

**Mediating Role of Fear of Missing Out in Psychological Needs Satisfaction and Social Media Engagement among University Students**

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The aim of the present research was to examine the role of psychological needs satisfaction and fear of missing out in social media engagement among university students. A correlational research design was used to collect data from a convenient sample ( $N = 550$ ) comprising university students. Measures of Basic Need Satisfaction in General Scale (Deci & Ryan, 2012), Fear of Missing Out Scale (Przybylski et al., 2013), and Social Media Engagement Questionnaire (Al-Menayes, 2015) were used. Results showed that psychological needs satisfaction negatively predicted fear of missing out and social media engagement, whereas fear of missing out positively predicted social media engagement. Furthermore, fear of missing out mediated the relationship between psychological needs satisfaction and social media engagement. In addition, boys were high on psychological need satisfaction and low on fear of missing out and social media engagement as compared to girls; while results of MANOVA indicated that age and education were significantly positively related to study variables. The findings of the study have pragmatic implications for youth counselors, parents, and teachers.

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Social media constitute an important forum for communication in Pakistan and it embraces an important position of contact tools that play an important part in circulating various forms of information. Studies on social media in Pakistan (Azher et al., 2014; Shabir et al., 2014) have revealed that the influence of social media sites may have a beneficial impact on students but on closer look; however, the implied effect of social media usage would bear hampering influence on the futuristic goals of the students and social webs are constantly diverting pupils from their education.

The fundamental notion of psychological needs satisfaction plays an essential role in shaping healthy and productive human behavior. Needs are viewed by theorists either as inherent (Deci & Ryan, 2012) or learned over time (Jerome, 2013). Studies (Abel et al., 2016; Wu, 2012) has pointed out that gratification of needs plays an important role in the psychological health and wellbeing of individuals; while, dissatisfaction with needs would result in psychological ailments and behavioral problems in people. Deci and Ryan (2012) emphasized three needs that are imperative for human development including the need for competence, relatedness, and autonomy. Molix and Nichols (2013) considered the need for autonomy as a sense of subjective control and decision in a manner by which individual behavior is perceived to be originated from the personal will. The need for competence pertains to an individual's fundamental sense of being capable and valuable (Sapmaz et al., 2012). According to Shuhaimi and Marzuki (2015), the competence need entails the power to be successful in challenging tasks and the capability to achieve the preferred results regardless of challenges. In addition, relatedness need is marked as one's need of being interrelated with different individuals, groups, and society and belongingness to the surrounding along with forming close and warm connections with others (Thomson, 2016).

Another construct that has been studied in the present study is the fear of missing out which is characterized by the craving of remaining

persistently associated with whatever others are doing (Przybylski et al., 2013). According to Sapadin (2015), fear of missing out is reflected in inclinations among people to have outlooks that others are having exhilarating encounters, which they are missing, and those who are snared via social media, for their fear of missing out is stronger. Thompson (2016) asserted that adolescents with fear of missing out are profoundly on edge that everybody's talking about a Facebook, WhatsApp, or Instagram up comings and they were the last ones to see, or everyone's hanging out at a gathering or celebration, and they stayed avoided and these feelings, in turn, triggers uneasiness, which is recognized as fear of missing out. Tang and Quandt (2019) suggested that the dread of missing out could be a basis for adverse temperaments and depressed sentiments that one is absent from social happenings. Reagle (2015) identified fear of missing out as jealousy-related worry about the missed occasion (fear of missing out) and belonging (fear of being left out). It is further viewed as a type of social anxiety or nervousness, an impulsive worry that one may miss a chance for a social experience or some other rewarding occasion, frequently aroused by posts seen via social media websites (Dossey, 2014). Likewise, Casale and Fioravanti (2015) asserted that adolescents in their attempt to adapt according to a group's expectations, always measuring their lives against a stars Instagram post or a friend's life occasion tend to experience more fear of being missed out and it may be connected to feelings of disappointment.

Social media engagement has been considered as an outcome construct in the present study; whereby Nowinski (2019) defined it as getting involved in social networking and investing much amount of energy and time in exchanging information and remaining in contact with their social group or circle through different websites and because of that one can get habitual to or dependent on social media. Alt (2016) asserted that usage of social media is quite common particular among young individuals as they use it for various purposes such as communication with family and friends, gathering different types of information, and entertainment purposes (Abusbihaa & Mustaffaa, 2014). In addition, social media tools help students to relate to their educational group and attain social support (Dwamena et al., 2016). However, excessive and

increasing reliance on social media compelled the researchers (Bewley, 2016; Graham, 2014; Sindermann et al., 2020) to focus on the negative influences, specifically, on mental health and psychological wellbeing; whereby findings highlighted unique antecedents in terms of needs satisfaction and fear of missing out.

### **Mediating Role of Fear of Missing Out**

Numerous studies have established the plausible mediating role of fear of missing out in predicting social media engagement from psychological need satisfaction. For instance, Alabi (2013) deliberated that people with less demonstration of needs gratification for competency (value), autonomy (self-sufficiency), and relatedness (affiliation with others) reported a greater degree of fear of missing out and higher involvement in social media projection. Raza et al. (2020) found that people with a poor level of psychological needs gratification experience heightened fear of being left out and tend to be more active social website consumers. Snidemann et al. (2020) asserted that people with lower basic need gratification are inclined to engage in social websites for the reason that it is assumed as a medium for connecting with people, an instrument for creating collective capability, and a chance for extending social relations. Masur et al. (2014) pointed out that a lack of autonomy, competence, and relatedness leads to higher use of social networking sites. Employing the self-determination model, Casale and Fioravanti (2015) found that the gratification of an unfulfilled need for self-presentation through social networking sites might be one of the potential pathways to social media use for socially anxious individuals. Nowinski (2019) demonstrated the mediating role of fear of missing out in augmented social media involvement. Likewise, Bewley (2016) added that participants' fears of missing out mediated the relationship between psychological resources and social media activities.

Numerous studies highlighted the role of various demographics in study variables. For instance, Sappmaz et al. (2012) reported nonsignificant gender differences in relation to needs for autonomy, competence, and relatedness. Conversely, Schmidt and Drouin (2016) exhibited that men described greater levels of competence fulfillment but

there were no gender differences in affiliation and autonomy need fulfillment. However, Molix and Nichols (2013) suggested that male adolescents reported greater levels of whole needs gratification and more fulfillment of competency, affiliation need gratification than girls. Schmidt and Drouin (2016) found that girls tend to report higher levels of fear of missing out as compared to boys; while Abel et al. (2016) declared nonsignificant gender differences in relation to fear of missing out. An additional set of studies (Al-Menayes, 2015; Oberst et al., 2017) pointed out that girls are more likely to engage in social media along with heightened fear of losing control in social interactions and approval from peers.

### **Rationale**

Primary motives in designing the present study are three-pronged which serve as the driving indicators to postulate assumptions. Firstly, a review of existing literature highlighted the prerequisite that though psychological need satisfaction is rigorously explored in the context of personality, interpersonal relations, and adjustment-related behaviors; however, it is equally important to examine its influence on more contemporary behaviors such as the internet usage and social media involvement. Similarly, on the indigenous front, Pakistani studies (Ghazi & Khan, 2013; Raza et al., 2020; Shabir et al., 2014) also deliberated that there is a dire need to focus on psychological precursors that may lead to social media involvement. Secondly, empirical studies on major constructs of the present study pointed out quite inconsistent findings in terms of demographic influences. Thirdly, though the construct of fear of missing out is extensively examined as an outcome of certain personality traits; however, literature is relatively silent about the possible role as a determinant of virtual social behaviors. Conclusively, the present study focused on university students as the major source of the sample. This is rationalized as owing to the fact, that with increasing social media engagement, anxiety about the missed activity is common among young users of social media. Earlier work on anxiety related to social media usage recommended searching for psychological correlates of this construct, especially among university students as their intentions to use

social media would be based on multiple motives. For instance, as per the needs of modern times, university students are highly engaged and active in social media for entertainment, information, and civic and political participation. People with age ranges from 18 to 29 years had been constantly found the peak handlers of social media by the great edge (Raza et al., 2020). Therefore, it is essential to understand how psychological factors shape their social media engagement.

The major objectives of the study were to investigate the direct and indirect effects of fear of missing out in predicting social media engagement among university students. It was also intended to determine the role of gender, age, and education in relation to study variables.

### **Hypotheses**

The following hypotheses were proposed.

1. Psychological needs satisfaction is negatively related to fear of missing out and social media engagement.
2. Fear of missing out is positively related to social media engagement.
3. The relationship between psychological needs satisfaction and social media engagement is mediated by fear of missing out.
4. Boys are likely to express more psychological needs satisfaction and less fear of missing out and social media engagement as compared to girls.

### **Method**

#### **Participants**

A cross-sectional co-relational research design was employed to gather data from a convenient sample ( $N = 550$ ) comprising students from private and public sector universities of Islamabad and Rawalpindi. Respondents included boys ( $n = 290$ ) and girls ( $n = 260$ ), with age ranging from 18 to 27 years ( $M = 24.61$ ;  $SD = 7.80$ ). University affiliation of the respondents included private sector ( $n = 258$ ) and public sector ( $n = 292$ ) institutions. Educational level of the respondents ranged from graduation ( $n = 259$ ) to post graduation ( $n = 291$ ) and they belonged

to nuclear ( $n = 244$ ) and joint ( $n = 306$ ) family system; while, all respondents were regular and full time students enrolled in the educational institutions.

## Measures

**Basic Need Satisfaction in General Scale.** Psychological needs satisfaction was assessed with the Basic Need Satisfaction in General Scale (Deci et al., 2000) which consists of a total of 21 items and is divided into three subscales concerning the needs of competence (6 items), autonomy (7 items), and relatedness (8 items). Response options have been acquired on a 5-point rating scale ranging from 1= *not at all true* to 5 = *very true*; with a possible score range of 21-105. High scores obtained on this scale indicate a high level of psychological needs satisfaction. Adequate alpha reliability of this scale has been reported by the authors (.89; Deci et al., 2000); while, in the present study alpha coefficient of .87 was achieved for this scale.

**Fear of Missing Out Scale.** Anxiety about the missed activity was judged by the Fear of Missing Out Scale (Przybylski et al., 2013). The scale comprises 10 items; as a uni-dimensional measure of anxiety about missed experiences. Response options were acquired on a 5-point Likert type rating scale ranging from 1= *not at all true* to 5 = *extremely true*, and the potential score range was 10-50 where high scores indicated more fear of missing out. Alpha reliability of this scale has been reported satisfactory (.90; Przybylski et al., 2013); while in the present study alpha coefficient of .81 was achieved for the Fear of Missing Out Scale.

**Social Media Engagement Questionnaire.** Social Media Engagement Questionnaire (Al-Menayes, 2015) was used to measure participants' social media engagement. The scale comprises 5 items, and response options were acquired on a 5-point rating scale extending from 1 = *never* to 5 = *several times per week*. The possible score range was 5-25, and high scores indicated more social media engagement. Original authors (.81; Menayes, 2015) reported adequate internal consistency of the scale; while, an alpha coefficient of .79 was achieved for this scale in the current sample.

## Procedure

Official permission from heads of the respective universities was acquired. Informed consent was acquired from every participant, and they were assured that their information would be kept confidential. Each participant was given a booklet containing the demographic sheet and questionnaires based on study variables and was requested to fill the questionnaires as genuinely as possible. Although there was no time restriction for the completion of questionnaires, respondents took approximately 15-20 minutes in completing the booklet. Participants' queries while filling out the questionnaires were answered immediately to give them a better understanding of the statements; to enhance the completion of the questionnaires. Participants were appreciated and graciously acknowledged for their time and provision of valued information for the study.

## Results

Multiple linear regression was conducted to determine the predicting role of psychological needs satisfaction and fear of missing out on social media engagement. Mediation analysis was conducted to investigate the mediating role of fear of missing out in the relationship between psychological needs satisfaction and social media engagement. Furthermore, a *t*-test was computed to determine gender differences concerning study variables.

Table 1  
*Multiple Linear Regression Analyses for Predicting Social Media Engagement (N=550)*

Predictors	<i>B</i>	<i>S.E</i>	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	Criterion Variable	
						<i>F</i>	$\Delta F$
Constant	22.45	1.59		.20	.18	Social Media Engagement	
Autonomy	-.52	.06	-.27*			24.80**	22.23**
Competence	-.64	.08	-.38**				
Relatedness	-.49	.05	-.25*				
PNS (Total)	-.76	.15	-.44**				



Constant	41.67	1.15		.49	.31	Social Media Engagement
FOMO	.92	.03	.54**			123.38** 120.01**

Note. PNS = Psychological Need Satisfaction; FOMO = Fear of Missing Out.

\*  $p \leq .01$ . \*\*  $p \leq .001$

Results of multiple regression show that psychological needs of autonomy, competence, and relatedness significantly negatively predicted social media engagement and the overall psychological needs satisfaction explains 18% of the variance in social media involvement. In addition, fear of missing out significantly positively predicted social media engagement and explained 31% of the variance in social media engagement. These findings provide reasonable support for H1 and H2.

Table 2  
*Mediating Role of Fear of Missing Out Between Psychological Needs Satisfaction and Social Media Engagement (N = 550)*

Criterion Variable	Predictor Variable	B	p	95% CI	
				LL	UL
<b>Direct Effects</b>					
Social Media Engagement	PNS	-.36	.0	1.11	5.0
				0	1
Fear of Missing Out	PNS	-.29	.0	0.19	4.0
				0	8
Social Media Engagement	Fear of Missing Out	.32	.0	1.22	6.4
				0	2
<b>Indirect Effect</b>					
Social Media Engagement	PNS through FoMO	-.02	.3	-1.07	2.0
				3	2

Note. PNS = Psychological Need Satisfaction; FOMO = Fear of Missing Out

Table 2 indicates the direct and indirect patterns in predicting social media engagement. Findings depicted that psychological need satisfaction significantly negatively predicted fear of missing out and

social media engagement. Moreover, fear of missing out positively predicted social media engagement; however, the indirect effect of psychological needs satisfaction on social media engagement becomes nonsignificant, when fear of missing out is introduced as a mediator. Hence, presenting substantial support for H3.

Table 3

*Gender Differences on t-Test Across Study Variables (N = 550)*

Variables	Girls (n = 260)		Boys (n = 290)		t(548)	p	95% CI		Cohen's d
	M	SD	M	SD			LL	UL	
	PNS-Total	83.6	22.4	89.4			17.3	5.05	
	5	3	0	7		0	17.74	7.77	
Autonomy	27.3	8.27	32.8	6.72	3.68	.0	-5.32	-	.46
	6		3			0		1.60	
Competence	24.2	7.56	28.8	5.91	4.20	.0	-5.26	-	.52
	7		6			0		1.90	
Relatedness	32.0	8.64	37.7	7.88	5.76	.0	-7.64	-	.68
	0		0			0		3.75	
FoMO	31.9	9.10	27.5	7.58	4.25	.0	2.37	6.4	.62
	7		3			0		9	
SME	18.7	6.39	14.5	6.40	4.15	.0	1.69	4.7	.50
	3		1			0		4	

*Note.* PNS = Psychological Needs Satisfaction; FoMO = Fear of Missing Out; SME = Social Media Engagement

Results presented in Table 3 depict significant gender differences in all study constructs where boys exhibited better psychological needs satisfaction as compared to girls and expressed more fulfillment of autonomy, competence, and relatedness needs as compared to girls. On the other hand, girls exhibited more fear of missing out and social media involvement than boys; thereby offering empirical support for H4.

As significant group differences appear in the age and educational groups of the respondents; therefore, on parsimonious grounds, their combined effect is tabulated through MANOVA.

Table 4  
MANOVA for Age and Education Concerning Study Variables (N = 550)

Variables	18-22 years (n = 190)	22.1-25 Years (n = 195)	25.1-28 Years (n = 165)	Graduation (n = 259)	Post- raduation (n = 291)
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
PNS	80.11 (13.20)	84.38 (11.56)	88.70 (10.85)	78.03 (12.66)	83.59 (13.20)
FoMO	31.71 (10.91)	28.12 (9.08)	24.52 (10.62)	33.39 (10.70)	29.67 (9.08)
SME	20.44 (7.07)	17.16 (6.33)	13.28 (6.29)	19.50 (8.53)	15.73 (7.77)

Note. PNS = Psychological Need Satisfaction; FoMO = Fear of Missing Out; SME = Social Media Engagement Wilk’s  $\lambda = 0.213$  ( $p < .01$ );  $F = 10.92$  ( $p < .001$ )

Table 4 represents the findings of multivariate analysis for assessing the influence of age and education on study variables. The significant  $F$  value shows that students of the post-graduate level of higher age group (25.1-28 years) reveal better psychological need satisfaction and the lowest levels of fear of missing out and social media engagement.

### Discussion

Findings of the study showed that psychological needs satisfaction negatively predicted fear of missing out and social media engagement. These findings can be best explained in the light of self-determination theory (Deci & Ryan, 2012) stating that gratification of psychological needs is coupled with cognitive and emotional indulgence;

thereby, assisting in overcoming unwanted and irrational fears for sustainable interpersonal relations. Abusbihaa and Mustaffaa (2014) further elaborated on the self-determination model with an assertion that less gratification of mental needs might link to fear of being socially missed out which drives them to be more active in alternate channels of social interactions. Similarly, Abel et al. (2016) also inferred that people with the demonstration of low gratification of competency (worth), autonomy (self-rule), and relatedness (affiliation) desires aligned with greater intensity for fear of missing out. Snidermann et al. (2020) concluded that people with less gratification of mental needs can move to social media involvement as a channel for connecting with people and a chance for extending social relations. Furthermore, Masur et al. (2014) suggested that poor fulfillment of emotional needs leads to higher use of social networking sites.

Finding further showed that fear of missing out is positively associated with social media engagement. This pattern is optimally described by Abel et al. (2016) justifying that students with a heightened fear of missing out tend to use more social websites and that fear of missing out serves as a major determinant of perpetual loneliness, seclusion, and yearning for social interactions would serve as a catalyst through increased involvement in social media. However, Reagle (2015) argued that fear of missing out mainly sets off feelings of anxiety and mental distress which inclined people to seek more psychological comfort and emotionally relieving experiences by being over-active on various forms of social media. The relatively recent line of studies (Nowinski, 2019; Sindermann et al., 2020; Tang & Quandt, 2019) also inferred that dynamics of essential psychological fears and emotional hindrances provoke the youngsters to take mental shelter and psychological asylum in the virtual world of social sites and over-involvement in the phony spheres of social media.

It has also been established in the present study that fear of missing out mediated the relationship of psychological needs satisfaction with social media engagement. This finding can be best captured from the perspective of self-determination theory (Deci & Ryan, 2012) stating that fulfillment of basic psychological needs plays a pivotal role in

determining various psychological resources (such as efficacy and hardiness) or hindrances (such as fears and self-handicapping) thereby function as influential cognitive, emotional and social outcomes. Oberst et al. (2017) asserted that fulfillment of primary affective needs serves a major role in shaping our assumptions about the social world; which in turn, determines our patterns and trends of social interactions. It is further endorsed by Alt (2016) asserting that college students are more inclined to experience fear of missing out while making adjustments to social interactions with their peers and are more likely to involve in social media.

Results also highlighted that boys express higher psychological needs satisfaction and lower fear of missing out as well as social media engagement. This trend could be optimally explained in the light of need satisfaction theory (Schmidt & Drouin, 2016) stating socialization experiences in childhood play a pivotal role in determining psychological and emotional expressions of needs as well as fulfillment of these needs. Additional pieces of evidence (Jerome, 2013; Kasser, 2009) revealed that most cultures opted for different socialization practices for boys and girls; which in turn, influenced subsequent need fulfillment in both genders. Similarly, Kietzmann et al. (2011) suggested that boys showed a greater amount of whole needs gratification, as well as sub-dimensions of autonomy and competency; while girls express more needs for affiliation. In addition, Alabi (2013) and Bewley (2016) offered a possible explanation for these findings that can be traced to cultural values of male dominance and comparatively easy excess to the internet for male students than female students. On indigenous grounds, Azher et al. (2014) and Raza et al. (2020) provided a native perspective about gender differences by inferring that autonomous-oriented socialization practices of boys give a relatively broad margin to boys to experience better psychological need satisfaction and fewer inclinations to experience fear of being left out as compared to girls. On the contrary, girls are encouraged to adopt a more cautious stance in establishing and maintaining relationships on social media.

Finally, results revealed the combined effect of age and education indicating a positive association between age and education with

psychological need satisfaction and an inverse relationship between fear of missing out and social media engagement. Earlier studies offer ample support for this pattern of relationship; for instance, Masur et al. (2014) inferred that postgraduate students felt that they had more independence (autonomy) and personal responsibility (competence) than those who had not graduated; while undergrad students reported more Facebook addiction. Furthermore, Molix and Nichols (2013) deliberated that graduation-level students exhibited more anxiety about being left out, higher social media involvement, and lower community esteem than post-graduate students. According to Nowinski (2019), more than 90% of undergraduate pupils have relatively lowered Facebook involvement as compared to freshmen students; seemingly juniors spent more time on Facebook than seniors. Likewise, Shuhaimi and Marzuki (2015) explained from the developmental perspective that young adolescents are less skilled in the mastery of their psychological needs; thereby, would experience more anxiety and fear of missing out on social media. Concerning the native view, Ghazi and Khan (2013) also deliberated that students reported sound fulfillment of psychological and affective needs as they mature and acquire improved scholastic levels; this further enhances their trust and dependence on personal strengths and less reliance on social sites of relationships.

### **Limitations and Recommendations**

The present study bears certain potential limitations which can be addressed in future explorations. Firstly, the participants were selected from certain locations; which may hinder the diversity of the sample and respondents. Hence, future studies may focus on acquiring a more rigorous approach to taking samples with diverse characteristics to capture a thorough representation of population strata. Secondly, the use of self-report measures may bear the inevitable influence of social desirability and acquiescence response style. This flaw can be resolved by the use of more qualitative and in-depth techniques to develop deeper insight into the phenomenon. Thirdly, a particular age group is catered to in the present study; which may not provide understanding from the developmental perspective. Therefore, future investigations can focus on

various age cohorts to grasp the journey of need satisfaction as the individual progresses through age.

### **Implications**

The current study provides relatively directional data to better understand the determining role of psychological needs satisfaction in influencing psychological outcomes. Therefore, findings of the present study highlighting the role of basic psychological needs (such as autonomy, competency, and relatedness) and emotional fear of missing out that plays a pivotal role in social media involvement would bear clinical inferences for developmental counselors, parents, and teachers as primary agents of regulating need development and need fulfillment of children, adolescents, and young adults. In addition, current findings also offer a distinctive window to educationists for designing curriculum and extracurricular social media activities which would highlight more productive, resilient, and altruistic use of it; thereby, inducing industrious influence on the emerging youth. Finally, the present findings may serve as a baseline anchor to highlight the need to take up a more multidisciplinary approach in designing modules for using social media sites that encourage positive psychological growth.

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