

PAPER

What My Friends Are Up to? The Relationship between Social Media Usage and Fear of Missing Out among Undergraduates

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ABSTRACT

The social media platform is extremely popular among undergraduate students. Along with the increase in social media usage, phenomena such as the fear of missing out are also becoming more prevalent among this group. It is hypothesized that excessive usage of social media contributes to the psychological decline of undergraduate students. This study aimed to examine the relationship between social media usage and the fear of missing out among undergraduate students. In addition, this study also examined the level of social media usage and the fear of missing out. The study adopted a quantitative approach, specifically a correlational research design. Data were collected from 306 undergraduates at Universiti Teknologi Malaysia using the social networking time use scale and fear of missing out (FOMO) scale instruments to measure social media usage and fear of missing out, respectively. Descriptive analysis revealed that undergraduates have a moderate level of social media usage and a moderate level of fear of missing out. Meanwhile, the inferential analysis revealed a significant positive relationship between the usage of social media and the level of fear of missing out among undergraduates. In conclusion, the study results indicate that social media usage does influence the fear of missing out among undergraduates, although the coefficient was weak.

KEYWORDS

social media usage, fear of missing out (FOMO), undergraduates

1 INTRODUCTION

Undergraduates have integrated the advancement of technology into their daily lives, and social media, specifically, has emerged as an essential part of life. Social media, which was founded with the intention of aiding long-distance interaction, has brought additional benefits to undergraduates by facilitating educational purposes. In Malaysia, 93.3% of the population are social media users, with the population are which the majority (34.4%) in the age range of 20–24, primarily consisting of

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undergraduates [1]. The emergence of social media has satisfied undergraduates' desire for social connectedness, social engagement, and alleviated feelings of missing out (FOMO) [2]. This is because, as undergraduates are required to leave their friends to pursue higher studies, they tend to have a greater desire to stay connected with their social circle through social media [3]. It is undeniable that social media has provided advantages to individuals; however, the overuse of it has also raised some concerns. Studies have shown that young adults using social media are at risk of suffering from psychological distress [4] [5].

Although social media provides instant affirmation and recognition, the FOMO has been on the rise among its users [6]. FOMO is defined as an anxious feeling concerning one's social relationships [7]. Individuals experiencing the FOMO constantly worry that others may be having a more enjoyable experience than themselves, causing them to feel like an outsider in their social circle [8]. Studies by Upreti and Musalay [9] found that 70% of young adults in developing countries experience a "scary, frenzied, or frantic feeling that something is happening around them and that they are not a part of it." FOMO has become a widespread phenomenon among undergraduates, regardless of their academic background [10]. This phenomenon has shown an increase, particularly during the period of mandatory isolation caused by the COVID-19 pandemic [11]. Research has shown that a high fear of missing out leads to challenging behaviors such as phubbing and problematic smartphone usage. This is supported by Hogan's statement [6] that online social networking sites address the need for constant inclusion by offering infinite opportunities for individuals to resolve their fear of missing out. It has been reported that the use of smartphones during online lectures has increased due to the desire not to miss out. Furthermore, it has been found that attention distraction and learning disengagement are predicted among university students [10].

Although social media was designed to facilitate interactions, studies have shown that it is actually associated with adverse outcomes [12]. In past studies, it was reported that virtual interactions, which lack emotional connection, have been associated with an increased vulnerability to FOMO [13]. FOMO has been associated with individuals who experience chronic levels of dissatisfaction. As social media provides instant affirmation and reinforcement, it has also affected young adults' ability to tolerate delayed reinforcement [14]. In addition, as social media has emerged as a primary source of interaction [5], its absence leads to undergraduates reporting feelings of disengagement, unhappiness, and anxiety [15] [16]. Hence, it is undeniable that social media has its fair share of disadvantages. The increasing trend and negative impact of FOMO highlight the need for research on this topic in relation to social media usage.

Prior research conducted on these issues has shown that FOMO, as the independent variable, can lead to increased usage of social media [17] [18]. By contrast, based on the aforementioned rationale, it can also be postulated that higher social media usage is potentially associated with the fear of missing out. Studies on the relationship between social media usage and the fear of missing out have been conducted on different groups of youth samples. Rajan et al. [19] conducted a study on a sample age range of 18–24 years old, while the survey by Dam et al. [20] was primarily participated in by students (92.9% of the total sample). Another recent study by Leung et al. [21] recruited participants among undergraduates, while college students were selected in the study by [22]. The studies, however, present mixed findings. In addition, there have been limited studies conducted among undergraduates in Malaysia [23]. As stated by Beyens et al. [24], gaining insight into undergraduates' social media usage will validate the results of the existing study on the

relationship between social media and psychological distress. Hence, this study will examine the association between social media usage and the fear of missing out among Malaysian undergraduates. Furthermore, the current study will address the existing limitations in research regarding the motivation behind social media usage and its relationship with the fear of missing out. With an advanced understanding of these aspects, undergraduates can gain awareness and insight into their social media usage.

2 LITERATURE REVIEW

2.1 Social media usage

Social media is defined as media forms that allow and facilitate interactive participation [25]. In line with the rapid advancement of technology, numerous applications have been developed, enabling individuals to stay connected with just one click [17]. Kemp [26] reported that undergraduates spend the majority of their time, 97.5%, on social media. Supporting this, Ang et al. [27] stated that it has become a common phenomenon for individuals to be fixated on their social media instead of making eye contact.

Social media usage refers to a range of activities that users engage in online [28]. Particularly in Malaysia, the most popular social media sites are Facebook, Instagram, WhatsApp, and Twitter [29]. As stated by Talhah [30], there has been a notable increase in the usage of social media by Malaysians since the announcement of the movement control order (MCO) on March 18, 2020. In terms of social media users, the main category consists of individuals aged between 18 and 29 years old [31]. With 91.3% of users accessing social media every day [32]. The majority of undergraduates are reported to use more than three social media platforms [33], with the main purpose being ease of use and functionality [34]. A reason for undergraduates to use social media is to boost their self-confidence and gain approval from their desired social circle [35].

Besides being a platform for instant updates, it has triggered the fear of missing out among its users. Social media has not been kind to the fear of missing out among its users, which stems from the belief that others are having more fulfilling experiences [36]. Furthermore, the negative effects of social media on education can be observed in terms of reduced academic performance. The use of social media is reported to reduce students' concentration on studies [37]. This could be due to students' intention to multitask, which affects their cognitive control ability, resulting in poorer academic performance [28]. With its detrimental effects on well-being and education, it is crucial to conduct an investigation examining the relationship between social media usage and the fear of missing out among undergraduates.

2.2 Fear of missing out

Fear of missing out is defined as the "pervasive apprehension that others might be having rewarding experiences from which one is absent" [18]. It is often referred to as a frequent desire to be online on social media [38]. FOMO is ingrained in the human survival instinct, making it a difficult aspect to reduce [39]. Living in a technological world exposes individuals to a multitude of complex and uncertain information

about what their social circle is up to [7]. FOMO can range from being an episodic feeling that occurs randomly within a social circle to being a long-term disposition or state of mind, which can lead to a more severe sense of social inferiority [40].

According to Andrew [18], 75% of young adults have reported experiencing FOMO as a result of using social media. Twenge [5] stated that individuals' exposure to an abundance of inaccurate portrayals of others' lives and happiness leads to anxiety and a perception of social rejection. In addition, perceived social exclusion has been found to have a negative impact on an individual's quantity and quality of life [41]. Supporting the notion, individuals with a fear of missing out have been reported to have a lower level of satisfaction in terms of basic psychological needs, specifically autonomy, relatedness, and competence [17]. Fear of missing out has also led to problematic smartphone usage among undergraduates [27]. These factors are reportedly associated with reduced life competence, emotional tension, and emotional control [42].

Reyes et al. [43] proposed two factors that lead to the fear of missing out: the mobile revolution and the rapid development of social media. These situations lead to individuals being exposed to a situation in which every action and event is considered important, and missing out on a potentially rewarding event is seen as harmful. Furthermore, personal factors such as the need for recognition and impression management are also causes of the fear of missing out [44]. Another factor that contributes to FOMO is the quality of relationships. Bloemen and De Coninck [45] stated that the quality of relationships, specifically family relationships, is directly and indirectly associated with fear of missing out. It was found that the perceived high quality of relationships between parents and children was related to a lower fear of missing out. In addition, the level of support and control has also shown a positive correlation with the fear of missing out among young adults.

2.3 Relationship between social media usage and fear of missing out

Studies on FOMO have mainly been conducted in the context of social media, as it is reported to play an essential role in FOMO. Cham et al. [46] reported that FOMO results from a problematic attachment to social media and is associated with negative consequences in life. The consequences range from a lack of emotional control to reduced life competency among individuals. In a study conducted by Chakraborty [47], FOMO has been reported as a factor contributing to excessive social media usage among young adults. They were found to excessively use social media with the intention of alleviating their FOMO and reducing social disconnections. In addition, it has been found that young adults are vulnerable to FOMO as they are easily overlooked on social media platforms.

Walotek-Ściańska [48] described the fear of missing out among undergraduates as a situation in which they are unable to resist using social media during lectures because they don't want to miss out on rewarding updates happening online. Miller [49] has stated that social media acts as fuel for the fire of FOMO. As users have constant real-time access to what others in their social circle are up to, they become prone to the fear of missing out and develop a sense of unworthiness and lower self-esteem. Along the same lines, Dossey [50] has reported that the relationship between fear of missing out and social media usage is a vicious cycle. Individuals with a high level of fear of missing out are prone to feelings of sadness, as they tend

to substitute their social media interactions with real-life interactions. This, in turn, increases their sense of isolation and results in a higher level of FOMO.

As stated by Hassim et al. [36], the fear of missing out among young adults is closely linked to their constant and immediate engagement with social media. In the study, 57.4% of the participants were undergraduates. Undergraduates are identified as a particularly vulnerable group when it comes to the fear of missing out. This is due to their transitional phase into adulthood and the process of shaping their identity [51]. In fact, research has shown that FOMO tends to exacerbate feelings of loneliness among individuals who engage in excessive use of social media [52]. Hence, it is inevitable that, despite providing instant affirmation to individuals, social media does bring about negative consequences in the presence of excessive usage.

3 THEORETICAL PERSPECTIVES

In the early 1940s, Elihu Katz proposed the uses and gratification theory. This theory offers a user-centered view of social and psychological motives that motivate an individual's use of a particular media [53]. In addition, it provides insight into the rationale behind an individual's choice of one media over another. An assumption of the uses and gratification theory is that individuals are active and choose media based on their own needs and requirements [54, 55]. Stafford and Stafford [56] proposed the concept of social gratification, which refers to the fulfilment of social expectations, including social interaction and networking. Boehmer et al. [57] reported that excessive usage ignites a cycle of mental desire and rewards, which leads to defective behaviors and a decline in psychological well-being.

Fear of missing out is a term that conceptualized using the self-determination theory proposed by Deci and Ryan in 1985. Based on a relational perspective, self-determination theory explains an individual's goal-directed behaviour as motivated by the satisfaction of three needs: autonomy, competence, and relatedness. Przybylski and colleagues employed this theory and proposed that the fear of missing out is a negative emotional state that arises from an unmet need for social relatedness. Grounding this study in self-determination theory emphasizes the significance of fulfilling an individual's basic needs and highlights how deficits can jeopardize optimal social functioning. Hui and Tsang [58] stated that fulfilling the three needs leads to the optimal functioning of individuals across cultures. Hence, as a theory that is culturally universal, it is wise to use self-determination theory in this study with undergraduates in Malaysia.

4 METHODOLOGY

The current study utilizes a quantitative approach to address the research questions at hand. Specifically, this study will adopt a correlational research design. Samples for the study were recruited based on Krejcie and Morgan guidelines [59]. A total of 306 undergraduate students have been recruited. This study will exclusively focus on Malaysian undergraduates to mitigate any potential errors arising from cultural and geographical variations. In addition, there have been limited studies conducted in Malaysia on the topic of this study, creating a research gap.

Therefore, this study will exclusively focus on the Malaysian context. The study sample was chosen using a simple random sampling technique.

The social networking time use scale (SONTUS) measures the social media usage of the study participants. The scale consists of 29 items covering five contexts in which social media is used: academic, public places, stress, relaxation, and motives for use. Each item is to be answered on an 11-point Likert scale, which is further classified into four categories of response (1: Low; 2: Average; 3: High; 4: Extremely High). The instrument has a Cronbach’s alpha of 0.92 for the full scale and values ranging from 0.83 to 0.91 for the five subscales. The variable “FOMO,” is measured through the FOMOs, which was designed by Andrew [18]. The scale consists of 10 items to assess an individual’s fears, worries, and anxieties associated with being excluded from events and experiences in their social environment [17]. These items are to be answered on a 5-point Likert scale and demonstrate high internal consistency, with a Cronbach’s alpha of 0.854. The reliability of the scale ranges from .87 to .90.

Considering the ordinal nature of Likert scale, median value was used to identify the level of social media usage, and fear of missing out. In particular, there will be three and four-level categories of social media usage: *Low* ($1 \leq M < 2$), *Moderate* ($2 \leq M < 3$), and *High* ($M > 3$). Additionally, there will be four categories of fear of missing out: *Low* ($1 \leq M < 2$), *Moderately Low*: ($2 \leq M < 3$), *Moderately High* ($3 \leq M < 4$), and *High* ($M \geq 4$) respectively. Meanwhile, a correlation statistical test of Spearman rho was used to analyze the relationship between the variable. The coefficient ranges from -1 to 1. A negative value indicates a negative relationship, while a positive value indicates a positive relationship.

5 RESULT

5.1 Findings on social media usage

Table 1 displays the overall level of social media usage and the level by five different contexts of use.

Table 1. Median analysis on social media usage

Context of Use	Median	Level
Relaxation and Free Period	2	Moderate
Academic-related Period	2	Moderate
Public Place-related Period	1	Low
Stress-related Period	3	High
Motives for Use	2	Moderate
Overall	2	Moderate

Results indicated that the overall median is at a moderate level, suggesting that the usage of social media is relatively high to a moderate extent. This mainly contributed to the three contexts of use (relaxation, academics, and motives of use), each scoring 2, respectively. The median and percentage of responses for each item are presented in Table 2.

Table 2. Analysis on SONTUS items

No.	Item	Median	1	2	3	4
Relaxation and Free Period						
2	When you are at home sitting idly	4.0	8.5%	14.4%	24.5%	52.6%
6	When you are waiting for someone (e.g., friends) either in their house or at a pre-arranged place	2.5	17.3%	32.7%	26.8%	23.2%
12	When you are in bed about to sleep	3.0	17.3%	23.2%	27.5%	32.0%
14	When you are at a place to repair your car, house appliances, etc.	2.0	39.5%	23.2%	21.9%	15.4%
21	When you are in the company of friends/family/colleagues having fun	2.0	42.8%	29.7%	20.9%	6.5%
22	When you are watching TV, news, football, films, sports, etc.	2.0	38.2%	30.7%	17.6%	13.4%
24	When you are a passenger in a car/bus/train for at least 2 min	2.0	46.4%	21.9%	22.2%	9.5%
26	When you are waiting for your boss in her office for at least 2 min when she is not attending to you	1.0	58.8%	21.2%	13.7%	6.2%
Overall Median of “Relaxation and Free Period” Subscale					2.0	
Academic-related period						
5	When you are doing school or job-related assignment at home	3.0	17.3%	29.4%	25.5%	27.8%
10	When you are in the class receiving lecture	2.0	45.1%	27.5%	18.3%	9.2%
13	When you are reading in the library for academic purpose e.g., recommended text for class	2.0	43.8%	30.4%	16.3%	9.5%
28	When you are online doing school or job-related works e.g., project, homework	2.0	20.3%	31.7%	25.5%	22.5%
29	Watching academic-related video lectures or those related to your job	3.0	23.2%	24.8%	29.7%	22.2%
Overall median of “Academic-related period” subscale					2.0	
Public place-related use						
4	When you go to the stadium to watch football, basketball etc.	1.0	59.2%	21.9%	13.1%	5.9%
9	When you are in a meeting	1.0	55.9%	27.1%	11.4%	5.6%
19	When you are sitting in a religious place (e.g., church, mosque) and activities like sermon or prayer is yet to start	1.0	58.5%	24.5%	12.4%	4.6%
23	When you go to the cinema house to watch movie(s)	1.0	63.1%	21.6%	10.5%	4.9%
Overall median of “public place-related use” subscale					1.0	

(Continued)

Table 2. Analysis on SONTUS items (Continued)

No.	Item	Median	1	2	3	4
Stress-related use						
3	When you need to reduce your mental stress	3.0	14.7%	23.9%	20.9%	40.5%
8	When you have gone through a lot of stress	3.0	23.5%	20.3%	21.9%	34.3%
15	When you need to reduce your emotional stress	3.0	19.3%	24.5%	23.9%	32.4%
16	When you want to reduce the pressure of your daily routines	3.0	15.4%	28.4%	24.5%	31.7%
27	When you are trying to forget your financial challenges	2.0	35.9%	29.7%	21.2%	13.1%
Overall median of “stress related use” subscale					3.0	
Motives for use						
11	When you need to maintain contact with existing friends	3.0	17.0%	32.0%	28.1%	22.9%
20	When you need to find out more about people you met offline	2.0	38.6%	26.5%	20.9%	14.1%
25	When you need to find people you haven’t seen for a while	2.0	37.3%	34.0%	18.3%	10.5%
Overall median of “motives for use” subscale					2.0	
Overall median		2.0				

The first subconstruct, relaxation, and free period have an overall median of 2, indicating a moderate/average usage. However, item 2, “when you are at home sitting idly”, has a median of 4, indicating high usage. This is obtained as 52.5% of respondents have stated that they have spent more than 10 minutes in social media for 3 times or more in the past week. Contrary to that, item 26, “waiting for your lecturer in her office for at least 2 minutes when she is not attending to you,” has a median of 1, indicating low usage. This is probably due to the students’ show their respect to the lecturer.

The second subconstruct, the academic-related period, has an overall median of 2, indicating a moderate/average usage as well. All five items in the subscale have a median ranging from 2 to 3. Item 5, “when you are doing school or job-related assignment at home,” with a median of 3, indicates a high usage. This reflects that most undergraduates use social media while attempting to complete their assignments. The third subconstruct, public place related use, has an overall median score of 1, indicating a low usage in the stated context. All four items in the subscale have a median of 1. For example, item 23, “when you go to the cinema to watch movies,” received a response of 1 (not applicable, never used, or used once for less than 10 minutes) from 63.1% of respondents (193 undergraduates).

The fourth subconstruct, stress-related use, has an overall median of 3, indicating a high usage. All five items in the subscale have a median ranging from 2 to 3. However, item 3, “when you need to reduce your mental stress,” has a majority of respondents, 40.5% (124 undergraduates) choosing scale 4, stating that they have spent more than 10 minutes in social media in the past week for 3 times or more. The fifth subconstruct, motives for use, has an overall median of 2. The three items in the subscales have a median of 3 for item 11 and a median of 2 for item 20 and item 25. For instance, item 20, “when you need to find out more about people you

met offline,” had the majority of respondents, 38.6% (118 undergraduates), stating that it was either not applicable or had not been used in the past week for more than 10 minutes.

5.2 Findings on fear of missing out

Based on the obtained results, the median score for each item ranges from 3 to 4. Out of the 9 items, 6 items (Item1, Item2, Item3, Item4, Item6, Item10) have a median score of 3. On the other hand, Item5, Item7, and Item9 have a median score of 4. For example, Item5, which states “it is important that I understand my friends’ in-jokes,” has 36.3% of respondents (111 undergraduates) answering with a scale of 4, indicating a high level of fear of missing out. The overall median score on the fear of missing out scale is 3 (See Table 3).

Table 3. Analysis on fear of missing out items

No.	Item	Median	1	2	3	4	5
1	I fear others have more rewarding experiences than me.	3.0	11.1%	16.7%	27.5%	25.2%	19.6%
2	I fear my friends have more rewarding experiences than me.	3.0	15.4%	19.0%	25.8%	23.9%	16.0%
3	I get worried when I find out my friends are having fun without me.	3.0	17.3%	21.9%	22.5%	23.5%	14.7%
4	I get anxious when I don't know what my friends are up to	3.0	19.3%	25.2%	22.9%	19.9%	12.7%
5	It is important that I understand my friends’ in jokes.	4.0	4.2%	7.2%	26.5%	36.3%	25.8%
6	Sometimes, I wonder if I spend too much time keeping up with what is going on.	3.0	9.2%	11.8%	29.4%	31.0%	18.6%
7	It bothers me when I miss an opportunity to meet up with friends	4.0	9.8%	13.4%	24.5%	32.4%	19.9%
9	When I miss out on a planned get-together it bothers me.	4.0	7.5%	15%	26.8%	31%	19.6%
10	When I go on vacation, I continue to keep tabs on what my friends are doing.	3.0	16.0%	23.9%	28.4%	19.0%	12.7%
Overall Median		3.0					

5.3 Findings on the relationship between social media usage and fear of missing out

Spearman’s Rho correlation has been used to analyze the relationship between social media usage and the level of fear of missing out among undergraduates. The results of the analysis are presented in Table 4. The p-value of the correlation is less than 0.05, and the Spearman’s rho correlation coefficient is 0.240. Hence, H_0 is rejected because $p < \alpha$. Correlation analysis shows that there is a positive correlation

between social media usage and the fear of missing out among undergraduates. The correlation coefficient is weak, with a value of $r = 0.240$. The sample size for this analysis is 306, and the significance level is set $\alpha = 0.01$ for a two-tailed test. This indicates that undergraduates who use social media more frequently have a higher fear of missing out. In short, there is a significant positive correlation between social media usage and the fear of missing out among undergraduate students.

Table 4. Spearman correlation between social media usage and fear of missing out

		FOMO	GLOBAL_S
Spearman's rho	FOMO	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	306
	GLOBAL_S	Correlation Coefficient	.240**
		Sig. (2-tailed)	.000
		N	306

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

As there is a significant correlation between social media usage and the fear of missing out, additional correlation analysis has been conducted between the sub-constructs of social media usage and the fear of missing out. Revised 2: As shown in Table 5, there is a positive correlation between FOMO and the use of social media during relaxation and free periods ($r = 0.150$, $n = 306$, $\alpha = 0.01$ two-tailed), public place-related use ($r = 0.225$, $n = 306$, $\alpha = 0.01$ two-tailed), stress-related periods ($r = 0.117$, $n = 306$, $\alpha = 0.01$ two-tailed), and motives of use ($r = 0.127$, $n = 306$, $\alpha = 0.01$ two-tailed). Reason 2: Corrected capitalization, added missing articles, and made the sentence structure clearer. On the other hand, there is no correlation between the level of fear of missing out and social media usage during academic-related periods ($r = 0.080$, $n = 306$, $\alpha > 0.05$).

Table 5. Spearman correlation between subconstructs of social media usage and fear of missing out

	Fear of Missing Out Correlation Coefficient	Sig. (2-Tailed)	N
Relaxation and Free Period	0.150	0.008**	306
Academic-Related Period	0.080	0.163	306
Public Place Related Use	0.225	0.000**	306
Stress Related Period	0.117	0.002**	306
Motives for Use	0.127	0.026	306

6 DISCUSSION

6.1 Discussion on analysis of social media usage level

The results of the descriptive analysis revealed that the level of social media usage among the undergraduate sample is moderately high. Similarly, in a study by Ahmad et al. [60] on the social media usage of 240 undergraduates, it was reported

that the majority of the respondents (37.1%) spend 3 to 4 hours on social media, followed by 30% spending more than 5 hours on social media daily. The extremely high usage can be attributed to the role of social media in socialization, information seeking, and academic purposes [61]. Besides, Ayub and Bakar [62] reported that social media usage increased during the MCO period. In addition, the researchers have identified five trends in social media usage: education, entertainment, income generation, information retrieval, and communication. Hence, the current study suggests that the extremely high usage of social media among undergraduates could be influenced by academic purposes and the pandemic.

In this study, social media usage was measured using five sub-constructs. Social media usage was measured in this study using five subconstructs. The first subconstruct is the use of social media for relaxation and leisure. The use of social media for relaxation is a widely accepted aspect of the literature on social media usage [63]. This subconstruct has a median of 2, indicating moderate/average social media usage. Tuurosong and Amadu [64] have also stated that students' time spent on social media decreases towards the end of a semester due to academic commitments. This study was conducted during the last week of a semester, highlighting a potential application for moderate social media usage as a means of relaxation. An example of an item in this subconstruct is *"When you are at home sitting idly."* It has a median of 4, indicating high usage. This is supported by Cheng and Cho [65], who found that respondents spent a significant amount of time on social media for relaxation purposes during their free time. This item requires a response regarding social media usage during free periods, resulting in a high median consistent with Cheng and Cho.

The second subconstruct is the academic-related period. This subconstruct has an overall median of 2. This is similar to the study conducted by Hasnain et al. [66], where students had moderate social media usage in terms of academic-related aspects. Although the overall median of this subconstruct indicated moderate usage, some items had a higher median value. "An example of an item is *'When you are doing school or job-related assignments at home,'* with a median of 3 indicating high social media usage." Hamid et al. [67] stated that current undergraduates use social media to enhance academic-related tasks, such as interacting with lectures and gaining further knowledge about the course content. In line with that, the study conducted by Sobaih et al. [68] reported that undergraduates are increasingly using social media for academic purposes. Specifically, research has found that the use of social media by undergraduates is effective in supporting formal teaching and learning.

The third subconstruct is public place-related use, with a median score of 1. All items in this subconstruct also have a median score of 1, indicating low usage of social media in public places. For example, items such as *"When you go to the stadium to watch football, basketball, etc."* and *"When you go to the cinema to watch a movie(s)."* The low value of the median could possibly be attributed to respondents' preference for social media during a specific period of time. As this study was conducted during the last week of the semester, undergraduates might not have had time to engage in public place-related use scenarios. Supporting the notion, Gallego-Gómez et al. [69] reported that the stress faced by undergraduates approaching the final exam has a significant effect on their leisure activities.

The fourth subconstruct is the stress-related period, with an overall median of 3. An example of an item in this subconstruct is *"When you need to reduce your mental stress,"* which also has a median of 3, indicating high social media usage. In line with that, Vannucci et al. [70] reported that respondents were found to use social media increasingly during stressful periods. Similarly, Brailovskaia et al. [71] stated that respondents' use of social media increased during stressful periods. As stated

by Alzahem et al. [72], undergraduates tend to experience high levels of stress at the end of the semester. In line with that, undergraduates who were at the end of their semester during this study have also reported a similar finding of high social media usage during a stressful period.

The fifth subconstruct is the motive for using social media. This subconstruct has a median of 2, indicating moderate/average social media usage. Bowden-Green et al. [73] have reported a similar finding of moderate usage of social media in relation to the motive for using social media. In the study, undergraduates used social media in moderation to pass the time and maintain relationships. Although the overall median was moderate, some items had a high median. An example of an item in this subconstruct is *“When you need to maintain contact with existing friends.”* It has a median of 3, indicating high usage. This is supported by Sheldon and Bryant [74]. In their study, researchers found that undergraduates have individual motives for using social media. Such motives include surveillance, knowledge documentation, coolness, and creativity.

6.2 Discussion on analysis of FOMO level

The analysis for the second research question pertaining to the level of FOMO revealed that the majority of undergraduates at UTM have a moderate level of fear of missing out. The research conducted by Qutishat and Sharour [75] reported similar findings to the current study. In their study, the majority of the respondents had a moderate level of fear of missing out. Similarly, in a study conducted among undergraduates in China, it was also reported that the majority of undergraduates had a moderate level of fear of missing out [76]. Undergraduates' moderate to high fear of missing out could be influenced by the COVID-19 pandemic. As stated by Gioia and Boursier [11], the pandemic and its related standard operating procedures (SOPs) have undeniably increased the fear of missing out among undergraduate students. These have led to increased smartphone use during lectures, driven by the desire to not miss out on any important updates. Fear of missing out is evidently an impactful phenomenon that has been increasing among undergraduates over the years [77].

Furthermore, age is another factor that could explain the moderate level of fear of missing out among undergraduates. Andrew [18] has stated that the fear of missing out negatively affects individuals of all ages. Their study reported that the fear of missing out decreased as the respondents' ages increased. Along the same lines, Beyens et al. [24] found that adolescents tend to have a very high level of fear of missing out, which decreases with age. These studies support the current study, which found that undergraduates have a moderate level of fear of missing out. On the contrary, a study conducted by Al-Furaih and Al-Awidi [10] reported that undergraduates have a high level of fear of missing out. As indicated in the literature review of the current study, the fear of missing out is strongly linked to the utilization of social media. In addition, Jood [51] states that undergraduates are more vulnerable to the fear of missing out compared to other age groups. This vulnerability is attributed to their transition into adulthood and the process of shaping their identity.

6.3 Discussion on analysis of relationship between social media usage and FOMO

The third research question regarding the relationship between social media usage and fear of missing out was analyzed using Spearman's Rho correlation. The results showed a significant positive correlation between social media usage and the fear of

missing out levels among UTM undergraduates. This indicates that undergraduates who use social media more frequently have a higher level of fear of missing out, and vice versa. A study conducted by Chen et al. [78] on FOMO and social media usage among undergraduates also revealed a similar finding to the current study. The researchers reported that there was a significant association between social media usage and fear of missing out. Similarly, Rozgonjuk et al. [79] also stated that there is a significant relationship between social media usage and the fear of missing out. In addition, the study found that the relationship had a negative impact on both life and work productivity. Furthermore, the intensity of social media use disorder was found to be positively correlated with the fear of missing out. Furthermore, Sekścińska and Jaworska [80] also stated that the fear of missing out has been significantly associated with negative moods in individuals when their access to social media is interrupted.

Oberst et al. [8] proposed a possible explanation for the significant positive relationship between social media usage and FOMO. It was stated that a significant relationship is caused by the psychological dependence of undergraduates on social media usage for the construction of social identities. Undergraduates were found to be psychologically dependent on social media to fulfill their social needs. Furthermore, Lee and Chiou [81] stated that the desire to satisfy social needs is another factor contributing to the significant positive correlation between social media usage and FOMO among undergraduates. The failure to satisfy these needs could increase sensitivity to FOMO and lead undergraduates to engage in high social media usage [77]. For instance, Instagram's "Story" feature allows individuals to be instantly updated on someone's whereabouts. This motivates individuals to constantly use social media, which in turn leads to FOMO when they are not using it.

As stated by Andreassen [82], excessive social media usage may be considered pathological, as it compels individuals to constantly check their phones out of a fear of missing out. Along the same lines, Andrew [18] has stated that anxiety, which is a component of the fear of missing out, also becomes a consequence of high social media usage. In addition, Jones [83] has stated that individuals who are unable to access social media reported feeling disconnected and stressed, as they are unable to stay connected to their desired social circle. This is mainly because, without access to social media, individuals are unable to gain insight into the activities and whereabouts of their desired social circle. The researcher hypothesized that individuals with FOMO tend to engage in social media excessively in order to constantly stay updated on the activities of their social circle.

Although a significant relationship has been found between social media usage and the fear of missing out, the coefficient value is low. This low coefficient can be explained by factors such as age and year of enrollment. As stated by Beyens et al. [24], the level of FOMO decreases with the age of the respondents. Specifically, as individuals transition from adolescence to adulthood, FOMO diminishes. In the current study, the majority of the respondents were between the ages of 23 and 25. Hence, this could explain the low coefficient value of the correlation. Besides, the gender of the respondents is another possible cause of the low coefficient value. Specifically, males are more prone to the fear of missing out than females [84]. A majority of respondents in the current study were female undergraduates, which may explain the low coefficient value.

7 CONCLUSION

In conclusion, the current study aims to identify the relationship between social media usage and FOMO among undergraduate students. Through descriptive and inferential analysis, all three-research objectives have been achieved. It is concluded

that UTM undergraduates have an extremely high level of social media usage and a moderate level of fear of missing out. Furthermore, there is a significant positive relationship between the usage of social media and the level of FOMO among undergraduates. The results were consistent with previous literature, and potential explanations for the significant relationship have been discussed.

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