Social Media and Psychological Morbidity: A Preliminary Study of Stress, Depression, and Anxiety among Students at the National University of Malaysia

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ABSTRACT

This study investigates the relationship between social media usage patterns and mental health outcomes among students at National University of Malaysia. Using a quantitative research design, data were collected from 43 respondents among undergraduate students using Depression Anxiety Stress Scales DASS 21 and Internet Addiction Test (IAT). The data were analyzed using appropriate statistical techniques. The analysis examined associations between social media engagement and indicators of mental health, including anxiety, depression, and overall psychological well-being. The findings reveal significant correlations between higher levels of social media use and adverse mental health outcomes. Results from Pearson's correlation was used to measure the strength and direction of the linear relationship between two variables. The correlation analysis results indicate that stress is strongly and significantly correlated with anxiety ($r = 0.744$, $p < 0.01$), depression ($r = 0.646$, $p < 0.01$), and internet addiction ($r = 0.596$, $p < 0.01$). Overall, the study found that social media use can contribute to internet addiction and negatively affect mental health, including stress, anxiety, and depression. These findings underscore the need for targeted interventions and evidence-based strategies to promote healthier digital behaviors and support students' psychological well-being.

Keywords: resilience, depression, stress, anxiety, university students, mental health

INRODUCTION

The global landscape has undergone substantial transformations following the pre-COVID-19 era, navigating through lockdowns and into contemporary post-pandemic lifestyles. Amidst this transition, reliance on the online world has intensified, becoming increasingly central to daily life. The use of social media platforms, such as blogs, Facebook, Instagram, Threads, YouTube, and X, has transcended mere casual interaction or leisure. These communication channels have become instrumental for public engagement including government outreach and community interaction across all societal strata, from adolescents to adults and leaders. However, a significant concern associated with this pervasive use is the potential for dependency, particularly as individuals adapt to these new conditions and changes. University students, whose formative years have coincided with rapid globalization, frequently express challenges related to curtailed opportunities for broader exploration and a heightened need to adapt to current norms. Consequently, utilizing social media for networking and as a coping mechanism against reality can profoundly impact personal and academic development, rendering students susceptible to both its positive and negative effects.

This study specifically examines the mental health implications of social media use among students. According to the Ministry of Health Malaysia, mental health is defined as an individual's capacity to maintain harmonious relationships, actively participate in social activities, and contribute effectively to the community. This definition implies that mental health enables an individual or society to function optimally. In light of this, a critical question arises: to what extent does social media use among students facilitate the cultivation of harmonious relationships, inspire community engagement, and encourage societal contributions. A review of the literature, including work

by Hasbie et al. (2024), suggests that the advantages and disadvantages of social media are contingent upon individual usage patterns. For instance, online communities and social media platforms can foster relationship building, provide supportive networks and mitigate feelings of isolation. Furthermore, literature indicates that social media holds potential as a platform for digital mental health interventions by disseminating information to individuals who may be geographically remote or reluctant to seek traditional help. Conversely, negative effects highlighted in the literature include excessive screen time particularly among youth, which has been linked to disrupted sleep patterns and an elevated risk of anxiety and depressive symptoms. The pervasive nature of social media can also exacerbate body image concerns, cyberbullying, and the "fear of missing out" phenomenon. Additionally, the constant connectivity afforded by Information and Communication Technology blurs the boundaries between professional and personal life, contributing to burnout and increased stress levels. Therefore, this study aims to investigate the impact of social media use on mental health among students, specifically those at Universiti Kebangsaan Malaysia. The findings will enhance understanding among stakeholders, facilitating the development of effective interventions for mental health issues arising from social media use and examining patterns of social media engagement that influence fluctuations in mental well-being. More specifically, this paper explores the intricate relationships between internet addiction and the prevalence of stress, depression, and anxiety among university students.

LITERATURE

In academic discourse, "media" is conceptualized as a facilitative instrument or intermediary in communication and relationships, while "social" pertains to aspects related to society. Consequently, social media refers to digital platforms or applications that enable users to share information and engage in social interactions. The proliferation of technology and the internet have rendered social media a ubiquitous global phenomenon profoundly influencing modes of communication and human interaction. In Malaysia, specifically, the adoption and utilization of social media have consistently demonstrated an upward trend annually. Society in this country also seen increasingly in using digital device for the purpose of accessing social media. In the 2018 digital report released by was reported that the number of internet users in Malaysia has increased. Statistics show that 79 percent of Malaysians allocate in a way average three hour per day on social media (Khalil, 2018). This shows how important social media is in the daily life of Malaysian modern society.

Usage social media in a way widespread seen as one medium communication effective deep deliver information, especially deep improve awareness about mental health. For example, various mental health awareness campaigns are carried out through platforms such as Twitter, Facebook, and other social media (Saha et al., 2019; Xu et al., 2016; Hawn, 2009; Fergie et al., 2016). These campaigns not only help spread information which right but also encourage discussion open about mental health issues. In addition, social media is also seen as a platform for open discussion, especially for those who have experienced mental health issues. It has become a popular forum for people to share opinions, advice, and information about mental health. (McClellan et al., 2016). These platforms provide a safe space for individuals to share their experiences, get support, and feel like they are not alone in their struggles.

Social media brings a new dimension to the development of healthcare as it is widely used by every level of society and has the potential to become a platform to deliver information about health mentally (Moorhead et al., 2013). However, users should be careful with all the information available on social media. This is because often the real facts are manipulated, which can lead to public panic among the community.

Theoretically, the results of a study conducted by Burnell and Kuther (2016) found that most group young or youth which face problem less social attention (from family, friends, or society around) more tend using social media as a medium to interact. This indirectly causes the lack interaction social in a way face to face deep circle society (Hayes et al., 2016). The Cognitive-Behavioral Model of Problematic Internet Use (PIU) developed by Davis (2001) provides one of the most comprehensive explanations for how psychological vulnerabilities and distorted thought patterns contribute to excessive and maladaptive Internet use. Davis argues that PIU is not solely the result of time spent online but emerges from the interaction between distal factors—such as psychopathology, social isolation, and situational cues—and proximal cognitive distortions that shape an

individual's online behavior. These interacting components are illustrated in Figure 1, which outlines the mechanisms underlying both generalized and specific forms of pathological Internet use.

Figure 1. Cognitive-Behavioral Model of Problematic Internet Use (Davis, 2001)
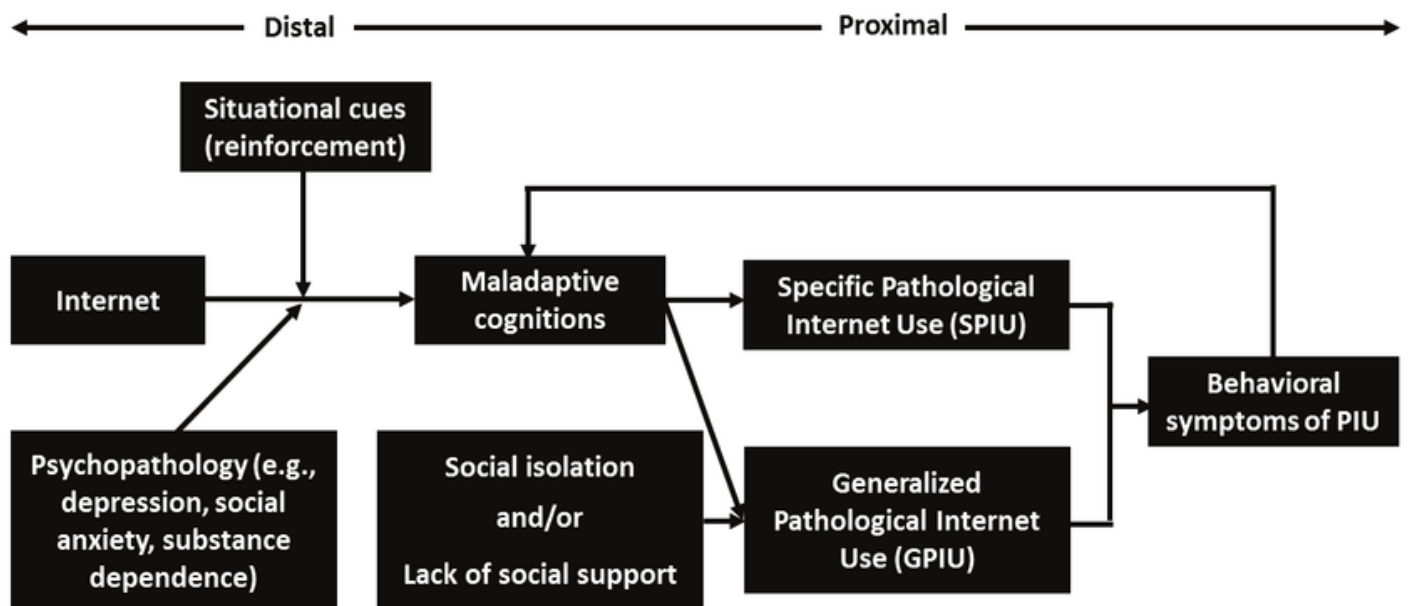
In this model, distal factors including psychopathology such as depression, social anxiety, and substance dependence serve as underlying vulnerabilities that predispose individuals to developing maladaptive cognitions related to Internet use (Davis, 2001). Research supports this assertion, with studies showing that emotional distress and mental-health symptoms are strong predictors of PIU (Caplan, 2002; Young & Rogers, 1998). Similarly, social isolation and a lack of social support further intensify the likelihood of forming distorted beliefs about the Internet as a safer or more rewarding space (Tokunaga & Rains, 2010).

These maladaptive cognitions act as proximal causes, directly influencing problematic behaviors by framing the Internet as an effective escape from negative emotions or stressful life events. Reinforcing situational cues such as the sense of achievement in online gaming or validation in social networking further strengthen these cognitions, resulting in compulsive and avoidant patterns of online engagement (Kardefelt-Winther, 2014).

The model also distinguishes between Specific Pathological Internet Use (SPIU) and Generalized Pathological Internet Use (GPIU). SPIU refers to excessive engagement with particular online activities (e.g., gaming, pornography, social media), whereas GPIU encompasses broad overuse across multiple online domains (Davis, 2001). Subsequent frameworks, such as the I-PACE model (Brand et al., 2016), expand on this distinction by acknowledging the interplay of affective states, cognitive biases, and executive-control deficits. Regardless of type, both SPIU and GPIU ultimately lead to a range of behavioral symptoms of PIU, including withdrawal, tolerance, and functional impairment.

Overall, the Cognitive-Behavioral Model provides a foundational structure for understanding how stress, anxiety, depression, and social factors contribute to problematic Internet behavior. Its emphasis on cognitive distortions and psychological vulnerabilities continues to shape contemporary research and informs therapeutic approaches such as cognitive-behavioral interventions aimed at reducing maladaptive online use (King et al., 2011).

METHODOLOGY

Research Design

This study employed a quantitative, non-experimental research design to examine the effects of social media use on mental health among students of The National University of Malaysia. A survey method was selected to allow

systematic measurement of variables and to identify the relationships between social media usage patterns and mental health outcomes.

Study Location

The study was conducted at The National University of Malaysia. The location was chosen because it met the criteria necessary to support effective data collection and provided access to a population relevant to the research objectives.

Participants and Sampling

The target population consisted of undergraduate and postgraduate students enrolled at The National University of Malaysia. A convenience sampling method was used to recruit participants. Participants were recruited voluntarily through online platforms, including WhatsApp, Telegram, and Instagram. No remuneration was provided. Only individuals who met the inclusion criteria were allowed to participate:

- Students of The National University of Malaysia

- Malaysian citizens

- Active social media users

- Able to read and write in the language of the questionnaire

Research Instruments

1. Depression Anxiety Stress Scales (DASS-21)

Mental health was measured using the DASS-21, developed by researchers at the University of New South Wales, Australia. The instrument comprises 21 items divided into three subscales: Depression, Anxiety, and Stress. Each item is scored on a four-point Likert scale ranging from 0 ("Did not apply to me at all") to 3 ("Applied to me very much or most of the time"). The scores for each subscale are summed to determine the respondent's levels of depression, anxiety, and stress. The DASS-21 is widely used and has demonstrated strong reliability and validity in assessing psychological distress.

2. Internet Addiction Test (IAT) – Social Media Use Items

Social media use was measured using selected items adapted from the Internet Addiction Test (IAT). The instrument collected information on the duration of social media use per day, preferred social media applications, and general patterns of online engagement. These variables were used to explore the influence of social media use on mental health among university students.

Demographic Information

The questionnaire also included demographic items such as gender, age, academic level, and faculty affiliation.

Data Collection Procedures

Data were collected through an online survey distributed using digital messaging and social networking platforms. Participants accessed a link to the questionnaire, provided voluntary consent, and completed the survey anonymously. The data collection process ensured confidentiality and adhered to ethical research standards.

RESULT

Based on Table 1.0, the descriptive statistics provide an overall profile of the data collected in this study. A total of 43 respondents participated, with measurements taken for several variables including gender, age, stress, anxiety, depression, and internet addiction. The gender variable yielded a mean score of 1.63 with a standard deviation of 0.489, indicating a relatively balanced distribution between male and female respondents. The age of participants showed a mean of 22.42 years with a standard deviation of 1.500, suggesting that the sample falls within a narrow age range (20 to 27 years).

For the psychological variables, stress reported a mean of 7.3023 with a standard deviation of 4.60091, indicating substantial variability in stress levels among the respondents. Anxiety recorded a mean of 5.6047 with a standard deviation of 4.59368, while depression showed a mean of 5.4884 with a standard deviation of 4.53753, both demonstrating considerable variation in emotional states within the sample. Internet addiction displayed a mean of 34.0465 with a standard deviation of 15.12953, reflecting a wide dispersion in levels of internet addiction among respondents.

Table 1. Descriptive Analysis

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Stress	43	0.00	18.00	7.3023	4.60091
Anxiety	43	0.00	18.00	5.6047	4.59368
Depression	43	0.00	21.00	5.4884	4.53753
Internet Addiction	43	1.00	74.00	34.0465	15.12953
Valid N (listwise)	43	—	—	—	—

The Analysis of Variance (ANOVA) was used to compare the mean scores across more than two age groups. The results indicate that for the stress variable, the F-value was 1.843 with a p-value of 0.118, suggesting that there is no significant difference in stress levels across the different age groups. For the anxiety variable, the F-value was 1.839 with a p-value of 0.119, also indicating no significant difference in anxiety levels among the age groups. For the depression variable, the F-value was 1.098 with a p-value of 0.382, showing that there is no significant difference in depression levels across the age groups. For the internet addiction variable, the F-value was 1.712 with a p-value of 0.146, likewise showing no significant difference in internet addiction levels among the age groups.

Overall, the ANOVA results demonstrate that there are no significant mean differences across the age groups for the variables stress, anxiety, depression, and internet addiction. This indicates that age does not have a significant influence on the levels of stress, anxiety, depression, or internet addiction among the respondents in this study.

Table 2. The Analysis of Variance (ANOVA)

Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Stress	Between Groups	208.879	6	34.813	1.843	.118
	Within Groups	680.190	36	18.894		
	Total	**889.070**	42			

Anxiety	Between Groups	207.917	6	34.653	1.839	.119
	Within Groups	678.362	36	18.843		
	Total	**886.279**	42			
Depression	Between Groups	133.797	6	22.299	1.098	.382
	Within Groups	730.948	36	20.304		
	Total	**864.744**	42			
Internet Addiction	Between Groups	2134.178	6	355.696	1.712	.146
	Within Groups	7479.729	36	207.770		
	Total	**9613.907**	42			

Pearson's correlation was used to measure the strength and direction of the linear relationship between two variables. The correlation analysis results indicate that stress is strongly and significantly correlated with anxiety ($r = 0.744$, $p < 0.01$), depression ($r = 0.646$, $p < 0.01$), and internet addiction ($r = 0.596$, $p < 0.01$). This suggests that increased stress levels are closely associated with higher levels of anxiety, depression, and internet addiction. Anxiety also shows significant correlations with depression ($r = 0.325$, $p < 0.05$) and internet addiction ($r = 0.547$, $p < 0.01$), indicating that higher anxiety is linked to increased depression and greater internet addiction. Additionally, depression is significantly correlated with internet addiction ($r = 0.413$, $p < 0.01$), demonstrating that higher levels of depression are associated with higher levels of internet addiction.

Table 3. Pearson's correlation

Variables	**Gander**	**Age**	**Stress**	**Anxiety**	**Depression**	**Internet Addiction**
Gander	1	.042	-.012	-.056	-.013	-.039
Sig. (2-tailed)	—	.788	.938	.719	.935	.802
N	43	43	43	43	43	43
Age	.042	1	.151	.108	.115	.059
Sig. (2-tailed)	.788	—	.315	.515	.485	.715
N	43	43	43	43	43	43
Stress	-.012	.151	1	.744**	.646**	.596**
Sig. (2-tailed)	.938	.315	—	.000	.000	.000
N	43	43	43	43	43	43
Anxiety	-.056	.108	.744**	1	.325*	.547**
Sig. (2-tailed)	.719	.515	.000	—	.034	.000
N	43	43	43	43	43	43

Depression	-.013	.115	.646**	.325*	1	.609**
Sig. (2-tailed)	.935	.485	.000	.034	—	.000
N	43	43	43	43	43	43
Internet Addiction	-.039	.059	.596**	.547**	.609**	1
Sig. (2-tailed)	.802	.715	.000	.000	.000	—
N	43	43	43	43	43	43

Overall, the data analysis revealed no significant differences in mean scores between groups for stress, anxiety, depression, and internet addiction based on ANOVA results. However, significant correlations were observed among stress, anxiety, depression, and internet addiction, with stress demonstrating strong associations with the other three variables. These findings suggest that interventions aimed at reducing stress may also effectively mitigate anxiety, depression, and internet addiction among the respondents.

DISCUSSION

This study discusses the impact of social media usage on mental health. Social media has become an integral part of daily life for many individuals. While social media offers benefits such as facilitating communication, information sharing, and social networking, it can also have negative effects on mental health. The objectives of this study were achieved, specifically to examine the effects of social media use on mental health among students at The National University of Malaysia. Additionally, the study explored gender differences in the impact of social media on mental health. Various samples and statistics regarding social media use among these students were collected.

Based on the data obtained, female students were identified as the highest users of social media. Stress was the most prominent mental health concern experienced by students, followed by depression and then anxiety. However, these issues were reported more frequently among male students. According to the findings, social media usage significantly influences mental health. Moreover, the study found that social media use contributes to internet addiction among students. Nonetheless, research on this issue is limited in Malaysia, and there is a lack of in-depth studies on how social media in Malaysia can play a role in educating and raising awareness about mental health.

The present study examined the relationships among stress, anxiety, depression, and internet addiction, and the results provide strong empirical support for the theoretical propositions of the Cognitive-Behavioral Model of Problematic Internet Use (Davis, 2001). Pearson's correlation analysis revealed significant positive associations among all variables, indicating that higher levels of psychological distress are closely linked to increased problematic internet use.

Consistent with Davis's (2001) model, the findings demonstrate that stress is strongly correlated with anxiety, depression, and internet addiction, suggesting that stress functions as an important distal factor contributing to maladaptive online behavior. According to the model, distal factor such as psychopathology, social isolation, and stressful life experiences predisposes individuals to developing maladaptive cognitions, which in turn influence the development of both generalized and specific pathological internet use. The strong correlation between stress and internet addiction ($r = 0.596$, $p < 0.01$) aligns with this theoretical pathway, implying that individuals under stress may turn to the Internet as a coping mechanism, thereby reinforcing maladaptive cognitions and potentially escalating compulsive online behavior.

The significant correlations between anxiety and internet addiction ($r = 0.547$, $p < 0.01$) and between depression and internet addiction ($r = 0.413$, $p < 0.01$) further support the notion that psychopathological symptoms are closely linked to problematic Internet use. Previous studies have similarly found that anxiety and depressive symptoms predict higher PIU levels (Caplan, 2002; Young & Rogers, 1998), consistent with Davis's proposition

that these forms of emotional distress fuel the development of cognitive distortions related to the Internet. Individuals experiencing anxiety may perceive online environments as safer or more controllable than offline settings, while those with depressive symptoms may use the Internet to escape negative emotions or seek temporary relief both of which are core mechanisms described in the model.

The moderate but significant correlation between anxiety and depression ($r = 0.325$, $p < 0.05$) also highlights the interconnected nature of these psychological conditions, which can intensify vulnerability to PIU. This supports earlier findings that emotional distress often co-occurs, compounding the risk of developing maladaptive coping strategies such as excessive Internet use (Tokunaga & Rains, 2010). Reinforcing situational cues such as immediate feedback from social media, stimulating online games, or constant connectivity further strengthen these maladaptive patterns, as described by Kardefelt-Winther (2014).

Moreover, the Cognitive-Behavioral Model's distinction between Specific Pathological Internet Use (SPIU) and Generalized Pathological Internet Use (GPIU) is reflected in the present findings. The significant correlations indicate that psychological distress does not only drive broad overuse of the Internet but may also contribute to compulsive engagement with particular online platforms or activities. This aligns with extensions of the model, such as Brand et al.'s (2016) I-PACE framework, which emphasizes the role of affective dysregulation and cognitive biases in shaping both specific and generalized patterns of problematic use.

Problematic social media use has been negatively correlated with well-being and positively correlated with stress, including depression and loneliness (Chiungjung Huang et al., 2020). Among adolescents, social media use is associated with depression, anxiety, and psychological stress, with time spent, activity type, engagement, and addiction identified as key factors (B. Keles et al., 2019). Social media usage has also been used to model mental well-being and predict the presence of specific mental health disorders such as depression, suicidal tendencies, and anxiety (Stevie Chancellor et al., 2020). Additionally, a small but significant positive correlation exists between social media use and depressive symptoms among adolescents (E. Evie et al., 2020).

Excessive social media use is also linked to poor sleep quality and negative mental health outcomes among youth (R. Alonzo et al., 2020). While many reviews interpret the relationship between social media use and mental health as weak or inconsistent, some studies report significant and harmful associations (P. Valkenburg et al., 2021). Excessive and increasing social media use, particularly among vulnerable individuals, is associated with depression and other mental health disorders (Osman Ulvi et al., 2022). Frequent social media use among females is associated with higher anxiety levels, whereas other mechanisms appear to operate among males (R. Viner, 2019).

CONCLUSION

Overall, the study found that social media use can contribute to internet addiction and negatively affect mental health, including stress, anxiety, and depression. Although no significant differences were observed across gender and age groups, the strong interrelationships among these psychological variables suggest that interventions targeting stress reduction may also help alleviate anxiety, depression, and internet addiction.

To promote healthier social media use, it is recommended to limit time spent on social media. Ethical and mindful use of social media can also help reduce stigma toward individuals with mental health issues and increase awareness of mental health concerns. Additionally, improving access to mental health support within universities is crucial. This study is significant as it provides insights into how social media influences mental health and offers practical guidance for students, educators, and policymakers to address these issues effectively. Understanding the balance between the benefits and risks of social media use is essential for ensuring its healthy and productive use.

STUDY LIMITATIONS

This study has several important limitations. First, the small sample size of 43 respondents from National University of Malaysia may not represent the broader student population, limiting the generalizability of the findings to larger groups or other universities. Geographic limitations are also relevant, as the study was

conducted at a single university and may not provide a comprehensive view of social media's effects on student mental health in other Malaysian universities or internationally.

The quantitative methodology employed may not capture the nuances of social media use and its impact on mental health. Qualitative approaches, such as in-depth interviews, could provide richer insights. Furthermore, this study measured only a few variables stress, anxiety, depression, and internet addiction without considering other factors such as social support or family background. Finally, the study may not account for external factors, such as current events or academic pressures, which could significantly influence respondents' mental health. Recognizing these limitations allows future research to be better designed to provide a more comprehensive understanding of social media's impact on mental health.

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