-19-related information shared by unknown sources on social media was the least credible (M = 1.91, SD = 0.89). Lastly, the COVID-19-related information shared by reliable sources and people such as the government's websites and international organizations (e.g. WHO) was the most credible (M = 3.64, SD = 0.80). Table 4 shows the participants' assessment of the credibility of COVID-19 information on social media.

Table 4. Participants' Assessment on the Credibility of COVID-19 information on Social Media.

Social Credibility Assessment Questionnaire	Mean (M)	Standard Deviation (SD)
1. When looking at information related to COVID-19 on social media, how often do you believe the information because your friends on social media also believe it?	2.66	0.69
2. When looking at information related to COVID-19 on social media, how often do you believe the information because other people (not on your friends' list) on social media also believe it?	2.26	0.80
3. When looking at information related to COVID-19 on social media, how often do you believe the information because unknown sources on social media also believe it?	1.91	0.89
4. When looking at information related to COVID-19 on social media, how often do you believe the information because known sources on social media also believe it (e.g. WHO, media, and local authorities)?	3.64	0.80

According to Table 5, most participants mentioned that the credibility of COVID-19 information shared by friends on social media was '*neutral*'. The results also highlighted that such information shared by non-friends on social media was '*not so much credible*'. Apparently, most of them did not believe the credibility of such information shared by unknown and unreliable sources on social media. In contrast, the majority of the participants believed the credibility of COVID-19 information shared by reliable and credible sources on social media.

Table 5. Credibility Assessment of COVID-19 information in Social Media in Percentages

Social Media Credibility Assessment Questionnaire	Not at all (%)	Not so much (%)	Neutral (%)	Very much (%)	Extremely very much (%)
1. When looking at information related to COVID-19 on social media, how often do you believe the information because your friends on social media also believe it?	5.03	31.16	56.28	7.54	0.00
2. When looking at information related to COVID-19 on social media, how often do you believe the information because other people (not on your friends' list) on social media also believe it?	19.10	39.20	38.19	3.52	0.00
3. When looking at information related to COVID-19 on social media, how often do you believe the information because unknown sources on social media also believe it?	40.70	31.16	24.62	3.52	0.00

| 4. | When looking at information related to COVID-19 on social media, how often do you believe the information because known sources on social media also believe it (e.g. WHO, media, and local authorities)? | 1.01 | 5.03 | 35.18 | 46.73 | 12.06 |

3.5 The Use of Social Media for Misinformation Verification

We also investigated the participants' HISB in terms of the way they verified misinformation related to COVID-19 on social media. First, the question asking, '*How likely are you to check the updates from your friends on social media to make sure the information you received is believable?*' had a mean score (M = 2.93, SD = 0.97), which was above average, indicating that the participants believe and trust more on the information provided by their friends. Second, the question asking, '*How likely are you to check the updates from others (who are not on your friends' list) on social media to make sure the information you received is believable?*', had a below-average score (M = 2.42, SD = 1.15), indicating that there is lack of trust and believe on information provided by non-friends on social media. Third, the question asking, '*How likely are you to check the updates from unknown sources on social media to make sure the information you received is believable?*', had the least mean score among others (M = 2.36, SD = 1.20), indicating that the participants had the least trust in information shared by unknown or unreliable sources on social media. Lastly, the question asking, '*How likely are you to check the updates from known sources on social media (e.g. WHO, media, and local authorities) to make sure the information you received is believable?*', has the highest mean score among others (M = 3.45, SD = 0.99), which was expected as apparently, the participant find the information provided by the officials more trustful. Table 6 shows the participants' HISB in terms of their verification of such information on social media.

Table 6. Participants' Verification of COVID-19 misinformation on Social Media.

Social Media Trustworthiness Questionnaire	Mean (M)	Standard Deviation (SD)
1. How likely are you to check the updates from your friends on social media to make sure the information you received is believable?	2.93	0.97
2. How likely are you to check the updates from others (who are not on your friends' list) on social media to make sure the information you received is believable?	2.42	1.15
3. How likely are you to check the updates from unknown sources on social media to make sure the information you received is believable?	2.36	1.20
4. How likely are you to check the updates from known sources on social media (e.g.	3.46	0.99

WHO, media, and local authorities) to make
sure the information you received is
believable?

According to Table 7, most participants mentioned that when they checked the falsehood of COVID-19-related information with the updated news or information (e.g. posts) on social media, they tended to believe such information if it was also shared by their friends on social media. However, most participants had less trust in information shared by non-friends because it was unreliable to check the falsehood of information related to COVID-19. Apparently, most of them did not check or use the updated news from unknown and unreliable sources on social media to verify if the information they received was false and inaccurate. In contrast, the majority of them checked the updated information from reliable and credible sources on social media to verify the reliability and accuracy of COVID-19 information.

Table 7. Participants' Verification of COVID-19 misinformation on Social Media in Percentages

Social Media Verification Questionnaire	Not at all (%)	Not so much (%)	Neutral (%)	Very much (%)	Extremely very much (%)
1. How likely are you to check the updates from your friends on social media to make sure the information you received is believable?	7.04	24.62	41.71	21.61	5.03
2. How likely are you to check the updates from others (who are not on your friends' list) on social media to make sure the information you received is believable?	30.65	18.09	32.66	16.08	2.51
3. How likely are you to check the updates from unknown sources on social media to make sure the information you received is believable?	35.68	14.07	32.66	14.07	3.52
4. How likely are you to check the updates from known sources on social media (e.g. WHO, media, and local authorities) to make sure the information you received is believable?	5.53	6.53	37.69	37.19	13.07

3.6 Fear of COVID-19

We also investigated the participants' fear of COVID-19 based on the information that they obtained from social media platforms. First and in general, the participants were most afraid of COVID-19 (M = 3.31, SD = 1.01). Second, when the participants thought

that COVID-19-related information on social media could make them uncomfortable (M = 3.27, SD = 0.97). When they thought about COVID-19-related information on social media, they thought that their hands became clammy (M = 2.15, SD = 1.04). They also mentioned that they were afraid of losing lives due to COVID-19-related information on social media (M = 3.01, SD = 0.99). They also pointed out that when watching news and stories about COVID-19 on social media, they became nervous and anxious (M = 3.01, SD = 0.99). Furthermore, they stated that they could not sleep because they were worried about getting COVID-19 after seeking such information on social media (M = 2.03, SD = 1.04). Lastly, they mentioned that their heart raced when they thought about getting COVID-19 after they had obtained such information on social media (M = 2.37, SD = 1.15) respectively. Table 8 shows the participants' fear of COVID-19, and Table 9 also shows that most of the participants responded '*neutral*' concerning their fear of COVID-19.

Table 8. Participants' Fear of COVID-19.

Social Media Trustworthiness Questionnaire	Mean (M)	Standard Deviation (SD)
1. I am most afraid of COVID-19.	3.31	1.01
2. It makes me uncomfortable to think about COVID-19.	3.27	0.97
3. My hands become clammy when I think about COVID-19.	2.15	1.04
4. I am afraid of losing my life because of COVID-19.	3.25	1.08
5. When watching news and stories about COVID-19 on social media, I become nervous and anxious.	3.01	0.99
6. I cannot sleep because I'm worried about getting COVID-19.	2.03	1.04
7. My heart races or palpitates when I think about getting COVID-19.	2.37	1.15

Table 9. Participants' Fear of COVID-19 in Percentages

Social Media Trustworthiness Questionnaire	Not at all (%)	Not so much (%)	Neutral (%)	Very much (%)	Extremely very much (%)
1. I am most afraid of COVID-19.	4.52	12.56	45.23	23.12	14.57
2. It makes me uncomfortable to think about COVID-19.	4.52	12.56	45.23	26.63	11.06
3. My hands become clammy when I think about COVID-19.	31.66	33.67	26.13	5.03	3.52
4. I am afraid of losing my life because of COVID-19.	7.54	14.07	36.68	29.15	12.56

5.	When watching news and stories about COVID-19 on social media, I become nervous and anxious.	8.54	17.09	46.23	21.61	6.53
6.	I cannot sleep because I'm worried about getting COVID-19.	39.20	30.65	21.11	6.53	2.51
7.	My heart races or palpitates when I think about getting COVID-19.	30.65	22.11	30.15	13.57	3.52

4   Discussion

The current research examined and investigated the participants' health information-seeking behaviour during the COVID-19 pandemic. All participants were university students and the majority of them were undergraduate students at various universities in Myanmar. We found that the participants mainly and extensively use Facebook as a social media platform to seek information related to COVID-19. This finding is consistent with the findings that they used Facebook as a health information-seeking tool to search, verify, and obtain COVID-19-related information during the pandemic [39]. The findings also pointed out that most of them were active in using social media platforms in their daily routines, using the platforms daily for between 30 and 120 minutes. Hence, it can be said that the participants were active users of social media platforms, particularly Facebook, and they have had extensive experience in using such a tool. Regarding their self-efficacy in using social media platforms, we found that the participants were confident in their abilities in using social media platforms. For instance, they were skillful in using social media platforms, as well as they were good at finding information on social media. These findings are consistent with their social media usage patterns. They usually contributed to social media platforms in terms of writing posts, comments, and sharing. In addition, they often looked for information on social media such as by reading posts, comments, and videos. These findings also support that the participants used social media platforms for seeking, verifying, and obtaining information during the COVID-19 pandemic [40]. In addition, they shared health-related information (e.g. COVID-19) on social media platforms, particularly on Facebook.

Concerning the participants' HISB on social media, the findings suggest that when they sought COVID-19-related information on social media, they mainly trusted known and credible sources such as the official Facebook Page of WHO or the government's Facebook pages. For instance, if either WHO or the government's social media page announced or shared COVID-19 daily rates, they tended to trust such information because it was shared by a credible and reliable source. They used such reliable sources to search, verify, and obtain COVID-19 information. The results show that although they took opinions about COVID-19 from their friends on social media, they did not take it seriously, and their trustworthiness was mostly neutral. As an example, when they read the Covid-19 outbreak information shared by their friends on social media, they would neither believe nor reject it. However, the participants' trustworthiness was low in COVID-19 information shared by non-friends on social media. For example, if

they saw particular information about the COVID-19 outbreak shared by non-friends on social media, they did not tend to believe it. As most of the participants in this research were experienced users of social media, we could assume that they could easily distinguish who to trust and what to trust when they sought COVID-19-related information on social media. For instance, they did not trust the information concerning COVID-19 treatment or vaccine effectiveness shared by unreliable sources on social media. It means that such unreliable sources may easily spread misinformation about COVID-19 that is likely to alleviate individual and public concerns about COVID-19 information.

According to the findings, the participant's behaviours in the assessment of the credibility of COVID-19 show that official and known sources on social media (e.g. WHO or government pages) were the most reliable. For example, when they sought COVID-19 symptoms on social media, they tended to believe the credibility of information by WHO or the government's social media pages because the information was shared by reliable sources. In contrast, they did not believe in the credibility of information shared by unreliable sources on social media because it was hard to verify how credible such information was, as well as the transparency and accountability of such information were not clear. As seen in the previous discussion, the participants had a similar '*neutral*' view toward the credibility of COVID-19 information shared by friends on social media. However, they believed that the COVID-19 information shared by non-friends on social media was less credible compared to the information shared by friends. For instance, when a friend on social media shares COVID-19 new variants (e.g. Coronavirus Delta variant), they tended to believe that it was credible, whereas they did not believe if it was shared by non-friends on social media. These findings are supported by the existing literature that public trust plays a key role to control the Covid-19 pandemic, as well as to provide effective crisis information during the pandemic [41].

When the participants checked the falsehood of the COVID-19 information they received, as expected, they used the updated information from reliable sources on social media (e.g. the government's official Facebook pages). For instance, if they doubted the credibility of the COVID-19 information (e.g. vaccine), they used the official's social media page to confirm; whereas they had no trust in the information shared by unreliable and unknown sources on social media. To a certain extent, they believed and used their friends' updated information on social media to check the accuracy and reliability of COVID-19 information. For example, if a friend on social media shares the symptoms of COVID-19, the participants tended to believe and use such information to verify the information they received; however, they had low trust in the information shared by non-friends on social media. These findings are supported by the existing literature that as misinformation on social media tends to be more popular than accurate information, fact-checking or filtering is important for users so that they can receive reliable information [42].

Lastly, about the participants' fear of COVID-19 information, we found that they had concerns about being contracted or getting infected with such disease. However, their level of fear was found to be average. It can be related to their information-seeking behaviours on social media, or it can also be related to their high self-efficacy in using social media platforms. For instance, they were skillful in using social media platforms; hence, they were confident to seek, verify, and obtain reliability in social media. They

also sought COVID-19-related information mostly from reliable and credible sources, as well as they trusted such information shared by their friends on the same social media platform. Furthermore, they always considered the opinions from credible sources before they decided to believe a piece of information about COVID-19. Hence, it can be said that most information they trusted was credible and trustworthy. Furthermore, they also verified such information by checking reliable and credible sources.

Based on the findings from the study, we summarise that social media, particularly Facebook in the context of the current research, plays an important role for university students in developing countries in terms of seeking, verifying, obtaining, and judging the credibility of related information during the COVID-19 pandemic. Furthermore, users' HISB on social media is also important when they seek health-related information such as COVID-19. In addition, the existing literature shows the issues of misinformation during the COVID-19 pandemic [36]. To solve such issues, users need to assess the credibility of health information and verify its sources and make a judgment on whether they should believe such information or not. The findings from this paper show that such users' HISBs are important so that they can obtain accurate and reliable health-related information. For instance, users need to assess and verify the credibility of COVID-19-related information (e.g. vaccine effectiveness or new COVID-19 variant) before making a judgment about such information. They need to assess and verify the credibility of such information in terms of what the source of the information is and how credible such information is. Unless users assess and verify it, unreliable information (aka misinformation or disinformation) can influence people's views on COVID-19 (e.g. adherence to social distancing), as well as it may cause disturbances to authorities' actions in fighting for COVID-19. Finally, the findings clearly show that the role of governments and authorized organizations (e.g. WHO) plays a vital role to spread credible and reliable information related to COVID-19, particularly on social media. The findings from this study can be insightful for researchers, practitioners, and policymakers particularly in educating misinformation or disinformation related to COVID-19 disease and pandemic. Furthermore, the study creates opportunities for researchers to further investigate the role of social media in controlling misinformation. The limitation of the research includes a small sample size, duration of data collection, and research method (i.e. this study used only a quantitative approach); hence, further inquiry into this research is recommended.

5   Conclusion

Information particularly those provided through social media is one of the major issues during the COVID-19 pandemic. People's health information-seeking behaviours play an important role in finding relevant and accurate information on social media during COVID-19. Hence, in this research, we conducted a questionnaire-based study to investigate and understand university students' HISBs during the recent global COVID-19 pandemic. This research focuses on university students particularly in Myanmar, which is a developing country. Based on the findings from the study, most university students in Myanmar greatly relied on Facebook as a social media tool to seek COVID-19-related information during the pandemic. The findings show that they mostly believed in COVID-19 information shared by reliable and credible sources (e.g.

government's social media pages), whereas they did not trust the information shared by unreliable sources. They had a neutral view of the credibility of information shared by friends or non-friends on social media. This research suggests that the source of information plays an important role in terms of the credibility of such information. Furthermore, users need to assess and verify the credibility of information on social media when seeking COVID-19-related information so that they can avoid misinformation or rumours on social media. Lastly, the role of governments and authorities is vital to use social media as a platform to spread trustworthy and credible health-related information to users during the COVID-19 pandemic. This study suggests opportunities for researchers to investigate the role of social media in fighting health-related misinformation. This study contributes to making public health policies, practices, and actions on social media, especially for governments and authorities in terms of spreading accurate and reliable health-related information and fighting against misinformation related to COVID-19.

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