Fear of missing out (FOMO), emotional distress, and problematic social media use among university student

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ABSTRACT

Background: The rapid increase in social media usage among university students has emphasised the psychological difficulties associated with Fear of Missing Out (FoMO), Emotional Distress, and Problematic Social Media Use. This study examines the relationship between these variables among university students, assessing the impact of FoMO on emotional well-being and social media dependency. *Materials and methods:* Quantitative cross-sectional design included 100 students from various departments at Mahatma Gandhi University, Kottayam. The study utilised the Fear of Missing Out Scale (FoMOs), the Depression, Anxiety, and Stress Scale (DASS-21), and the Bergen Social Media Addiction Scale (BSMAS) to assess the key variables. The data was analysed using Correlation, t-test, ANOVA and Multiple Linear Regression analysis to identify relationships, gender differences and significant predictors. *Results:* Correlation analysis indicates that higher levels of FoMO were substantially associated with greater emotional distress and an increased chance of PSMU. A possible gender difference in anxiety associated with FoMO is also suggested by the fact that female students reported higher anxiety levels than male students. *Conclusion:* These findings underscore the psychological effects of FoMO on students' social media use and mental well-being. The research underlines the imperative of targeted interventions, such as mindfulness practices and digital literacy programs, to help students cope with FoMO and reduce detrimental social media dependence, enhancing mental well-being.

Keywords: Fear of missing out (FoMO), emotional distress, problematic social media use, university students

INTRODUCTION

Social media is a technology tool that operates online, allowing individuals to create and share online content based on personalised relationships.[1] As technology progresses, social media has grown to become a vital tool for information sharing and the ability to communicate.[2]

The rise of digital connectivity reflects our increasing reliance on technology to connect and share information and highlights its profound impact on contemporary communication practices. Social networks gradually alter how people communicate and share knowledge in the new media age.[3]

Social media has been recognised as a determinant of the psychological well-being of an individual. It has emerged as an essential element in the lives of young adults, significantly influencing mental health and social behaviours. The phenomenon of FOMO, which is marked by concern over perhaps missing fulfilling experiences shared online, is particularly dangerous for university students.[4] The present study intends to examine the association between FOMO, emotional distress, and PSMU among university students, seeking insights into social media's detrimental influence.

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Fear of missing out (FoMO) is a distinct term coined in 2004 and then popularised in 2010 to denote phenomena prevalent on social networking platforms. It was ultimately included in the Oxford Dictionary in 2013.[5] In 2013, British researchers articulated FoMO as the "pervasive apprehension that others might be having rewarding experiences from which one is absent," characterised by the need to remain constantly connected to others' activities. FoMO was conceptualised via the lens of self-determination theory (SDT), formulated by Ryan et al.[6] and utilised by Przybylski et al.[7] to elucidate the motivations behind FoMO. In Self-Determination Theory (SDT), social relatedness can enhance intrinsic motivation, thus promoting positive mental health. Przybylski et al.[7] utilised Self-Determination Theory (SDT) to conceptualise Fear of Missing Out (FoMO) as a detrimental emotional condition arising from unfulfilled social relatedness demands.

In an online context, FoMO is defined as the anxiety coming from the prospect of not partaking in rewarding online experiences, prompting individuals to feel obligated to watch their online social connections constantly. [7] The compensatory motivation perspective of self-determination theory posits that satisfying basic psychological needs is a crucial motivating mechanism that compels individuals to engage in behavioural compensation when their needs remain unmet. Consequently, a heightened desire for belonging correlates with an increased probability of suffering FoMO.[8] Previous studies have demonstrated direct and indirect correlations between FoMO and PSMU.[9]

FoMO contains two phases: first, the perception of missing out, followed by a compulsive activity to retain these social relationships. The social part of FoMO could be proposed as relatedness, which relates to the need to belong and the establishment of solid and stable interpersonal relationships.[10] Several unpleasant life experiences and emotions, such as anxiety, an overall lack of emotional control, sleep deprivation, impaired life competency, emotional strain, and adverse consequences on physical well-being, are associated with FoMO. Intimate relationships may be viewed as a means of fending off social rejection.[11] Problematic Social Media Use (PSMU) has been characterised as the need for more

regulation of one's use of social media, which is related to harmful effects on everyday functioning.

Review of Literature

Ellison et al.[12] pioneered research into social media's psychological ramifications on universitystudents, using Facebook as a case study. Their results suggested that their use could negatively impact psychological well-being. Many factors were considered to be related to the psychological impact of university students' use of social media, such as social support,[13] self-esteem,[14] life satisfaction,[12] stress,[15] FoMO,[16] social networking site addiction,[17] Anxiety,[18] depression,[19] social isolation,[20] social networking intensity,[21] and loneliness.[22]

Fear of Missing Out (FOMO): It is a social anxiety, has grown with the emergence of digital media. It is distinguished by a desire to maintain constant online connections with the lives and experiences of people.[7] Addiction to social media, poor peer relationships, and increased susceptibility to stress due to unpleasant events are all associated with FoMO. FoMO and social media addiction are found to be mediated by sensitivity to stress related to neglect (but not to adverse reactions by online peers), which in turn mediates the association with emotional symptoms.[23] Emotional distress, characterised by feelings of anxiety, depression, and stress, is often linked to FoMO. The COVID-19 pandemic further exacerbated this distress, studies showing that FoMO-mediated post-traumatic stress disorder (PTSD) symptoms related to the pandemic.[24]

Problematic Social Media Use (PSMU): According to Casale et al.,[24] Problematic Social Media Use (PSMU): (i) is substantially greater in low-income countries (LIC); (ii) did not rise during the previous seven years, except for LIC, following the start of the COVID-19 pandemic; (iii) did not change with age or gender. In certain nations, the increasing prevalence of PSMU during the COVID-19 pandemic may have been a temporary phenomenon in dealing with physical distances, while in other places, PSMU increased overall. Both the higher frequency of mental problems in LIC and the sociocultural variations between nations may contribute to the high levels of PSMU in LIC, as PSMU may be a sign of more serious psychiatric disorders.

FoMO and PSMU: FoMO significantly predicts PSMU. According to Servidio et al.,[4] students who experience high levels of FoMO use social media more frequently to prevent feelings of exclusion. Among the 1000 participants in a Belgian study,[25] 6.5% were found to be excessive SNS users; these individuals also had lower levels of conscientiousness, emotional stability, agreeableness, perceived control, and self-esteem—all of which may be risk factors for affective disorders. Young adults who ignore peer relationships are linked to problematic internet use and the emergence of FoMO, which may result in depressed symptoms.[26] Furthermore, a considerably increased risk of suicidality was reported for those who used social networking sites for more than two hours a day.[27]

In the background of COVID-19, those who experience high levels of FoMO are at a higher risk of developing Social Media Addiction (SMA). FoMO is a significant predictor of SMA research in the cyber age.[28] One possible explanation for this connection is that people who suffer from FoMO may use social media excessively to stay in touch, informed, and always connected to others' activities. This is done to avoid missing out on the incredible and fulfilling experiences or opportunities others may have while away. Among the incentives for using social networks, "finding out what is going on" is the most essential one.[29] Furthermore, specific social media platforms may cause and exacerbate FoMO by creating particular features, like alerts and real-time information, that keep users glued to their screens and exacerbate social media self-control failure,[30] which leads to problematic social media use. This combination of FoMO and social media platform design could generate a reinforcing cycle, making it harder for individuals to withdraw from social media, potentially leading to addictive behaviours.

Research Gap

Fear of Missing Out (FoMO) is frequently connected with problematic social media use (PSMU). Moreover, past studies have shown a significant relationship between FoMO, social comparison and self-esteem. However, there is a lack of studies that explore the link between FoMO, emotional distress and PSMU. The present study intends to evaluate the influential

components in dealing with FoMO, emotional distress and problematic social media use.

MATERIALS AND METHODS

A quantitative cross-sectional design comprised 100 students from various departments at Mahatma Gandhi University, Kottayam. Through purposive sampling, participants were recruited among undergraduates, postgraduates, and research scholars. The study employed the Fear of Missing Out Scale (FoMOs)[7], the Depression, Anxiety, and Stress Scale (DASS-21), and the Bergen Social Media Addiction Scale (BSMAS) to assess the key variables. The Fear of Missing Out (FoMO) Scale is a psychological tool to assess a person's anxiety about losing out on fulfilling social interactions, particularly regarding social media and online connectivity. The FoMO Scale is a 10-item self-report questionnaire, each item assessed on a 5-point Likert scale. To score the FoMO Scale, add the responses received for each item to generate a total score. The scores vary from 10 to 50, where higher values imply a more significant degree of FoMO.

A self-report tool called the Depression, Anxiety, and Stress Scale (DASS-21)[31] is used to measure depression, anxiety, and stress levels. Three subscales, each with seven items, comprise its twenty-one items.

Depression (Items 3, 5, 10, 13, 16, 17, 21) - Anhedonia, dysphoria, inertia, self-deprecation, hopelessness, lack of interest or involvement and devaluation of life are some of the symptoms.

Anxiety (Items 2, 4, 7, 9, 15, 19, 20): Signs and symptoms include fear and physiological arousal. It evaluates the autonomic arousal that is characteristic of anxiety, including shaking, perspiration, panic attacks, and the dread of losing control. The purpose of the anxiety items is not to measure the worry that is characteristic of generalised anxiety disorder but rather to assess the respondent's feeling of nervous arousal.

Stress (Items 1, 6, 8, 11, 12, 14, 18) - Chronic symptoms of non-specific arousal. It examines trouble relaxing, anxious alertness, being quickly upset/agitated, irritable/over-reactive, and impatient. The purpose of stress items is to gauge the respondent's level of tension and chronic general arousal, which measures how

overwhelmed or overloaded they feel by life's challenges.

Each item is graded on a 4-point Likert scale. The item scores for each subscale are added and multiplied by two to create scores for the DASS-21 comparable to those of the original DASS-42 scale.

The Bergen Social Media Addiction Scale (BSMAS)[32] is a commonly used questionnaire to assess PSMU based on six essential addiction components: salience, tolerance, mood modification, conflict, withdrawal and relapse. The BSMAS uses a five-point Likert scale with six items representing one of these elements. Each item is scored on a scale from 1 to 5. The overall score can vary from 6 to 30, with higher scores indicating higher degrees of Problematic Social Media Use. Based on the gold standard of clinical diagnosis, Luo et al. [32] have proposed a score of 24 (out of a total scale score of 30) to distinguish between those at risk and those not at risk for SMA.

The researcher followed ethical considerations before the data collection process. Respondents were provided information about the objective and the benefits of the study. Participants were reassured of their voluntary participation and the privacy and confidentiality of their responses before completing the questionnaires. They were informed that completing the questionnaire indicated their consent to participate in the study and that they might leave anytime. Google Forms was used to distribute the questions via WhatsApp groups. Questionnaires were filled out by the participants and submitted online. Data was coded, tabulated, and analysed using the Statistical Package for Social Sciences (SPSS) Version 22.0.

Descriptive and Inferential statistics were employed to analyse the data. Correlation, t-test, ANOVA and Multiple Linear Regression analysis were used to explore connections between variables and determine gender differences.

RESULTS

The study sample includes one hundred university students from Mahatma Gandhi University, Kottayam. Table 1 outlines a complete overview of the demographics, namely, participant's age, education, and gender, and Table 2 shows descriptive statistics and category-wise distribution of key variables, namely PSMU, FoMO, depression, anxiety, and stress.

Table 1 Socio-demographic profile of the respondents

Variables	Categories	f	%
Age Mean = 23.79	Less than 21 years	21	21
	22 to 24 years	55	55
	25 years and above	24	24
Gender	Male	30	30
	Female	70	70
Education	Bachelor Degree	11	11
	Post Graduation	83	83
	PhD	6	6

The average age of participants was approximately 23.8 years. The majority, 55%, were aged 22 to 24 years, and 24% of participants were 25 years or older.

The gender distribution was predominantly female, with 70% female and 30% male participants. Most students were in postgraduate programs (83%), 11% were undergraduate and 6% were doctoral (PhD) students.

The mean score for PSMU was 16.4. 91% of respondents scored within the normal range (≤ 23), implying they did not display PSMU. 9% scored in the problematic category (≥ 24), demonstrating inclinations toward PSMU.

The average FoMO score was 21. 47% of students had low FoMO (0–20), and 53% reported moderate FoMO (scores between 21–59). None of the participants scored in the high FoMO range (≥ 60).

The mean depression score was 25.4. About 37% are in the moderate range (14–20), 24% in the severe range (21–27) and 38% in the highly severe range (28+). The mean anxiety score was 23.8. About 68% of participants are in the extremely severe range (20+). The mean stress score was 25.6. 8% in the normal range (0–14). Nearly 39% are in the severe range (26–33), and 13% are in the extremely severe range (34+).

Table 2 Descriptive statistics and category-wise distribution of key variables

Variables	Mean	Categories	f	%
PSMU	16.41	"Normal" (<=23)	91	91
		"Problematic Use" (>=24)	9	9
FoMO	20.99	"Low" (0-20)	47	47
		"Mild" (21-59)	53	53
		"High" (60-100)	0	0
Depression	25.4	"Normal" (0-9)	0	0
		"Mild" (10-13)	1	1.0
		"Moderate" (14-20)	37	37.0
		"Severe" (21-27)	24	24.0
		"Extremely severe" (28+)	38	38.0
Anxiety	23.8	"Normal" (0-7)	0	0
		"Mild" (8-9)	1	1.0
		"Moderate" (10-14)	12	12.0
		"Severe" (15-19)	19	19.0
		"Extremely severe" (20+)	68	68.0
Stress	25.6	"Normal" (0-14)	8	8.0
		"Mild" (15-18)	14	14.0
		"Moderate" (19-25)	26	26.0
		"Severe" (26-33)	39	39.0
		"Extremely severe" (34+)	13	13.0

The descriptive statistics reveal significant levels of emotional distress, with a notable proportion of students feeling severe to extremely severe depression, anxiety, and stress. Additionally, FoMO was frequent among over half of the sample (53%), and a smaller fraction (9%) indicated problematic social media use.

Table 3 Correlation between variables

Variables	Age	PSMU	FoMO
Age	1	-.225*	-.188
PSMU	-.225*	1	.305*
FoMO	-.188	.305*	1
Depression	-.091	.248*	.320*
Anxiety	-.106	.141	.326*
Stress	-.077	.200*	.317*
* Correlation is significant at < 0.05 level (2-tailed)			

Table 3 shows the Correlation between Age, PSMU, FoMO and Emotional Distress of the respondents. The Pearson Correlation Coefficient values indicate a negative relationship between PSMU and Age; as age increases, PSMU decreases, and vice versa. PSMU, FoMO, Depression and Stress of the respondents are positively correlated. Moreover, there is a positive relationship

between FoMO, Depression, Anxiety and Stress among the respondents.

Table 4 Gender difference in the Anxiety of the Respondents

	Gender	N	Mean	SD	t	Sig
Anxiety	Male	30	20.20	5.810	-2.779	.007*
	Female	70	24.31	7.156		

Table 4 shows the mean, SD, and t values obtained for the respondents' anxiety concerning their gender. The t value obtained is -2.779, which is significant at <0.05. Hence, there is a significant mean difference between Gender and the Anxiety of the respondents. Females (Mean=24.31) have more anxiety than males (Mean=20.20). The effect size is medium (Cohen's d = 0.63).

Table 5 ANOVA between levels of education and various dependent variables

	Bachelor	PG	PhD	Total
N	12	82	6	100
Mean	18.00	16.43	13.67	16.45
Std. Dev.	5.187	4.800	3.882	4.833
PSMU	1.633			
FoMO	1.571			
Depression	1.328			
Anxiety	1.578			
Stress	1.666			

Table 5 shows the mean, SD, and F values obtained for the respondents' level of education along with various dependent variables of the study. The F value obtained is not significant at <0.05. Hence, there is no significant mean difference between the dependent variables (FoMO, PSMU and Emotional Distress) and the educational level of the respondents.

Table 6 shows Multiple Linear Regression analysis was performed to identify the significant predictors of FoMO and PSMU, including Emotional Distress (depression, anxiety and stress) and demographic variables (age, gender and education). The models (as shown in Table 6) explained approximately 14.7% of the variance in FoMO (R^2 = 0.207, Adjusted R^2 =0.147, $F_{7,92}$ = 3.429, p = .003) and 9.8% of the variance in PSMU (R^2 = 0.162, Adjusted R^2 =0.098, $F_{7,92}$ = 2.536, p = .020).

The results show that FoMO significantly impacts PSMU (β = .166, p = .043) and vice

versa (β = .263, *p* = .043). The bidirectional relationship between FoMO and PSMU indicates a reinforcing cycle where students with higher levels of FoMO are predisposed to PSMU, thereby intensifying their FoMO experience. In these models, emotional distress and demographic variables did not influence either FoMO or PSMU.

Table 6 Multiple Linear Regression analysis for predictors of FoMO and PSMU

Model Summary	FoMO (DV)	PSMU (DV)
R²	0.207	0.162
Adjusted R²	0.147	0.098
F (df1, df2)	3.429 (7, 92)	2.536 (7, 92)
p (Sig.)	0.003	0.020
Predictor Variables (β)	Age (-.148) Gender (-1.117) Education (-.809) Depression (.075) Anxiety (.186) Stress (.052) PSMU (.263*)	Age (-.204) Gender (-1.013) Education (-.412) Depression (.097) Anxiety (-.050) Stress (.051) FoMO (.166*)

DISCUSSION

The findings of this study support the well-documented relationship between FoMO, emotional distress, and problematic social media use (PSMU) among university students. This relationship reveals the psychological repercussions of digital connectedness on students' mental health, agreeing with earlier studies that emphasise the harmful effects of FoMO on social media usage and emotional well-being.

FoMO and Emotional Distress

The study demonstrates a significant positive relationship between FoMO and emotional distress, notably symptoms of anxiety, depression, and stress. At the same time, the earlier studies opine that FOMO causes anxiety by fostering a lifelong social comparison state in which people continuously assess their circumstances in relation to the idealised online representations of their peers. [4] In line with self-determination theory, Przybylski et al.[7] hypothesised that FoMO emerges from unfulfilled psychological requirements for social relatedness, causing individuals to seek social validation online, which may increase emotional distress.[6,7]

The COVID-19 pandemic seems to have intensified these impacts, as research suggests that FoMO influenced pandemic-related PTSD symptoms, resulting in increased emotional distress.[24] Social media dependence and isolation brought on by the pandemic increased the psychological stress linked to FoMO, underscoring the significance of using mental health therapies to treat anxiety linked to it.

FoMO and Problematic Social Media Use

The study's findings further indicate a positive correlation between PSMU and FoMO, as well as a bidirectional relationship leading to a reinforcing vicious cycle, where students with higher levels of FoMO are predisposed to PSMU, thereby intensifying their FoMO experience. These results are similar to those of earlier studies that considered FoMO as a predictor of compulsive social media use. According to Servidio et al.,[4] students who experienced higher levels of FoMO were more likely to engage in risky social media activities to stay connected and prevent feelings of exclusion. A cycle of emotional distress and PSMU is reinforced by this obsessive urge to keep an eye on social activities, which not only encourages excessive social media use but also leads to psychological reliance.[23]

Fabris et al.,[23] who proposed that stress associated with FoMO, specifically emotions of neglect and fear of adverse reactions from online peers, acts as a mediator between FoMO and social media addiction, further supporting this conclusion. This mediating impact means that students having FoMO may resort to social media as a coping tool, which inadvertently increases their emotional distress and reinforces problematic behaviours.

Gender Differences in Anxiety

Additionally, the study identified that male and female students' anxiety levels differed significantly, with females exhibiting higher anxiety scores. This corresponds with previous studies that suggest female students may be more prone to social media-driven FoMO and its related anxiety due to a higher sensitivity to social approval and social comparisons.[18] Higher social comparison tendencies may drive female students to face more distress when seeing others' online lives, adding to heightened anxiety and depression.

Implications and Future Directions

The findings of this study underline the need for therapies that target both FoMO and its

psychological repercussions. Potential strategies include encouraging mindful social media use, promoting digital literacy, and developing mental health initiatives to tackle FoMO related stress and anxiety. Digital literacy workshops that educate students about false portrayals on social media could minimise FoMO-induced comparison behaviours. At the same time, mindfulness training could assist them in resisting the urge to check social media compulsively. The findings imply that FOMO is a substantial cause of both emotional distress and PSMU among university students. The COVID-19 pandemic increased these symptoms, showing an urgent need for mental health initiatives addressing FoMO related stress.[24]

CONCLUSION

This study illustrates the substantial psychological implications of FoMO and its profound association with emotional distress and PSMU among university students. Findings demonstrate that higher levels of FoMO contribute to increased feelings of anxiety, depression, and stress, underscoring the vulnerability of students in today's digital environment when social comparison and connectivity can cause negative emotions. Furthermore, the study demonstrates that FoMO is a potent indicator of PSMU, continuing a cycle in which students depend more on social media to soothe feelings of exclusion, ultimately escalating emotional distress.

These findings have important implications, suggesting that educational institutions and mental health professionals prioritise initiatives that combat FoMO and encourage social media vigilance. Strategies such as digital literacy workshops, cognitive-behavioural treatments to reduce FoMO, and mindfulness activities to lessen compulsive social media behaviour may prepare students to use social media healthier. Such activities can enhance students' mental health by encouraging resilience and reducing dependency on online validation.

This study emphasises the need for proactive mental health interventions to mitigate the adverse effects of social media dependency and FoMO, opening the door to a more psychologically sound and balanced academic community. Further research should expand on these findings by evaluating the longitudinal consequences of FoMO on mental health and assessing the effectiveness of targeted therapies across diverse student demographics.

Ethical Considerations: Participants were informed about the study's purpose, benefits, confidentiality, and voluntary participation. They were allowed to withdraw at any time and were informed that the questionnaire's completion implied consent to participate in the study.

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