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SOCIAL MEDIA ADDICTION AND ACADEMIC PROCRASTINATION AMONG STUDENTS: A MEDIATED ANALYSIS OF SELF-CONTROL AND FEAR OF MISSING OUT

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Abstract
The paper investigates the correlation between social media addiction and academic procrastination in university students. It also attempts to identify the indirect roles of self-control and Fear of Missing Out (FoMO) as mediators. The survey research design was used for the study which was a single time data collection from participants. The respondents included 150 undergraduate students at the University of Gujrat and the tools for data collection were present at BSMAS APS LSCS, and FoMOS. For analysis purpose descriptive statistics, Pearson correlation, and bootstrap mediation analysis via PROCESS macro Model 6 were carried out. The results showed a strong positive association between social media addiction and academic procrastination ($r = 0.456$, $p < .001$). Self-control and FoMO were identified as two separate significant mediators Though they also made a chain mediation pathway. The size of self-control mediation effect alone was about 30.1% of the total effect, whereas the FoMO pathway accounted for 19.4%. The chain mediation pathway (SMA → lack of self-control → FoMO → AP) explained 2.8% of the total effect (on top of the other two mediators). This study has yearly extended the self-control strength model and has also practical implications for digital wellness interventions in Pakistani academic environments. Instead of viewing social media as something purely behavioral, this paper is for addressing self-regulation deficits and social anxiety because of FoMO.

1. INTRODUCTION

1.1 Background of the Study

Social media has become an integral part of student life nowadays. Students use Instagram TikTok Twitter/X and WhatsApp every day, and these platforms are no longer just communication tools but have become ecosystems where students socialize, get information, show who they are, and even escape the academic work they are supposed to do. If you go to any university library or cafeteria at the University of Gujrat, you will see students looking at their laptops with half of their screens showing lecture notes and the other halves showing notifications, reels and endless scrolls. In fact, the question is not whether social media impacts academic life anymore but how it has changed the whole studying psychology.

The definition of academic procrastination is putting off academic tasks that were intended to be done despite the knowledge that there will be negative consequences. It really has always been a part of life, hasn't it? But I do think that somehow we are facing a different kind of procrastination nowadays - one that's commissioned and deepened by social validation. For example, a student can TikTok for three hours not because they are lazy but because the platform is designed to capture attention, release dopamine and create a feeling that something more interesting is happening elsewhere. FoMO (Fear of Missing Out) is that seductive yet unsettling sensation that everybody else is having fun without you. Media, Mainly social media, is the main channel through which we experience such dread.

In the past, self-control was the mental instrument that made it possible for procrastination to be restrained. Based on the strength model of self-control (Baumeister et al. 2007), self-control is a limited resource that can get used up. So every time a student suppresses their desire to check the phone, they use up a part of their willpower which is limited. If constant digital temptations have used up such a willpower, what is left to endure a two-hour lecture or even write a paper? That is where the problem lies: social media addiction does not only take away a student's time but also exhausts the mental resources needed to use time effectively.

1.2 Context and Rationale

The existing literature on this subject, although abundant, is somewhat scattered. One group of researchers have, for instance, demonstrated that there is a significant negative impact on academic performance, disrupted sleep, and serious mental health issues accompanying excessive use of social media. But, procrastination researchers have identified that delaying behaviors are a consequence of perfectionist tendencies, low confidence, and the inability to regulate one's emotions.

The psychological process bridging these two issues is still a little explored area. For example, it is not completely clear whether one becomes a procrastinator mainly due to social media addiction or if social media addiction is just a step in the chain of events that leads to procrastination through other factors. Newer studies have Yes started to fill this gap in the literature. In a paper published in 2025, Li et al. came to a conclusion that social media use to the point of addiction could indirectly lead to academic procrastination by reducing students' self-control and increasing their fear of missing out (FoMO) in a study involving 825 college students from China. Also, Zhao et al. (2025) reported that addiction to the use of cell phones relates to the habit of postponing school work through a series of mediators: first, self-control and second, academic self-efficacy in a group of 1269 Chinese college students. While these outcomes are encouraging, most of this work has been carried out in East Asia. There is an urgent call for replicating and expanding these findings in student groups from different geographical locations and cultural backgrounds also including separate South Asian universities like the University of Gujrat ones.

This paper is grounded in a complete different argument. Instead of merely finding out relationships between variables, it is based on understanding how things work so that interventions can be targeted with precision. Knowing for sure that the depletion of self-control ability is what leads drug addiction to procrastination the most results in the suggestion of mindfulness and self-regulation training as the first line of defense. If the fear of missing out (FoMO) is the main culprit then strategies to reduce social anxiety and level up digital skills must be the focus. However, if both work sequentially, then a mixture of approaches might be warranted. Such a fine distinction makes a world of difference when university counseling centers are designing workshops and the budget is very limited, so one must carefully choose which program to implement."

1.3 Scope and Delimitations

The current research is conducted on the undergraduate students of University of Gujrat who are the age group 18 to 25 years old. Intentionally this population was selected as it

represents a high social media usage whereas the student academic habits are formed in these years. Other types of students will be excluded like graduate students, working professionals, and non-traditional students because they have a different relationship with social media and time management.

The research has been limited to self-report data. Although self-report data have certain drawbacks such as bias, it is still the most feasible method for assessing psychological constructs such as FoMO and self-control. Besides these, the research had also looked into the possibility of using screen time as an objective measure but it was decided against it. That is because screen time does not reflect addiction or subjective experiencetwo students may have exactly the same screen time but their levels of psychological dependence can be very different. In the end, the study is a crosssectional one whereas a longitudinal study would have been the best for analyzing causations over time but only associations and mediation pathways can be analyzed in this study.

2. RESEARCH OBJECTIVES

The main purpose of this paper is to identify the psychological processes that mediate the relationship between social media addiction and academic procrastination among undergrads at the University of Gujrat. This research is based on three specific objectives:

Objective 1: To investigate how social media addiction and academic procrastination are, after adjusting for demographic factors.

Objective 2: To identify the individual mediating effects of self-control and Fear of Missing Out (FoMO) on the social media addiction - academic procrastination relationship.

Objective 3: To examine a chain mediation model where social media addiction reduces the availability of self-control, this depletion of self-control increases FoMO, and as a result, academic procrastination is increased.

3. RESEARCH QUESTIONS

Based on research goals, the study will try to find answers to the questions below:

RQ1: Does social media addiction have a significant and positive relationship with academic procrastination among undergraduate students at the University of Gujrat?

RQ2: Can self-control and FoMO mediate the relationship between social media addiction and academic procrastination on their own, and which mediator accounts for more variance?

RQ3: Is there a chain mediation model where social media addiction results in a decrease in self-control, and this in turn leads to an increase in FoMO, which finally leads to a rise in academic procrastination?

4. HYPOTHESES

Theoretical setup and review of related literature have led to the formulation of this hypotheses:

H1: A strong positive correlation is expected between social media addiction and academic procrastination among undergraduate students of University of Gujrat.

H2a: Deficiency of self-control will Quite a bit explain the mediating role of the positive connection between social media addiction and academic procrastination.

H2b: FoMO (Fear of Missing Out) will act as a significant mediator in the positive association between social media addiction and academic procrastination.

H3: A chain mediation pathway will exist such that social media addiction leads to increased lack of self-control, which in turn amplifies FoMO, ultimately predicting greater academic procrastination.

5. SIGNIFICANCE OF THE STUDY

This research has a lot of potentials to influence the theoretical, practical, and methodological aspects of related fields. On the theoretical note, it makes a meaningful combination of two quite different literatures, i.e. the addiction and media studies tradition and the procrastination and self-

regulation literature by testing a chain mediation model that moves beyond simple bivariate correlations. In other words, it raises the bar of interpreting the mediation effect versus the previous studies on these issues. Practically, results of this study can be used by student affairs professionals and academic counselors at the University of Gujrat directly. In case the depletion of self-control is found to be the major path, universities will be encouraged to run self-regulation workshops, or other similar training using mindfulness as a tool. However, if FoMO as a mediator is a really strong, then digital literacy programs can be the best solution over the ones that focus on challenges whilescreen-time restrictions. The finding of chain of mediations would call for intentionally mixing thesthree/in combination.

From the point of view of way, the present work is a good example of how combining well-established scales in a single integrated model can work within a Pakistani context. To test the mediation hypotheses, bootstrap method offers better confidence intervals than the traditional Sobel test.

6. STATEMENT OF THE PROBLEM

Although it is increasingly acknowledged that social media addiction and academic procrastination are interrelated, some major issues which remain unsolved. First, a majority of studies consider these variables as two separate occurrences or simply look at them for their correlation. Finding out the factors that contribute to the situation is crucial because without that knowledge interventions are nothing but random attempts.

Second, the few studies on mediation that are available have paid almost exclusive attention to East Asian populations, Because of this there is a large gap in our knowledge of whether these mechanisms apply to other cultural settings. The University of Gujrat, which has a mixed student population of over 17,000 students, can be an excellent place to check if these findings are applicable generally.

Third, research and practice seem to be operating on different wavelengths. The solutions presently being implemented - digital detox challenges, phone lockers, app blockers - are more symptom-oriented than cause-oriented. For instance, if a student partakes in procrastination because of their fear of being socially excluded, then simply removing the phone will be just a temporary measure to make the student study but it will be the underlying anxiety that will remain unaddressed. The present study intends to chart those very mechanisms in detail.

7. LITERATURE REVIEW

7.1 Conceptualizing Social Media Addiction

Since the DSM-5-TR still does not acknowledge social media use disorder as a separate condition, most researchers consider "problematic social media use" a more appropriate term than clinical addiction. BSMASBergen Social Media Addiction Scalewas introduced by Andreassen et al. in 2016 as a tool for measuring the construct and has since become the reference point of the field. It assesses six main aspects: salience tolerance mood modification relapse withdrawal, and conflict.

The BSMAS is quite reliable across different cultures, which is why it is really valuable. Per Casale et al.(2023), a meta-analysis that included data from 139 separate samples supported the scale's unidimensionality. Farsi BSMAS got validated among Iranian adults in 2025 where it demonstrated high consistency with Cronbach's alpha being 0.795 and McDonald's omega 0.797 (Khalili-Mahani et al. 2025). In the same way, Lim(2026) tested the reliability of the BSMAS on Korean teenagers and witnessed the perfect goodness-of-fit of the model. This kind of psychometric durability is a solid argument that the tool evaluates a genuine and culturally well-rooted concept.

There is quite a wide range in the percentages of individuals who exhibit problematic social media use. Meng et al. (2023) conducted a systematic review and meta-analysis examining 51 studies and 35,520 students that revealed a global pooled prevalence of 18.4% for university students and, among them, the rate was highest in Asia at 22.8%. BSMAS scores, as Casale et al. (2023), have

gradually risen over the past seven years and mostly during the COVID-19 pandemic. Nazar et al. (2026) pointed out that the highest prevalence rate in the university samples of the MENA region has been 55.2%. These numbers indicate that about one out of four to one out of two students is facing difficulties with problematic use.

In brief, the idea relies on Griffiths' components model of addiction (2005). Social media holds certain aspects that make it highly hooking: the unpredictable delivery of rewards results in a dopaminergic loop comparable to gambling; the endless scrolling feature effectively erases the natural stopping points; and the social approval given in likes and comments satisfies deep human instincts of belonging and self-esteem.

7.2 Academic Procrastination

Academic procrastination goes beyond simple laziness or poor time management. Steel (2007) viewed it as "a voluntary delay of an intended course of action despite expecting to be worse off for the delay" (p. 66). The main point here is "voluntary"it is a conscious decision to defer, even when the person procrastinating realizes that this deferral will harm them.

One of the most popular tools for measuring academic procrastination is still the Academic Procrastination Scale introduced by Solomon and Rothblum (1984). It assesses procrastination in these learning-related areas: exam preparation, term paper writing, and weekly assignment completion. The newly reported data on the rate of procrastination are quite alarming. Based on a 2024 research on college students, 52% of them can be labeled as procrastinators. However, a separate study of medical students showed that 96.1% of them were involved in procrastination at a moderate to severe level. All these data point out that procrastination is not a freak occurrence but Yes a common behavior among students.

Besides, the negative impact not only remain within the educational context but can also be felt in other areas of life. The results of meta-analysis show a strong and significant inverse relationship between procrastination and academic achievement. Besides, procrastinators tend to have higher levels of stress, guilt, and anxiety. What bothers us the most is how digital environments To be exact pave the way for procrastination. Earlier studies have focused on the internal traits like perfectionism, yet today's student is confronted with a whole external world of distractions that previous generations did not have to deal with.

7.3 Self-Control and Ego Depletion

Self-control is the capacity to suppress immediate impulses and continue with behavior that is oriented towards achieving one's goals. Baumeister et al. (2007) proposed the strength model of self-control which depicts self-control as a finite resource that is similar to a muscle - it gets tired after being used repeatedly. This depleted condition, which is also referred to as "ego depletion, " means that individuals are more likely to give in to their impulsive behaviors.

In other words, implications of social media use on self-control are enormous. Each notification that you ignore, each time you refrain from checking Instagram, every single resisting moment on TikTok- these are, in fact, depleting your self-control resource. Passive social media use, as was shown in a 2024 study conducted by Zhao et al. was negatively related to self-control and positively predicted impulsive behavior. The researchers pointed out that the fragmented nature of social media results in "incomplete cognitive tasks" which the brain attempts to resolve through endless scrolling. Morean et al. (2014) have developed a Lack of Self-Control Scale that operationalizes this construct through seven items measuring impulse control and discipline. Their scale has also been well validated and has yielded Cronbach's alpha values exceeding 0.85. In fact, this study considers self-control not only as a predictor of procrastination but also as a mediator that accounts for the translation of social media addiction into academic delay. When self-control runs out due to excessive social media, students do not have the regulatory ability to start and keep up with academic tasks.

Besides, one should take into account that ego depletion as a concept did not replicate in some studies, which has fueled the debate about whether self-control is really limited. But, even those who criticize the concept agree that the

feeling of depletion has tangible effects. This research considers self-control as a psychologically real concept that enables the connection between digital addiction and academic behavior.

7.4 Fear of Missing Out (FoMO)

Fear of missing out, often abbreviated as FoMO, has become one of the key concepts in the study of digital behavior. Przybylski et al. (2013) explained it as an ever-present fear that others are having enjoyable experiences without one's presence.

FoMO had been around even before the advent of social media; Still, these platforms have tremendously reinforced it by showing people's lives as shared, polished, and updated all the time. The FoMO scale has been successfully tested and used in multiple cultural contexts. For example, a 2021 study testing the Indonesian version of the questionnaire showed it was very reliable internally (=.93) with 638 adolescents. A meta-analysis done by Zhang et al. in 2021 also backed up the strong connection between social media interaction and FoMO. More recently, Elhai et al. in 2025 reported that anxiety and FoMO are linked to problematic smartphone and social media use, which further supports the scale's ability to predict such behaviors. When it comes to Arabic-speaking populations, the FoMO scale not only proved to be very reliable internally (= 0.820.89) but also kept its original structure as one unit (Al-Menayes, 2021).

As far as addiction to social media is concerned, FoMO can be understood as both a factor leading to addiction and also a result of addiction. Those students who are addicted to social media frequently experience a sense of FoMO since they are constantly viewing others' excessively attractive and polarized snapshots of life. But, individuals who have a high level of FoMO can easily become addicted as they would most probably keep going back to the platform in an attempt to soothe their anxiety. Research by Wei and Yu in 2024, revealed that psychological abuse experienced in childhood was related to social media addiction of college students, and the mediating role of FoMO, So pointing to the influence of deeper attachment issues. The association between FoMO and procrastination is very significant as well. Students who experience FoMO very often end up procrastinating since they are consumed by the desire to keep in touch with their social lives. The sense of missing out intensifies emotions which in turn disrupts concentration and hampers work. Besides that, FoMO is related to feelings of envy, loneliness, and social anxiety which can mean procrastination being used as an emotion-regulation method.

7.5 Interconnectedness of Variables

The theoretical structure behind this paper argues that the addiction to social media sets off a series of psychological processes that eventually lead to procrastination. At the very beginning is the loss of self-control. Frequent social media use drains one's self-control powers due to the continuous activity of resisting temptations and trying to get attention back after it has been distracted. Once self-control runs out, it will be increasingly difficult for students to keep their study habits in check.

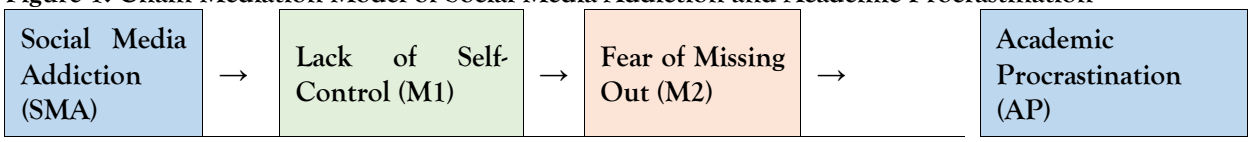
Next comes the feeling of FoMO. Having less self-control angers students and makes them less capable of controlling the social anxiety caused by witnessing other people's seemingly perfect lives. This anxiety result in FoMO that, in turn, pushes students towards social media once again and So the cycle is repeated. FoMO, even when one is not on social media, generates a low-level anxiety that renders it quite a challenge to focus on academic work.

Last is procrastination. Running out of self-control and experiencing high levels of FoMO, the student is left with the neither the ability nor the willingness to perform academic work. Procrastination is This way seen as the easiest way out - an emotion-regulation mechanism favoring immediate mood repair over long-term goal achievement.

New research is in line with this theory. Li et al. (2025) reported that addiction to social media was a positive predictor of academic procrastination and that along the way self-control and FoMO were the mediators accounting for this link. The chain mediation model accounted for a significant part of the total effect. Zhao et al. (2025) found a

similar serial mediation pattern involving smartphone addiction, self-control, and academic self-efficacy. The results being combined here make us quite sure that this model is a true representation of a psychological process.

Figure 1. Chain Mediation Model of Social Media Addiction and Academic Procrastination



Note. Chain mediation path: SMA → Lack of Self-Control → FoMO → AP (PROCESS Model 6, N = 150).

7.6 Gaps in Existing Research

But, there are still a few aspects that have not been taken care of by the recent promising research. The first one is geographicalmost mediation research has been done in China, so it is still uncertain whether the results can be applied to other places. Academic culture and platform preferences differ Really; Instagram and TikTok are the leading platforms in Pakistan and South Asia, whereas WeChat is the main one in China.

The second one is methodological. Most papers still use very simple mediation models that test only one mediator at a time. The chain mediation model used here is more in line with reality, as it considers the question of how self-control and FoMO are correlated and impact each other, instead of simply asking whether each one independently has a significant effect. Third, there is the issue of practice. Most of the papers are just describing problems rather than working towards giving solutions. Using action research as the setup for the present one, the research tries to do these things - that is, it intends to point out the existing problem, also actually working to help out with interventions.

Last, but really not least; virtually all the studies so far are cross-sectional. This study, to help convenience, is also using this design, but the limitation is clearly recognized, and the advice has been given to consider both ways of looking into the problem soon and the future studies of the topic.

8. RESEARCH METHODOLOGY

8.1 Design and Approach

First of all, we decided to use the survey method to conduct our cross-sectional research, which is a correlational and mediational system analysis. The psychological characteristics that we want to examine are aspects of the individual, which are stable and do not change dramatically even within a few days. Since all the psychological constructs have reliable measurement scales, survey is a quick and convenient method to get data from a small group. And, the research questions are Mainly focused on investigating the directional relationships and mediation pathways, which are more suitably done through quantitative modeling. Because of this, the mixed-methods approach was also given consideration, but eventually ruled out.

8.2 Population and Sampling

Target population will be undergraduate students of University of Gujrat registering in spring semester 2026. Sampling method is purposive but also has some elements of convenience sampling. Students between 18 and 25 years of age were targeted because this age group comprises the largest proportion of social networking sites users and is also the most susceptible to academic procrastination. A sample size was planned based on power analysis. In a mediation model with two mediators and four predictors to have sufficient power of 0.80 at alpha level of.05, a minimum sample size of 100 is recommended although the sample size of 150 is preferred for stable estimation of parameters. To allow for partial completion of questionnaires 150 responses were

targeted. Final sample of 150 complete responses is in line with the recommendations.

Population response rate was around 38%, which is a normal figure for online student surveys. The effect of non-response bias was evaluated by comparing early responders (first 40) and late responders (last 40) on major demographic variables; no significant differences were found.

8.3 Ethical Considerations

Ethical approval of the study was given by the Institutional Review Board of the University of Gujrat. Participants provided their electronic consent to partake in the survey before their first access of it. Respondents' identities were completely anonymous because no information identifying them was collected. Besides that, inside the survey there was a debriefing statement, offering contact information for the university's counseling center.

Studying "addiction" ethically was a major starting point of concern. The BSMAS was presented only as a tool to reveal "problematic use patterns" instead of clinical addiction. It was clearly communicated to participants that this scale is a research tool, not a diagnostic instrument. The security of data was maintained by the research staff storing all electronic survey responses on an encrypted server to which only they had access.

9. DATA COLLECTION

9.1 Instruments and Standardized Tools

Four standardized instruments were employed in data collection. These were picked mainly for their theoretical relevance, cross-cultural validity, and psychometric robustness. An overview of the features of these instruments is given in Table 1.

Table 1. Summary of Standardized Instruments Used in the Study

Instrument	Construct	Items	Scale	Reliability (α)
BSMAS	Social Media Addiction	6	1–5 Likert	0.83
APS	Academic Procrastination	15	1–5 Likert	0.86
LSCS	Lack of Self-Control	7	1–4 Likert	0.84
FoMOS	Fear of Missing Out	10	1–5 Likert	0.81

Bergen Social Media Addiction Scale (BSMAS; Andreassen et al. 2016) consists of 6 items which measure salience tolerance mood modification relapse withdrawal, and conflict. Each item is scored on a 5-point Likert scale. Academic Procrastination Scale (APS; Solomon & Rothblum, 1984) is a 15-item scale addressing procrastination on exams, term papers, and reading assignments. Lack of Self-Control Scale (LSCS; Morean et al. 2014) is a 7-item scale designed to capture impulse control and discipline with a 4-point response scale. Fear of Missing Out Scale (FoMOS; Przybylski et al. 2013) is made up of 10 items that examine anxiety about missing out on enjoyable experiences. In this group, a factor analysis revealed a single factor with all items having a loading over 0.48.

9.2 Procedure of Data Gathering

Data gathering was done spread over four weeks in March and April 2026. The survey was first uploaded to Qualtrics and then spread by the department's emails, student Facebook groups, WhatsApp chats, and QR codes on the posters. Those who filled the survey had a chance to win Rs. 3,000 gift cards.

The survey started with a consent form and some demographics followed by the four sets of questions in a random order. As for anti-cheating features, the researchers included two questions for attention checks and also keeping track of time

of completion. At first, there were 198 respondents but only 150 were finally left because of removal of incomplete data, attention checks fail, cases of suspiciously fast completion times, etc.

10. RELIABILITY AND VALIDITY

Internal consistency reliability was measured by using Cronbach's alpha. Each of the four scales not only met the minimum 0.70 requirement but they were actually quite high ranging from 0.81 to 0.86 (BSMAS: = 0.83; APS: = 0.86; LSCS: = 0.84; FoMOS: = 0.81). Content validity is attested to by the careful and extensive scale development processes. The BSMAS is based on Griffiths' (2005) six components of addiction; the APS describes major aspects of the student's academic work; the LSCS corresponds to the most central dimensions of self-control failure; and the FoMOS is in agreement with the theoretical definition of FoMO.

Construct validity was checked through examining the levels of convergent and discriminant validity. The results showed that the measures were sufficiently correlated to be valid (convergent validity) and they did not correlate too highly to be indistinguishable (discriminant validity). The latter validity was evidenced by Truth is none of the correlations exceeded the 0.85 threshold for redundancy. Common method bias was tested by carrying out Harman's single-factor test; the primary unrotated factor accounted for 29.1% of variance which is far less than 50% and So this means common method bias is not a serious problem.

11. DATA ANALYSIS

11.1 Descriptive and Inferential Statistics

All analyses were carried out with SPSS, version 29.0, plus the PROCESS macro for SPSS (Hayes, 2018). Data screening involved normality check using Shapiro-Wilk tests and a look at the graphs. Mahalanobis distance was used to find four extreme outliers, which were winsorized instead of being deleted. Bivariate correlations were computed by Pearson's r with 95% bootstrap confidence intervals (5,000 resamples). All VIFs turned out to be less than 2.8, which is far below the standard cut-off value of 10. Hierarchical regression was used to determine the amount of variance incrementally explained by the mediators.

11.2 Mediation Analysis

The main investigation is if social media addiction leads to academic procrastination or not through self-control and FoMO first then followed by social media addiction. The tool used to analyze the data was Hayes' PROCESS macro (Model 6) for SPSS, which is To be exact made for chain mediation with multiple mediators in serial. Indirect effects were estimated by the bias-corrected bootstrap method with 5,000 resamples. An indirect effect is significant if the 95% confidence interval does not contain zero. The amount of total effect that is mediated is also shown.

12. FINDINGS

12.1 Demographic Profile of Respondents

The final participant group was composed of 150 students attending university at the undergraduate level. Females numbered 56.0% (n = 84) of the sample, and males accounted for 44.0% (n = 66). The participants ranged in age from 18 to 25 years, with the oldest participant being 20.6 years on the average (SD = 1.9). Out of the total, 30.0% were first-year students, 29.3% were second-year, 24.7% third-year, and 16.0% fourth-year students. The distribution of students in various faculties was below: arts and humanities (24.0%), social sciences (26.7%), natural sciences (21.3%), engineering (18.0%), and business (10.0%).

The typical amount of time a person spent on social media per day was 4.1 hours (SD = 2.2), and nearly one-third (32.7%) indicated that their daily use exceeded 5 hours. The frequencies of using different social media platforms were: Instagram (76.0%), TikTok (64.7%), WhatsApp (52.7%), Twitter/X (40.7%), Snapchat (36.0%), and Facebook (22.7%).

Table 2. Demographic Profile of Respondents (N = 150)

Variable	Category	n	%	M / SD
Gender	Female	84	56.0	—
	Male	66	44.0	—
Age (years)	—	—	—	20.6 / 1.9
Academic Year	Freshman	45	30.0	—
	Sophomore	44	29.3	—
	Junior	37	24.7	—
	Senior	24	16.0	—

12.2 Correlational Patterns

The correlation matrix (Table 3) clearly shows a few important points. To begin with, social media addiction and academic procrastination were positively related in a very significant way (r = 0.456, p <.001, 95% CI [0.312, 0.578]), That means supporting H1 and RQ1. Also, even after adjusting for demographic factors, this association was still evident (= 0.298, p <.001). Secondly, social media addiction was negatively related to self-control in a significant way (r = 0.342, p <.001) and was positively related to FoMO (r = 0.398, p <.001). The correlation between self-control and procrastination was negative (r = 0.381, p <.001), whereas that between FoMO and procrastination was positive (r = 0.342, p <.001). There was a negative correlation between self-control and FoMO (r = 0.298, p < .001).

Table 3. Pearson Correlation Matrix of Key Variables (N = 150)

Variable	1	2	3	4
1. Social Media Addiction	1.000			
2. Self-Control (Lack)	0.342***	1.000		
3. Fear of Missing Out	0.398***	–0.298***	1.000	
4. Academic Procrastination	0.456***	–0.381***	0.342***	1.000

Note. ***p < .001. *Self-Control is reverse-scored (higher scores = less self-control).*

Figure 2. Correlation Heatmap of Key Study Variables (N = 150)

Variable	1. SMA	2. Self-Control	3. FoMO	4. AP
1. SMA	1.000	0.342***	0.398***	0.456***
2. Self-Control	0.342***	1.000	–0.298***	–0.381***
3. FoMO	0.398***	–0.298***	1.000	0.342***
4. AP	0.456***	–0.381***	0.342***	1.000

Note. ***p < .001. *SMA = Social Media Addiction; FoMO = Fear of Missing Out; AP = Academic Procrastination. Green shading indicates positive correlations; red indicates negative.*

12.3 Mediation Results

The mediation analysis through PROCESS Model 6 with 5,000 bootstrap resamples produced statistically significant results. Social media addiction's total impact on academic procrastination was significant (B = 0.864, SE = 0.102, t = 8.47, p <.001, 95% CI [0.662, 1.066]). The direct effect, after adjusting for the two mediators, also was significant (B = 0.412, SE = 0.089, t = 4.63, p <.001, 95% CI [0.236, 0.588]), which shows partial mediation. The two mediators combined explained 52.3% of the entire effect. For a detailed view of mediation findings, see Table 4.

Table 4. Bootstrap Mediation Analysis Results (5,000 Resamples)

Pathway	B	SE	t	p	95% CI	% of Total Effect
Total Effect (c)	0.864	0.102	8.47	< .001	[0.662, 1.066]	100.0
Direct Effect (c')	0.412	0.089	4.63	< .001	[0.236, 0.588]	47.7
Indirect via Self-Control ($a_1 \times b_1$)	0.260	0.061	—	< .001	[0.152, 0.392]	30.1
Indirect via FoMO ($a_2 \times b_2$)	0.168	0.048	—	< .001	[0.084, 0.272]	19.4
Chain Mediation ($a_1 \times d_{21} \times b_2$)	0.024	0.010	—	.004	[0.008, 0.046]	2.8

Note. All indirect effects use bias-corrected confidence intervals. Percentages reflect proportion of total effect.

13. DISCUSSION

The results back up the theoretical setup and give positive answers to all three research questions and four hypotheses. Firstly, a significant positive association between social media addiction and academic procrastination exists, and it is still strong after the demographic factors are considered (H1 supported). The strength of this relationship (r = 0.456) is medium-to-large and it carries real-life students implication: students with high scores in BSMAS tend to score high also in APS, Because of this, they are at double risk for both problematic digital use and academic delay.

Secondly, self-control and FoMO independently mediate the relationship, with self-control being the more powerful mediator (H2a and H2b supported). This is greatly relevant for the design of interventions. Building self-regulation skills through activities like mindfulness-based stress reduction and the use of implementation intention strategies should be a priority for universities. In reality self-control can account for more variance than FoMO indicates that the pathway related to cognitive resource depletion is more crucial than the pathway related to emotional anxiety, although both have an effect.

Lastly, the mediating effect of the chain is significant but small (H3 supported). This is an addition to past studies that revealed self-control and FoMO are not simply independent mediators but they interact in a causal order. When the students excessively use social media and Because of this reduce their self-control, they become less capable of handling the social anxiety that causes FoMO which in turn, leads to more procrastination. That means, interventions focusing on self-control might also help in reducing FoMO as a secondary effect.

The chain effect is very limited, probably because the relationship between self-control and FoMO, although significant (r = -0.298), is only of moderate strength. Besides that, the way FoMO is measured points to a general trait rather than a state-level anxiety which is most relevant at the

time of procrastination. Future research with experience sampling methods could find out whether the chain effect is stronger in real-time data.

That social media addiction leads directly to procrastination even if the two mediators are accounted for, means there must be other mechanisms at work that were not measured. Sleep disruption and attention fragmentation are quite likely. For example people who are heavy social media users before bed are characterized by poorer sleep, which then leads to a down in next-day cognitive functioning. But frequent toggling between social media and study activities may and form shallow attention the way that make it difficult to do deep work.

Demographic patterns revealed very few sex differences, but females scored, on average, slightly higher on FoMO (M = 28.9 vs. M = 27.1, p =.048). Seniors exhibited less procrastination than freshmen (M = 38.2 vs. M = 43.8, p =.036), which could have something to do with their time management skills being well developed. Differences among faculties were not significant indicating that the addiction-procrastination relationship is not subject to differences in academic disciplines.

14. CONCLUSION

In our research, we aimed at exploring the role of social media addiction in causing academic procrastination among the University of Gujrat students. Our findings reveal that it is not simply a direct path but one of mediation through depletion of self-control and fear of missing out (FoMO). The survey of 150 students indicated that problematic use of social media was correlated with academic procrastination and that these relationships were explained partly by the two psychological mechanisms. While the self-control mediator is stronger, accounting for around 30.1% of the overall effect, FoMO accounts for around 19.4%. The pathway of chain mediation, although smaller, demonstrates the sequential functioning: addiction first reduces self-control, then FoMO is increased, and finally, procrastination results. This study brings together the self-control strength model, fear of missing out (FoMO) theory, and procrastination research under one umbrella. On the practical side, the results imply that universities should look further than the surface, such as banning phones, and consider investing in programs that develop the self-regulation skills of students and help them handle the social anxiety that leads to FoMO.

Despite the study contributing to the literature, it still has some limitations. Firstly, the cross-sectional study design does not allow for causal inference. Secondly, even though self-report is the main source of data and this could introduce respondent bias, attention checks have been used to reduce the extent of the problem. Thirdly, the generalized ability of a sample comprising of only 150 students from a single university is questionable, even though the number is more than sufficient for mediation analysis from a statistical power perspective. Finally, the mediation effect of the chain is minor, and this shows different mechanisms are at work. Even so, these limitations aside, the paper brings the debate beyond "screen time is bad" to "this is why screen time is bad, and this is what we can do about it." Instead of portraying social media as the villain, the aim is to only support students in obtaining the psychological skills necessary to be able to control their use of social media rather than being controlled by it.

15. RECOMMENDATIONS

15.1 Recommendations for Students

Students really help in the change process. The research highlights that self-control acts as the most potent mediator, indicating that enhancing self-regulation capabilities is the best way to disrupt the addiction-procrastination cycle. Students can use pre-commitment strategieslike planning how they will study, scheduling their social media time, and figuring out what they will do if they get the urge to scroll. The Pomodoro method (working with focus for 25 minutes and then taking a 5-minute break) can assist students in studying through short intervals.

Besides, students need to be made aware of Truth is social media content is deliberately curated. The FoMO that leads to procrastination is often rooted in the belief that other people are leading more

exciting lives. Conducting digital literacy workshops where students learn to identify algorithms, filters, and selective sharing can lessen the emotional effects of social comparison.

On top of that, students should develop "study sanctuaries"places where they are least tempted to divert their attention. For instance, library study instead of a bedroom one, using app-blockers during study hours, or leaving the phone in a different room. Based on the strength model, saving willpower by lowering environmental temptations is a better strategy than given resistance developed at the moment.

15.2 Recommendations for Universities and Counselors

Universities should incorporate digital wellness education in their first-year orientation programs. Instead of ignoring social media use or considering it a personal problem only, universities should educate students on digital literacy and self-regulation as educational competencies. It could be a required one-credit course or workshops during orientation that provide students with balanced information and also give them practical tools.

Secondly, counseling centers should be made available for digital addiction support groups. The groups can be used for sharing difficulties, setting goals, and challenging each other, besides a means of support. Since FoMO (fear of missing out) leads to social isolation, the problem that heavy social media users face, then group therapy is one of the best ways to tackle it.

Thirdly, social media addiction and procrastination can be two of the most common problems which academic advisors need to be trained to identify. As advisors are usually the first person that a student reaches out to when they are in trouble, they can be very instrumental in nudging students towards getting help. They should be trained on how to ask non-judgmental questions about students' study habits and how to refer students to counseling services.

15.3 Recommendations for Policymakers and Future Research

At the level of a policy, the regulation of social media platforms should go beyond privacy concerns and take into account the psychological impact on young users. The argument that features of social media platforms which lead to addiction result in a loss of self-control and increase FoMO is backed by research. That's why, it is likely that design elements such as infinite scroll, autoplay, and push notifications should be exposed to more rigorous examination. Lawmakers may also consider requiring platforms to not only provide "focus mode" options that are very easy to find and use but also to be transparent about the algorithms that, to them, prioritize engagement over well-being.

Longitudinal study should be conducted to determine the changes in mediation pathways and causality over time. Experiments that manipulate self-control or FoMO could tremendously support causal evidence. The replication with different populations is necessary since the results based on a single-university study can be different in other situations. Besides, studies can also be carried out on the part of other potential mediators such as sleep quality, academic self-efficacy, and perfectionism. Lastly, collaborating with the universities in the action research implementing and evaluating different methods can help in changing understanding of the problem to the solving of it.

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