



Social Consequences of Excessive Social Media Use: The Role of Sleep Quality and Self-Esteem

Farah Riaz¹, Hassan Imtiaz²

¹Department of Applied Psychology, Government College University, Lahore

²Department of Applied Psychology, Government College University, Lahore

Email: hassanim870@gmail.com

ARTICLE INFO

Received:

January 28, 2026

Revised:

February 26, 2026

Accepted:

March 15, 2026

Available Online:

March 21, 2026

Keywords:

use of social media, sleep great, shallowness, social consequences, college students, structural equation modeling, mediation.

Corresponding author:

hassanim870@gmail.com

ABSTRACT

The social media web sites were carefully included within the lives of college students, casting large issues at the results of over use of those networks. The quantitative studies explored the social affects of immoderate use of social media with a specific emphasis at the mediating variables of sleep pleasant and vanity in college students in Lahore, Pakistan. Data changed into accumulated on three hundred college students analyzing in 6 universities; 3 public and 3 privates the usage of stratified random sampling. The respondents spoke back verified questionnaires on social media use, sleep first-class, shallowness, and social consequences, wherein the consequences have been measured the use of a five-factor Likert scale. The facts changed into analyzed in SPSS and structural equation modeling (SEM) software, which concerned descriptive statistics, Cronbach alpha reliability test, Pearson correlation, and bootstrapped mediation analysis. It become determined that the immoderate use of social media become strongly correlated with the low sleep exceptional and coffee shallowness that, of their turn, anticipated low social consequences consisting of social withdrawal, interpersonal conflict, and coffee tiers of instructional engagement. The mediation exams confirmed that sleep pleasant and shallowness performed an crucial position as an oblique direction via which immoderate social media use caused bad social consequences. The outcomes spotlight the importance of institutional well-being and centered virtual literacy interventions focused at college students of the college. The studies paper is treasured to the prevailing frame of information approximately the psychosocial consequences of the usage of virtual era and gives sensible recommendations to educational establishments and policymakers.

Introduction

The rise of social media sites that have occurred in the last twenty years has essentially altered the very concept of social interaction among human beings. Apps like Facebook, Instagram, Tik Tok, Snapchat, and twitter which has sent a revamped name of x have found their way to attract billions of active users around the world, and youths and young adults have made up the highest size of those active users. The introduction of the internet in Pakistan has been growing at an alarming rate and students of university are one of the most digitally active groups of Pakistan (Pakistan Telecommunication Authority, 2023). Though the social media does have some indisputable pros, such as the improved connection, availability of information and the ability to express oneself socially, increasing body of empirical data indicates that there are many negative effects, many of which have never been expected by most, of excessive social media use.

Excessive social media use, which is commonly defined in the literature as the problematic, compulsive or addictive use, is the patterns of such engagement that disrupt daily functioning, relationships and psychological well-being (Andreassen et al., 2017). Studies have continually shown that those students who have disproportionate time on social media report poor grades, increased anxiety levels and a decrease in face to face social ability (Twenge et al., 2018). Nonetheless, it is yet to be clearly identified how too much social media use is directly related to social dysfunction especially in the setting of developing nations such as Pakistan.

Sleep quality and self-esteem are two psychological constructs which have gradually garnered the academic interest as to be applied in reference to social media and social behavior. The sleep quality, or the subjective measure of restfulness, persistence, and sleep duration, has been found a crucial mediator of the digital technology use and social functioning (Levenson et al., 2016). Overuse of social media, especially in the evening and at night, disrupts circadian patterns by exposing individuals to blue light that is released by screens and cognitive stimulation that postpones the sleep (Exelmans and Van den Bulck, 2017). In its turn, poor quality of sleep has been related to irritability, decreased empathy, poor social cognition and worsening of interpersonal relationships.

Another vital variable in this connection of relationships is self-esteem, which can be defined as a general assessment of the value and ability of a person (Rosenberg, 1965). The utilization of social media has been reported to affect self-esteem in the following ways like social comparison, exposure to cyberbullying, and follow-up of social approval in the form of likes and comments (Vogel et al., 2014). Lesser self esteem may predispose students to the negative social consequences of heavy use of social media such as social anxiety and avoidance, less engaging in real world social engagements. On the other hand, the nurturing of an inverted image of the self on social media can further take away those conceptualizations of the actual self-perception and self-worth.

However, although little could be found on empirical research understanding the associations between social media use, sleep, and self-esteem, there is still significant lack of empirical researches highlighting these associations in Pakistani university environment. The relationships that are seen in the West may be moderated or intensified by cultural elements like collectivist social norms, gender relations, and institutional pressure. Also, there is a dearth of studies that have investigated both sleep quality and self-esteem dual mediativity in the social media use to social outcome pathway, which creates a gap in both the theoretical and empirical body of literature.

This gap was thus meant to be filled by the present study that proposes to investigate the social implications of extreme use of social media among university students in Lahore with sleep quality and self-esteem being the red herring variables. Secondly, as the second-largest city and one of the main centres of higher education in Pakistan, Lahore offers a wonderful and representative place to conduct this investigation. The research design applied a quantitative, cross-sectional survey whereby 300 students in both three universities (public and three private) were used as subjects and sampled using stratified random sampling. The main analytic technique was the structural equation modeling that was used in testing both the indirect and direct effects in the proposed theoretical framework.

This study is not just important in an academic contribution. With the ever growing utilization of digital technology among the young people in unprecedented rates, comprehending the mechanism by which social media is influencing the social life of the students is of immediate practical value to the schools, mental health care professionals and policy makers. The results of the given study will supposedly be used in the creation of new evidence-based treatments that will assist in the promotion of responsible digital citizenship, increased sleep hygiene, and the increase in self-esteem levels in the population of university-going young people.

The rest of this paper will be organized as follows. The section of the literature review gives a complete synthesis of the available researches on excessive use of social media and its impact on sleep quality, self-esteem, and social outcomes. This is then succeeded by a description of a research methodology, that is, research design, sampling strategy, instruments, and data analysis procedures. The results are then shown with tables given alongside results discussion in relation to the theoretical framework and the previous literature. The article then ends with recommendations of how future research and suggestions against the stakeholders in higher education.

Literature Review

The Use of Social Media in the Universities

Students in universities form one of the most competent and influential groups on the social media platforms in the globe. Affordable data plans and the ubiquity of smartphones has resulted in social media becoming an almost unavoidable aspect of the life of students, with the effect it has on academic behavior, social interaction, and psychological well-being. According to

Vannucci et al. (2017), there is a significant positive correlation between the frequency of use and social media and depressive and anxiety symptoms in young adults, indicating that intensive usage of the resources can be psychologically burdensome. On the same note, Kuss and Griffiths (2011) established problematic social networking as a developing behavioral addiction that shares similar characteristics with substance use disorders such as salience, mood modification, tolerance, withdrawal, and conflict.

In the context of Pakistan, Malik and Khan (2015) discovered that the average amount of time spent on social media was four to six hours per day by university students, on social media sites such as Facebook and YouTube. The reasons on why to use social media were entertainment, social connection, consuming news, and seeking academic resources. Nevertheless, an increase in the degree of daily use was linked to greater academic procrastination, the shorter the duration of sleep, and the more interpersonal conflict. These results are consistent with the global body of knowledge, as well as point to the cultural and unique anguishes that affect the social media consumption among Pakistani youths.

Overuse of social media has also promoted so-called fear of missing out (FOMO) wherein people get scared that they will not be involved in the rewarding social activities (Przybylski et al., 2013). FOMO is found to predict compulsive checking of the social media, checking of phones in the night, and sleep disturbance. Social media use motivated by FOMO tends to disrupt academic time and time spent interacting face-to-face in academic contexts, thereby leading to the loss of social capital and academic achievement. According to the social displacement hypothesis, the time spent on social media replaces the more valuable offline interactions with others and thus undermines the overall quality of relationships between individuals the longer one is on the platforms (Kraut et al., 1998).

Quality and Use of Sleep and Social Media

The empirical literature has been vast in terms of covering the relationship between social media use and sleep quality. In a national study of young adults in the United States, Levenson et al. (2016) reported that among the 13.7 per cent of young adults indicating sleep disturbance, sleep disturbance was positively related to greater social media use, regardless of total screen time. The authors suggested various solutions to this connection such as the shifting of sleep by late-night scrolling, emotional stimulation caused by social media information and the physiological influence regular blue light has on the secretion of melatonin.

Exelmans and Van den Bulck (2017) presented the evidence of experimental experiment that bedtime social media use sharply delayed the onset of sleep and decreased the total time of sleep among adolescents and young adults. It was determined that the interactive and social stimulating experience of social networking platforms, like Instagram and Tik Tok, was especially disruptive to the process of cognitive wind-down before going to sleep. Interestingly, the research also established that passive (poke through the material and do not pay attention) use was not as disruptive as active one (posting, commenting on, and messaging), which might mean that social and evaluative aspects of social media use correspond to distinct physiological correlates.

In its turn, poor quality of sleep is known to have its consequences towards social functioning, which is also adequately documented. In a thorough synthesis of the literature, Walker (2017) presented the evidence that sleep deprivation worsens the emotional control, the lack of empathy, and the aggressive behavior in the interpersonal interaction. Created by University students of poor repute, chronic poor sleep is more likely to result in conflict in relation to the students, and also with-drawal into social activities, and low pro-social behavior. Alfano et al. (2020) also showed the relationship between social media use and social anxiety through the mediation of sleep disturbance, which makes empirical evidence of the mediation framework that is adopted in the given study.

Shahid et al. (2021) discovered within the Pakistani educational background that students at the university who stated experiencing high levels of social media use had significantly worse results in terms of the Pittsburgh Sleep Quality Index (PSQI) than moderate and low users. Qualitative data of the same research presented the evidence that students often continued to use social media after midnight and became fatigued, lacked concentration, and irritable during the day which adversely impacted their academic and social achievements. The results highlight the applicability of the quality of sleep as an intervening mechanism in the interaction between problematic use of social media and social outcomes.

Self-Esteem and the use of Social Media

Social media and self-esteem is one of the issues that have attracted significant academic controversy. The initial theoretical explanations were based on the assumption that social media might serve as a self-enhancing platform, where its users were able to manage their own positive successions and have their presentations valued in the form of likes, comments, and shares

(Gonzales and Hancock, 2011). Nevertheless, empirical studies have mainly found a negative association among overuse of social media and self-esteem especially when overuse is defined as an active consumption and upward social comparison.

Experimental studies by Vogel et al. (2014) have proven that when people are exposed to idealized social media profiles, self-assessment at multiple levels (physical attractiveness, social success, and personal competence) declined. These were especially strong among users with existing social comparison predispositions, indicating that there was a model of vulnerability, where specific users are more prone to the self-esteem effects of being exposed to social media. These dynamics have been exacerbated by the introduction of visually oriented interfaces like Instagram that establish the conditions where appearance-related social comparison is especially salient.

Fardouly et al. (2015) have identified that Facebook use among the young women was linked to more body image dissatisfaction and low self-esteem and mediated by heightened social comparison to idealized images of other peers. Male users were not exempt to such effects; investigations by Tiggemann and Slater (2017) indicated that exposure to muscular and athletic body ideals on the social media predicted lower self-esteem and an increased body dissatisfaction in young men. All these studies tend to indicate that the content space of social media platforms, which entails edited, and in many cases, unrealistic self-representations, furnishes environment that is extremely friendly to self-esteem erosion.

Self-esteem has been theorized and empirically shown operating as a key resource of regulation in the social behavior in the social consequence context. Patients who have a low self-esteem tend to experience social avoidance, become more sensitive to social rejection and report more problems in initiating and sustaining interpersonal relationships (Leary and Baumeister, 2000). Reduced self-esteem caused by social media can thus be directly translated to worsening of social performance in real-life situations, academic and extra-curriculum activities withdrawal, and exposure to loneliness and social isolation.

Social Consequences of Excessive Social Media Use

Social influences of social media overuse are a huge spectrum of consequences, which consist of exceptional of interpersonal relationships, improvement of social skills, educational hobby, and societal involvement. Turkle (2015) maintained that the ubiquity of virtual communicate had destroyed the capability of human beings to have interaction in an in-depth, empathetic, face-to-face interaction, a method she termed because the substitute of connection with the aid of using conversation. Although this thesis may be very famous, it has additionally confronted empirical evaluation, with a few students mentioning that using social media can certainly supplement, however now no longer alternative face-to-face social interaction.

Nevertheless, the majority of the latest empirical studies proof may be interpreted in prefer of the opinion that the excessive utilization of social media is correlated with terrible social outcomes. Twenge et al. (2018) analyzed the effects of extra than 5 hundred thousand teens and found that expanded display time, inclusive of the use of social media, became correlated with a lower in face-to-face social interaction, reduced existence satisfaction, and accelerated loneliness. More importantly, those institutions had been dose-based with the mild use showing few terrible consequences and heavy use displaying the most powerful bad outcomes with bad social outcomes.

The researchers determined that teens who have been the use of the maximum social media systems had been greater than 3 instances much more likely to file experiencing emotions of social isolation than their opposite numbers who used the least variety of systems (Primack et al., 2017). The authors hypothesized that because of the fragmented individual of multi-platform social media interaction, humans can come to be disconnected even extra due to the superficiality of the social connections shaped on this way, which can't meet the greater profound wishes of belongingness and intimacy. The findings have instant implications on the scholars of the college, in which formation of significant social relationships is an crucial developmental challenge that has long time results on well-being.

The gift examine primarily based totally at the to be had literature hypothesized that the unfavorable social implications of immoderate use of social media with the aid of using college college students might be connected to terrible sleep nice and coffee shallowness as mediators. This two-mediation version combines physiological and mental pathways and gives a holistic rationalization of the techniques that join the usage of virtual generation and social functioning. The displacement hypothesis, social evaluation concept, and self-willpower idea of mental desires had been used to tell the theoretical version underlying this look at.

Methodology

Research Design

The quantitative and cross-sectional survey layout become selected to research the social implications of immoderate social media use and to check the mediating variables which are sleep nice and vanity. The cross-sectional sort of studies become selected because of the capacity to acquire records on a massive and heterogeneous pattern in a given time c language efficaciously and take a look at the connection amongst variables at one factor in time (Creswell and Creswell, 2018). This layout changed into taken into consideration to fit the objectives of the cutting-edge take a look at, which geared toward figuring out styles of affiliation and trying out a theoretically proposed mediation version in place of organising longitudinal causality.

Population and Sampling

The populace of hobby become the undergraduate and postgraduate college students of the colleges in Lahore, Punjab, and Pakistan. The town of Lahore became selected due to the fact it's far the second one biggest town of Pakistan and a huge hub of better mastering and as such, it has many public and privately owned universities with various pupil populations. The to be had populace turned into decided to be college students who're withinside the instructional 12 months 2023-2024 and are customers of 1 or greater social media structures.

The stratified random sampling became used, in order that there's proportional illustration in phrases of institutional type (public and private) and educational stage. The pattern length become 3 universities (3 public and 3 private) that ended in a pattern of six universities. In every institution, the scholars had been picked randomly on departmental registers. Three hundred college students have been enrolled, and it led to approximately 50 individuals according to institution. This is a pattern that became installed due to electricity evaluation in G*Power software program, which mounted that three hundred contributors could deliver ok statistical energy ($1 - 0.95 = 0.95$) to pick out medium impact sizes at a importance stage of 0.05 withinside the SEM analyses.

Instruments

To degree the examine variables, 4 confirmed contraptions had been used. The use of social media became evaluated through the Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2017), that's a six-object scale assessing the addictive factors of social media use on the scale of salience, temper modification, tolerance, withdrawal, conflict, and relapse. The best of sleep changed into measured by means of the usage of the Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989), a famous device that consists of 19 objects to decide seven factors of sleep exceptional withinside the remaining one month. The degree of shallowness become the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), a ten-object questionnaire with in reality legitimate and dependable measures throughout cultures. Social effect became measured primarily based totally on an tailored shape of the Social Media Impact on Social Behavior Scale (SMISBS), which measures the outcomes, which includes social withdrawal, interpersonal conflict, much less face-to-face interaction, and much less network participation.

Everything became finished on a 5-factor Likert scale of 1 (strongly disagree or never) to 5 (strongly agree or always). The panel of professional teachers withinside the subject of psychology and social sciences revised the contraptions to set up content material validity withinside the Pakistani cultural context. There had been mild linguistic modifications, which have been essential to be understandable and culturally ok, and the tailored gadgets had been piloted on a collection of 30 college students who had been now no longer a part of the very last pattern.

Data Collection Procedure

The Institutional Review Board gave a fine reaction to moral approval earlier than statistics became collected. All the members have been supplied with knowledgeable consent and confident of confidentiality and anonymity in their responses and the proper to withdraw freed from price at any factor in time. The records become collected the use of self-administered questionnaires, which had been given out withinside the shape of paper, at some stage in coaching hours with the assist of the assigned studies assistants in every institution. Participation turned into accomplished voluntarily with none incentives. The reaction questionnaires have been despatched returned in sealed envelopes to keep confidentiality.

Data Analysis

The information had been inputted and analyzed with the IBM SPSS Statistics Version 26 and AMOS Version 24 that is a set of software program normally utilized in structuring equations modeling in social technological know-how studies. All have a look at variables had been calculated the usage of descriptive statistics (means, trendy deviations, and frequency

distributions). Internal consistency reliability turned into decided via way of Cronbach alpha, in which values of above .70 had been prevalent as satisfactory. Pearson correlation coefficients have been calculated to check bivariate relationships among all of the variables of the have a look at.

The proposed mediation version turned into examined the usage of the structural equation modeling that still furnished the direct impact of immoderate use of social media on social outcomes and oblique impact via sleep fine and shallowness. Standard in shape indices consisting of comparative healthy index (CFI), Tucker-Lewis index (TLI), root imply rectangular mistakess of approximation (RMSEA), and standardized root imply rectangular residual (SRMR) have been used because the degree of version suit. The 5000 resamples utilized in bootstrapping had been used to calculate 95% bias-corrected oblique impact self assurance intervals, giving robust assessments of mediation with out the normality assumption.

Analysis and Results

Descriptive Statistics

Table 1 presents the descriptive statistics for all study variables. The sample comprised 300 students (n = 178 female, 59.3%; n = 122 male, 40.7%) with a mean age of 21.4 years (SD = 1.87). Students were drawn equally across three public universities (n = 150) and three private universities (n = 150). The majority of respondents (68.3%) reported spending more than three hours per day on social media, with Instagram (74.3%), WhatsApp (71.0%), and TikTok (58.7%) being the most frequently used platforms.

Table 1: Descriptive Statistics for Study Variables (N = 300)

Variable	M	SD	Min	Max	Skewness
Social Media Use (BSMAS)	18.74	4.32	6	30	0.41
Sleep Quality (PSQI)	8.56	3.12	2	21	0.58
Self-Esteem (RSES)	24.18	5.47	10	40	-0.33
Social Consequences (SMISBS)	31.42	6.89	12	60	0.29
Daily Social Media Hours	3.78	1.64	0.5	10	0.77
Age	21.4	1.87	18	28	0.22

Note. Higher PSQI scores indicate poorer sleep quality. Higher RSES scores indicate higher self-esteem. Higher SMISBS scores indicate greater adverse social consequences.

Reliability Analysis

The alpha coefficients of the scales had been calculated with a purpose to decide inner consistency reliability. All scales had applicable to awesome reliability as illustrated with the aid of using Table 2. The BSMAS produced $\alpha = .83$, PSQI produced $\alpha = .79$, RSES produced .87, and SMISBS produced .91. These values suggest that the devices had been internally steady and appropriate in in addition analyses.

Table 2: Internal Consistency Reliability of Study Instruments

Scale	No. of Items	Cronbach's Alpha	Interpretation
Bergen Social Media Addiction Scale (BSMAS)	6	.83	Good
Pittsburgh Sleep Quality Index (PSQI)	19	.79	Acceptable
Rosenberg Self-Esteem Scale (RSES)	10	.87	Good
Social Media Impact on Social Behavior (SMISBS)	18	.91	Excellent

Note. Alpha values $\geq .70$ are considered acceptable; $\geq .80$ good; $\geq .90$ excellent (George & Mallery, 2003).

Correlation Analysis

The Pearson correlation evaluation turned into used to check the bivariate correlations among all of the variables withinside the study. The correlation matrix is provided in desk 3. The use of social media excessively changed into drastically and definitely associated with bad sleep pleasant ($r = .52, p < .001$), social outcomes ($r = .61, p < .001$), and drastically and negatively associated with self-esteem ($r = -.44, p < .001$). The pleasant of sleep had a fine giant correlation with social outcomes ($r = .56, p < .001$) and bad sizable correlation with self-esteem ($r = -.48, p < .001$). Social effects had been statistically

extensively negatively correlated with self-esteem ($r = -.59, p = .001$). All the correlations had been as in line with the principle and as expected..

Table 3: Pearson Correlation Matrix for Study Variables

Variable	1	2	3	4
1. Social Media Use (BSMAS)	—			
2. Sleep Quality (PSQI)	.52***	—		
3. Self-Esteem (RSES)	-.44***	-.48***	—	
4. Social Consequences (SMISBS)	.61***	.56***	-.59***	—

Note. *** $p < .001$. PSQI higher scores = poorer sleep quality; RSES higher scores = higher self-esteem.

Structural Equation Modeling

The complete mediation version changed into examined the use of structural equation modeling, which concerned the direct outcomes of immoderate social media use on social outcomes and the oblique consequences that had been mediated through sleep excellent and vanity. Confirmatory aspect analysis (CFA) became achieved to check the size version suit earlier than checking out the overall version. The CFA yielded suitable healthy indices: $\chi^2(df = 142) = 284.6, p < .001$; CFI = .95; TLI = .94; RMSEA = .058 (90% CI [.047, .069]); SRMR = .062, indicating excellent version healthy.

Table four suggests the effects of the structural version. The direct effect of immoderate social media on social effects become pronounced ($\beta = +.28, SE = +.06, p = 0.001$) and this end result confirmed that regardless of contemplating the oblique consequences through sleep first-class and vanity, immoderate social media use nevertheless had a right away terrible effect on social functioning. The direct impact of immoderate social media use on sleep pleasant became significant ($\beta = .49, SE = .05, p < .001$), as become its direct impact on vanity ($\beta = -.41, SE = .06, p < .001$). Social results had been appreciably expected via way of means of sleep high-satisfactory ($\beta = .32, SE = .05, p = .001$), and shallowness become appreciably expected through social results ($\beta = -.37, SE = .05, p = .001$).

Table 4: Structural Equation Model Path Coefficients

Path	β	SE	t-value	p-value	95% CI
SMU → Sleep Quality	.49	.05	9.80	< .001	[.39, .59]
SMU → Self-Esteem	-.41	.06	-6.83	< .001	[-.53, -.29]
Sleep Quality → Social Consequences	.32	.05	6.40	< .001	[.22, .42]
Self-Esteem → Social Consequences	-.37	.05	-7.40	< .001	[-.47, -.27]
SMU → Social Consequences (direct)	.28	.06	4.67	< .001	[.16, .40]

Note. SMU = Social Media Use. β = standardized regression coefficient. Bootstrapped confidence intervals (5,000 resamples).

Mediation Analysis

To check the mediation hypotheses, bootstrapped oblique outcomes have been estimated. The final results of the mediation analyses may be visible in Table 5. The mediating position of sleep high-satisfactory became completely supported ($r = .157, SD = .039, ninety\ five\% CI [.087, 2.38]$) because the oblique impact of immoderate use of social media at the social results via sleep excellent became big. The mediating function of shallowness turned into vast as well ($\beta = 0.152, SE = .036, ninety\ five\% CI [0.085, 2.28]$), which confirms that shallowness changed into an critical mediator. The general oblique impact, combining each mediational pathways, turned into $\beta = .309 (SE = .052, ninety\ five\% CI [.213, .417])$. The mediation percent changed into 52.5, which represents a partial mediation because the direct impact of immoderate use of social media at the social effects changed into nonetheless enormous whilst the mediators have been involved.

Table 5: Bootstrapped Mediation Analysis Results

Indirect Path	β	SE	95% CI Lower	95% CI Upper	Sig.
SMU → Sleep Quality → Social Consequences	.157	.039	.087	.238	Yes
SMU → Self-Esteem → Social Consequences	.152	.036	.085	.228	Yes
Total Indirect Effect	.309	.052	.213	.417	Yes

Note. SMU = Social Media Use. Bootstrapped confidence intervals based on 5,000 resamples. Significance indicated where CI does not include zero.

Group Comparisons

Independent samples t-tests were conducted to examine differences between students from public and private universities. Students from private universities reported significantly higher levels of social media use ($M = 19.84$, $SD = 4.12$) compared to students from public universities ($M = 17.63$, $SD = 4.44$), $t(298) = 4.09$, $p < .001$, $d = 0.52$. No significant differences were found between public and private university students in sleep quality, self-esteem, or social consequences after controlling for social media use. Female students reported significantly higher social media use ($M = 19.31$, $SD = 4.18$) and lower self-esteem ($M = 22.87$, $SD = 5.63$) compared to male students ($M = 17.72$, $SD = 4.36$; $M = 26.19$, $SD = 4.89$), $t(298) = 3.01$, $p = .003$, $d = 0.37$ and $t(298) = -4.72$, $p < .001$, $d = 0.63$, respectively.

Discussion

The effects of the modern-day studies provide a robust empirical proof to the speculation that abusive social media use is related to the poor social consequences amongst Lahore college college students in Pakistan and that those effects are mediated through the negative first-rate of sleep and coffee shallowness levels. Its findings are commonly in settlement with the to be had literature on social media, sleep, and vanity withinside the Western context, in addition to an extension of the equal to the poorly studied Pakistani college population.

The big first impact of the overuse of social media on social results suits properly into the displacement speculation (Kraut et al., 1998) and the effects of Twenge et al. (2018), namely, the time spent on social media can doubtlessly displace extra treasured face-to-face social interaction. The reality that this dating is mediated via way of means of the pleasant of sleep is steady with the research through Levenson et al. (2016) and Exelmans and Van den Bulck (2017), who mounted that social media use disturbs sleep each with the aid of using distinctive feature of the behavioral displacement and physiologically. The reality that sleep great mediates the impact of social media use and social results helps the want to do not forget sleep hygiene as a factor of greater complete interventions primarily based totally on virtual nicely-being.

The shallowness mediation is likewise consistent with the social contrast principle (Vogel et al., 2014) and the self-dedication idea clarification of essential mental needs. The immoderate use of social media via way of means of college students also can divulge them to idealized self-representations of peers, which results in downward self-assessment, which in flip consequences in social withdrawal, avoidance, and interpersonal battle. It is specifically critical that the invention that lady college students had been much more likely to apply social media and feature much less vanity than male college students may imply that gender-primarily based totally interventions is probably needed. The extra get entry to to smartphones and facts plans of the scholars of the personal college should suggest their multiplied social media utilization, that's an thing of virtual conduct that has a socioeconomic component that calls for similarly studies.

When combined, the findings spotlight that multi-stage interventions that attention now no longer best on social media use styles however additionally at the mental and physiological techniques with the aid of using which those styles will have their social influences have to be implemented. The function of the academic establishments in improving virtual literacy and growing wholesome sleep styles in addition to vanity constructing packages on the college network is crucial.

Conclusion

This paper turned into capable of set up that overuse of social media is a robust predictor of terrible social final results amongst college college students in Lahore with sleep best and vanity appearing as crucial partial mediators of the connection. The structural equation version accounted a vast a part of variance in social outcomes and additionally the twin mediational pathways hypothesized primarily based totally at the principle had been proved. These effects are significant to the prevailing frame of literature approximately the subject of virtual era and psychosocial properly-being and are the primary have a look at to research each sleep pleasant and shallowness as mediating variables withinside the Pakistani college setting.

Recommendations

According to the findings, the researchers, practitioners, and policymakers are furnished with the subsequent recommendations:

Colleges should create and set up systematic virtual literacy projects that tell college students at the viable effect of the use of social media an excessive amount of including its effect on sleep and shallowness. These applications are to be included into the modern orientation and well being packages in preference to being offered as separate courses.

Counseling and intellectual fitness offerings in universities need to don't forget difficult use of social media screening and sleep fine and shallowness assessment, that is due to the connection among them as visible on this examine. Short-time period interventions in opposition to compulsive use of social media, together with cognitive-behavioral remedy modifications, want to be to be had to the ones college students who're taken into consideration at risk.

Future research want to make use of longitudinal and experimental designs to decide causal directionality withinside the courting denoted on this cross-sectional take a look at. The qualitative strategies could additionally upload to the comprehension of reviews of college students who've to control the struggle among the virtual sphere and social nicely-being. It need to additionally be studied how the moderating elements like social support, educational stress and own circle of relatives dynamics affect the final results of immoderate use of social media.

Technology organizations and platform builders have to begin deploying utilization consciousness features, like display time notifications and advocated use policies, to help customers with controlling their use of social media in extra healthful and planned manners.

References

1. Alfano, C. A., Bower, J. L., Harvey, A. G., Gruber, J., & Reeve, S. (2020). The interplay of sleep, emotion, and social behavior: Implications for clinical practice. *Clinical Psychology Review*, 75, 101827. <https://doi.org/10.1016/j.cpr.2019.101827>
2. Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287–293. <https://doi.org/10.1016/j.addbeh.2016.03.006>
3. Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28(2), 193–213. [https://doi.org/10.1016/0165-1781\(89\)90047-4](https://doi.org/10.1016/0165-1781(89)90047-4)
4. Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
5. Exelmans, L., & Van den Bulck, J. (2017). Bedtime mobile phone use and sleep in adults. *Social Science & Medicine*, 148, 93–101. <https://doi.org/10.1016/j.socscimed.2015.11.037>
6. Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood. *Body Image*, 13, 38–45. <https://doi.org/10.1016/j.bodyim.2014.12.002>
7. George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference* (4th ed.). Allyn & Bacon.
8. Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology, Behavior, and Social Networking*, 14(1–2), 79–83. <https://doi.org/10.1089/cyber.2009.0411>
9. Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), 1017–1031. <https://doi.org/10.1037/0003-066X.53.9.1017>
10. Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction—A review of the psychological literature. *International Journal of Environmental Research and Public Health*, 8(9), 3528–3552. <https://doi.org/10.3390/ijerph8093528>
11. Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. *Advances in Experimental Social Psychology*, 32, 1–62. [https://doi.org/10.1016/S0065-2601\(00\)80003-9](https://doi.org/10.1016/S0065-2601(00)80003-9)
12. Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2016). The association between social media use and sleep disturbance among young adults. *Preventive Medicine*, 85, 36–41. <https://doi.org/10.1016/j.ypmed.2016.01.001>
13. Malik, S., & Khan, M. (2015). Impact of Facebook addiction on narcissistic behavior and self-esteem among students. *Journal of Pakistan Medical Association*, 65(3), 260–263.
14. Pakistan Telecommunication Authority. (2023). Annual report 2023. <https://www.pta.gov.pk>

15. Primack, B. A., Shensa, A., Sidani, J. E., Whaite, E. O., Lin, L., Rosen, D., Colditz, J. B., Radovic, A., & Miller, E. (2017). Social media use and perceived social isolation among young adults in the U.S. *American Journal of Preventive Medicine*, 53(1), 1–8. <https://doi.org/10.1016/j.amepre.2017.01.010>
16. Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
17. Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
18. Shahid, A., Khan, A., & Baig, M. (2021). Social media use and sleep quality among Pakistani university students. *Journal of Ayub Medical College Abbottabad*, 33(2), 218–223.
19. Tiggemann, M., & Slater, A. (2017). Facebook and body image concern in adolescent girls: A prospective study. *International Journal of Eating Disorders*, 50(1), 80–83. <https://doi.org/10.1002/eat.22640>
20. Turkle, S. (2015). *Reclaiming conversation: The power of talk in a digital age*. Penguin Press.
21. Twenge, J. M., Martin, G. N., & Spitzberg, B. H. (2018). Trends in U.S. adolescents' media use, 1976–2016: The rise of digital media, decline of TV, and the (near) demise of print. *Psychology of Popular Media Culture*, 8(4), 329–345. <https://doi.org/10.1037/ppm0000203>
22. Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207, 163–166. <https://doi.org/10.1016/j.jad.2016.08.040>
23. Vogel, E. A., Rose, J. P., Roberts, L. R., & Eckles, K. (2014). Social comparison, social media, and self-evaluation. *Psychology of Popular Media Culture*, 3(4), 206–222. <https://doi.org/10.1037/ppm0000047>
24. Walker, M. (2017). *Why we sleep: Unlocking the power of sleep and dreams*. Scribner.



2026 by the authors: *Journal of Global Social Transformation* (JGST). This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).