

Social networking behaviour and psychological distress among Malaysian undergraduates during the COVID-19 pandemic

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ABSTRACT

This study investigated the extent of social networking sites usage and its relationship with the undergraduate students' psychological distress during the COVID-19 pandemic. In this quantitative correlational study, 212 students completed questionnaires assessing their social networking site use and psychological distress. Descriptive analysis revealed that the students were avid users of social networking sites. On average, almost half of the students used social networking sites more than six times per day while more than one-third of them spent more than three hours each day using social networking sites. Findings also showed that entertainment was the primary purpose of social networking site usage, followed by academic, social, and informational uses. Notably, nearly half of the students reported high levels of anxiety, and approximately one-third experienced significant depression and stress. However, correlational analyses found no significant associations between the length, frequency, and all purposes (social, academic, information, or entertainment) of social networking site usage and the levels of depression, anxiety, and stress. These findings suggest a complex interplay between these variables. Given the ever-increasing use of social networking sites and the alarming prevalence of mental distress among students, further studies are needed to delve deeper into this multifaceted relationship.

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1. INTRODUCTION

The world is at its breaking point when it comes to the issues of psychological distress, depression haunts over 300 million people worldwide [1]. Every year, nearly 800,000 individuals tragically end their own lives [1]. In 2019, it emerged as the second most common cause of death among young people aged 15 through 29 [1]. This issue was not foreign to Malaysia either. The National Health Morbidity Survey (NHMS) 2022 conducted by the Ministry of Health Malaysia reported that out of every ten Malaysians aged 16 and above, three experienced depression [2]. The survey also unveiled alarming statistics among young Malaysians: a striking 16.2% reported experiencing loneliness, 12.9% struggled to have quality sleep at night due to worry, and 13.1%, 10.0%, and 9.5% acknowledged having suicidal ideation, plan, and attempt respectively [2]. This problem was further exacerbated during the outbreak of coronavirus disease 2019 (COVID-19). When the Malaysian government declared a nationwide lockdown, also known as the movement control order (MCO) in March 2020, all tertiary institutions were authorized to close, and educators were forced to switch to emergency remote teaching (ERT) via online platforms. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) [3], this sudden disruption has affected over 1.5 billion students across the

globe. It has also unleashed various emotional distress such as depression, anxiety, and stress among undergraduate students in Malaysia [4]–[6]. As public events and social gatherings were prohibited during the MCO period, more Malaysians were using social networking sites (SNS) as an alternative. According to the Internet Users Survey 2020 carried out by the Malaysian Communications and Multimedia Commission (MCMC) [7], SNS usage for social, entertainment, and information purposes increased tremendously, especially among adolescents between 20 to 24 years old in Malaysia which can be assumed to be the age range of undergraduate students.

Since the rise of online social networking technologies, the association between social networking behaviour and mental distress has been studied extensively. Several studies concluded that excessive use of SNS, time spent on SNS, using SNS for entertainment purposes, and passive use of SNS were associated with depression, anxiety, and stress among tertiary students [8]–[13]. On the contrary, some publications revealed higher SNS usage and active use of SNS were correlated with improved mental health among the students [14]–[16]. Apart from that, a few studies have postulated no significant relationship between social networking behaviour and psychological distress [17]–[19]. In other words, previous studies revealed that social networking behaviour could have positive, negative, or no significant association with psychological distress. Given the mixed conclusion on the effects of social networking behaviour on students' mental health, together with the worsened psychological distress and upsurge of SNS usage among undergraduate students during the COVID-19 pandemic, there is a dire need to study the social networking behaviour among the undergraduate students and how it relates to their psychological distress. Hence, this study aims to investigate the association between social networking behaviour and psychological distress among Malaysian undergraduate students during the COVID-19 pandemic. Erfani *et al.* [8] remarked that as most of the previous studies were mainly focused on relating the frequency and length of SNS usage with psychological distress, it is worth exploring the motives of using SNS, thus, the purpose of SNS usage was included as one of the variables in this study. The following were the research questions of this study:

- How often are the undergraduate students using SNS?
- What are the reasons behind undergraduate students using SNS?
- To what extent are depression, anxiety, and stress symptoms prevalent among undergraduate students?
- How does social networking behaviour relate to psychological distress among undergraduate students?

2. METHOD

A correlation coefficient analysis was utilized in this study. This method was employed in analysing the quantitative data because it would enable the researcher to examine whether a significant relationship exists between social networking behaviour and psychological distress. The sample size was estimated using Cochran [20] and a sample of 263 was considered representative of the undergraduate students at Universiti Putra Malaysia. A two-stage random sampling technique was employed in this study. Four faculties were randomly selected within the 15 faculties in Universiti Putra Malaysia. Then from the four randomly selected faculties, 261 participants were randomly selected among the undergraduate students by using a table of random numbers. Data from 49 incomplete questionnaires were deleted, making the samples of this study to be 212. Data for this study was collected in April 2022.

2.1. Instrumentation

An SNS usage scale was used to examine the extent of SNS usage among undergraduate students. In this study, the scale comprises 16 items, with 8 items each for measuring the length of SNS usage and the frequency of SNS usage. The items used were adapted from the social networking usage questionnaire (SNUQ) developed by Gupta and Bashir [21]. A five-point Likert format, ranging from 1 to 5 was used for the items for both frequency of SNS usage (1=Never, 2=1 to 2 times a day, 3=3 to 4 times a day, 4=5 to 6 times a day, 5=More than 6 times a day) as well as the length of SNS usage (1=Less than 30 minutes per day, 2=0.5 to 1 hour per day, 3=1 to 2 hours per day, 4=2 to 3 hours per day, 5=More than three hours per day).

The items in the SNS purpose scale were adapted from the SNUQ developed by Gupta and Bashir [21]. It assesses the students' purpose of using SNS, which encompasses social, academic, information, and entertainment. The SNS purpose scale consists of 17 items and employs a five-point Likert format (1=never, 2=rarely, 3=sometimes, 4=often, and 5=always).

The psychological distress scale aims to examine the students' severity of depression, anxiety, and stress. The items used in this scale were adapted from the depression, anxiety and stress scale – 21 items (DASS-21) developed by Lovibond and Lovibond [22]. The psychological distress scale comprises 21 items, with seven items for each subscale (depression, anxiety, stress). Each item was rated from 0 (Did not apply to me at all) to 3 (Applied to me very much, or most of the time).

2.2. Pilot study

Before data collection, a pilot study was conducted to examine the reliability of the items in the research instrument. The pilot study involved 34 undergraduate students from Universiti Putra Malaysia, and the data collected from this pilot study were excluded from the final analysis. The frequency of use, length of use, and the SNS purpose subscales used in this study had Cronbach's alpha values of .85, .88 and .93 respectively. The Cronbach's alpha values of depression, anxiety, and stress subscales were .90, .86, and .93 respectively. According to Fraenkel *et al.* [23], the scale is considered reliable if the reliability coefficient is at least .70, and preferably higher than .90. These outcomes align with the existing literature in which the questionnaires were adapted. According to Gupta and Bashir [21], the reliability of the SNUQ was good, its Cronbach's alpha value was .83 (N=420). As for the reliability of DASS-21, it was supported by Lee *et al.* [24] in a study with 431 participants, with Cronbach's alpha values for depression (.81), anxiety (.84), and stress (.85). Collectively, these Cronbach's alpha values proves that there is an adequate internal consistency within the items in all three aforementioned scales of the research instrument. The questionnaire with the SNS usage scale, SNS purpose scale and psychological distress scale were disseminated to the randomly selected undergraduate students via email, and their participation was voluntary and anonymous.

3. RESULTS

3.1. Social networking behaviour

The extent of SNS usage comprises the frequency and the length of SNS usage. For the frequency of SNS usage, the number of times the undergraduate student used SNS in a day was measured in this study. Measured by an 8-item scale, the overall mean score for the students' frequency of SNS usage was 3.94 (SD=.82). An average of 45.58% of the students indicated that they used SNS more than six times a day. The results showed that the students used SNS frequently during the COVID-19 pandemic, especially for socialization and searching for information. The result also revealed a relatively lower frequency of SNS usage among the students for getting information related to job opportunities. The length of SNS usage was another part of the extent of SNS usage. In this study, the length of SNS usage measures how much time was spent in a day by undergraduate students using SNS. It was also measured using an 8-item scale and the overall mean score for the length of using SNS was 3.54 (SD=.96). On average, 32.26% of the students reported that they spent more than three hours per day on SNS. The results showed that the students spent a significant amount of time using SNS during the COVID-19 pandemic, especially using SNS for entertainment and academic purposes. However, the results indicated that the students used SNS least for obtaining career-related information, this was in line with the results obtained in the frequency of SNS usage.

Other than the degree of SNS usage, the study also examined the purposes for which undergraduate students used SNS. The results show mean scores of 3.60 (SD=1.00), 3.81 (SD=.91), 3.59 (SD=.92), and 4.04 (SD=.87), for social, academic, information, and entertainment purposes respectively. On average, 49.3% of undergraduate students always used SNS for entertainment purposes, followed by academic (36.8%), socialisation (33.17%), and information (29.73%) purposes. Regarding the entertainment use of SNS, using SNS to relieve academic stress is the most prominent entertainment-related SNS usage among the students. This is followed by watching movies via SNS, looking at humorous posts, and sharing pictures. Concerning academic purposes, the students use SNS the most for solving academic problems, followed by online academic group discussions, doing research work, communicate with friends for exams preparation, collaborative learning, learning about their curricular aspect, and seeking help from their instructors. In terms of socialisation reasons, the students used SNS the most for keeping in touch with their relatives, and is followed by becoming more sociable, and attending virtual social gatherings. As for information purposes, the students used SNS the most for reading news, sharing new ideas, and getting job-related information. Similar to the findings on the frequency and length of SNS usage, the percentage of students who used SNS for searching for career-related information and seeking help from lecturers were relatively lower.

3.2. Psychological distress

As shown in Table 1, anxiety emerged as the most critical psychological distress among the students, with 48.6% of students suffering at severe and extremely severe levels. Subsequently, 33.5% of undergraduate students reported severe to extremely severe levels of depression, and succeeding stress, with 27.3% of students reporting severe and extremely severe levels. Almost half of the undergraduate students were suffering from tremendous anxiety. Although the percentage of students experiencing severe to extremely severe depression and stress was lower than that of anxiety, around one-third of the students were undergoing high levels of depression and stress.

3.3. Relationship between social networking behaviour and psychological distress

Person product-moment correlation coefficient was used to determine the association between social networking behaviour and mental distress in this study. Preliminary analyses were conducted to ensure that the violation of the assumptions of normality, linearity and homoscedasticity was absent. The Cohen [25] rule of thumb was used in interpreting the strength of the association between the variables in this study. Table 2 presents the coefficient r -values between the studied variables. The results showed that social networking behaviour was not significantly associated with psychological distress. Despite the weak relationship, as compared to the relationship between other variables, the severity of anxiety and stress had a relatively stronger association with the frequency of SNS usage ($r=.12$, $p<.01$) and the length of SNS usage ($r=.13$, $p<.01$). Among all four purposes, using SNS for entertainment purposes was related most with psychological distress, especially anxiety and stress ($r=.12$, $p<.01$). It is also worth mentioning that using SNS for socialization was linked with a reduction in depression ($r=-.07$, $p<.01$) and stress ($r=-.03$, $p<.01$), and has no correlation with the severity of anxiety.

Table 1. Frequency and percentage of depression, anxiety, and stress

Severity	Depression		Anxiety		Stress	
	f	%	f	%	f	%
Normal	81	38.2	59	27.8	90	42.5
Mild	21	9.9	10	4.7	24	11.3
Moderate	39	18.4	40	18.9	39	18.4
Severe	24	11.3	22	10.4	23	10.8
Extremely severe	47	22.2	81	38.2	35	16.5

Table 2. Correlation between study variables

Variable	1	2	3	4	5	6	7	8	9
1. Frequency of SNS usage	-								
2. Length of SNS usage	.75**	-							
3. Social use of SNS	.56**	.57**	-						
4. Academic use of SNS	.64**	.63**	.68**	-					
5. Information use of SNS	.62**	.55**	.64**	.70**	-				
6. Entertainment use of SNS	.64**	.58**	.59**	.63**	.60**	-			
7. Severity of depression	.11	.12	-.07	.01	.03	.10	-		
8. Severity of anxiety	.12	.13	.00	.02	.06	.12	.83**	-	
9. Severity of stress	.12	.13	-.03	.01	.07	.12	.82**	.72**	-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4. DISCUSSION

4.1. Social networking behaviour of undergraduate students

Findings from this research have revealed that undergraduate students were avid users of SNS. The high mean scores in all four purposes of SNS usage suggested that the students were actively using SNS. Notably, entertainment emerged as the primary motivation for their SNS usage. These findings on social networking behaviour were in congruency with the result found in the survey by MCMC [7], which mentioned that the undergraduate students used SNS actively for the four aforementioned purposes. As physical events were prohibited during the pandemic, it comes as no surprise that an upsurge in SNS activities occurred among the students. A similar finding was also presented by Al-Dwaikat *et al.* [11], indicating an upsurge in students' engagement with SNS during the global epidemic.

Among all purposes studied in this study, the students use SNS the least for searching career-related information. This finding was seen across the three variables in social networking behaviour (frequency, length, and purpose of SNS usage). This signifies that the students might feel stressed and anxious about their career prospects due to the uncertainties and challenges caused by the pandemic, perceiving job search as futile or overwhelming [6]. It is possible that many of the participants were in the initial stages of their study, making academic success a higher priority than career prospects. Additionally, the results showed lower SNS usage for seeking help from lecturers within the students too. This implies that when addressing academic challenges, students tend to either collaborate with their peers or work independently. It also indicates a potential communication gap between lecturers and students in the online setting. These findings signify the need to educate tertiary students in leveraging SNS for crucial aspects of their academic and professional development, as well as to explore ways to improve online communication.

4.2. The extent of psychological distress among undergraduate students

Regarding the psychological distress within undergraduate students, findings from this study have shown that they were undergoing immense levels of depression, anxiety, and stress during the global crisis. In this study, almost half of the participants experienced critical anxiety, significantly surpassing previous findings within Malaysia [4]–[5]. Results from this research also revealed that around 30% of the participants responded experiencing dire depression and stress. This outcome is in parallel with studies conducted by Moni *et al.* [4], Sundarasan *et al.* [5], Moy and Ng [6] and Al-Dwaikat *et al.* [11] which concluded that undergraduate students were undergoing severe psychological distress. It is apparent that the undergraduate students were enduring aggravated psychological distress during this prolonged pandemic. The alarming levels of mental distress observed in this study may be due to the prolonged disruption of students' academic life [6]. The sudden transition to ERT invoked various obstacles for the students, including technical difficulties, information overload, uncondusive learning environments, reduced motivation, and lack of peer interaction. Consequently, this could result in learning loss and academic anxieties, further fueling learners' emotional distress [3]. Moreover, the isolation imposed by social distancing measures could also significantly impact students' mental well-being. The disruption of regular routines, the separation from friends and family, together with the limited opportunities for social interaction created a sense of loneliness and disconnect, exacerbating the feelings of anxiety and depression [5]. Other than that, another layer of psychological distress may be added by the financial concerns and uncertainties about the future [4]. Numerous families faced income disruptions due to the economic downturn during the global crisis, impacting students' overall well-being. Learners' anxieties could also be aggravated by the uncertainty surrounding future career prospects and post-graduation opportunities.

While some might argue that the students' mental wellbeing could improve when the national lockdown is relaxed and they are permitted to return to campus, results from this study have shown otherwise. The data of this study were collected during a period with less stringent safety measures than the first and second MCOs, allowing physical attendance in classes if health protocols were fulfilled. Despite that, this study found severe levels of psychological distress. This suggests that the fear of contracting the COVID-19 virus may persist, particularly with the emergence of more potent variants such as the Delta and Omicron variants. Moreover, readapting to conventional instruction after prolonged social isolation might cause students to experience tension and strained social connections. Further, learners may be overwhelmed by the accumulated learning loss when they go back to campus, potentially hindering their academic progress and heightening their stress. Therefore, it can be argued that the worsened depression, anxiety, and stress seen amongst the undergraduate students in this study could be the result of the emotional distress accumulated throughout the prolonged pandemic, and this issue might persist post-pandemic due to the abovementioned factors.

4.3. Social networking behaviour and its association with mental distress

Despite the popular concern about the impact of SNS on mental health, particularly during the COVID-19 pandemic, this study found that social networking behaviour is not significantly associated with psychological distress among the participants. Although this result contradicts previous studies which have shown significant positive correlation [9], [11], [12] and negative correlation [14]–[16], it resonates with previous findings by Tang *et al.* [17], Cook *et al.* [18], and Sadagheyani and Tatari [19]. This weak relationship points out that the association between the variables studied was more complex than previously thought and may involve confounding variables which extend beyond the context of the COVID-19 pandemic such as sleep-related factors [26]. Sleep plays a vital role in emotional regulation and mental well-being. Poor sleep can increase vulnerability to stress and anxiety which could magnify the negative effects of SNS usage. Conversely, healthy sleep patterns could act as a buffer, potentially mitigating the harmful effects of SNS usage. Furthermore, the relationship may be mediated by students' personality traits [27], the diverse individual predispositions among students could influence how they navigate SNS. Certain personality traits like neuroticism and conscientiousness could impact learners' susceptibility to social comparison and cyberbullying, further affecting the effects of SNS usage on mental well-being. Similarly, expectations from peers due to socio-cultural norms could affect the ways students engage with SNS [28]–[30], the need to fulfil expectations set by peer groups or maintain a certain online persona can lead to unhealthy online behaviours like excessive comparison. This pressure can be affected by cultural factors that emphasise image and social standing, influencing the potential impact of SNS use on psychological distress.

Despite the weak association, the outcomes are worth being mentioned given the increasing trend of both SNS usage [7] and the severity of psychological distress [2]. This study found that the frequency of SNS usage, the length of SNS usage and entertainment use of SNS showed a relatively stronger relationship with depression, anxiety, and stress. This suggests that students might find temporary relief from stress by engaging in entertainment on SNS, it might amass more mental distress when confronted with the realities of academic deadlines [8]. On the other hand, using SNS for academic purposes was found to be less associated with psychological distress. This implies that making academic progress appears to be a more sustainable way of maintaining mental health. Similarly, using SNS for socialization was related to lower depression and stress.

This indicates that using SNS to keep in touch with peers and family members can reduce mental distress as the students would feel more connected, resonating with the studies by Tang *et al.* [17], Sadagheyani and Tatari [19], and Al-Dwaikat *et al.* [11].

5. CONCLUSION

Overall, this study has revealed that undergraduate students are active daily users of SNS, and they are also struggling with significant levels of psychological distress. However, no significant relationship was found between social networking behaviour and psychological distress among the students. This multifaceted dynamic between social networking behaviour and psychological distress provides educational stakeholders with several implications which extend beyond the context of a pandemic. With the proliferation of SNS usage, it presents a double-edged sword for education. It could be a meaningful educational tool for engaging students in remote, Hybrid and Hybrid-flexible learning, but it also could be a platform which possesses multiple harmful effects on student learning outcomes and overall well-being. This indicated the pertinence of educating tertiary students on leveraging SNS for essential aspects of their development such as effective communication, learning, and obtaining career prospects. Besides students, instructors also need support in harnessing the educational potential of SNS which entails online communication skills and educational content creation, so that a safe online learning environment can be fostered.

Furthermore, the alarming rise in undergraduates' mental distress implies an urgent need for immediate actions from policymakers and other educational stakeholders before it further jeopardises student well-being. Comprehensive mental health programmes and support systems for students need to be implemented, and awareness of healthy digital citizenship also needs to be promoted among faculties.

Given the complex relationship between social networking behaviour and psychological distress, it is recommended that scholars carry out further research that includes other underlying variables to acquire a deeper understanding of this matter. Future studies which utilise qualitative approaches such as interviews or observations would provide richer insights into students' social networking behaviour and its effects on psychological distress. The population of future research can also be extended to include learners from diverse backgrounds such as age, socioeconomic status, and cultural contexts to enhance the generalisability of the findings. Additionally, future studies can delve into the effectiveness of educational programmes aimed at equipping learners with online communication skills, healthy SNS engagement habits, and strategies for managing emotions and maintaining digital well-being.




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