

Impact of Social Media Usage on Physical Health and Psychological Distress Among University Students

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Abstract

Social media has become an essential element of university students' everyday lives in recent years, significantly influencing their communication patterns, lifestyle choices, and psychological processes. The current study examines the growing prevalence of social media use among university students and its possible effects on psychological distress and physical health. It is based on the larger framework of digital health and psychosocial functioning. Keeping this in view, the present study was carried out to assess the impact of social media usage on physical health and psychological distress. A quantitative, cross-sectional research design was utilized and data were gathered from 212 university students through standardized self-report instruments including; Social Media Usage Scale (SUMS), Physical Health Questionnaire (PHQ) and Kessler Psychological Distress Scale (K10) scales were used to assess the usage of social media, physical health and psychological distress respectively. The findings revealed significant positive relationships between social media usage, physical health and psychological distress suggesting that excessive usage of social media were linked with increased somatic symptoms and psychological distress among university students. Regression analyses further showed that social media usage was a significant predictor of both physical health and psychological distress. Significant gender differences were also observed on social media usage, physical health and psychological distress respectively which suggest that girls have greater inclination of social media usage, physical health and psychological distress as compared to the boys. In addition, significant family system differences were also observed on social media usage suggesting that participants from nuclear family system tended to have a greater tendency of social media usage as compared to those from joint family system. Therefore, the findings emphasize how important it is for universities to acknowledge social media use as a serious psychological and health issue. To reduce physical health complaints and psychological discomfort among university students, educational institutions and mental health specialists should work together to develop preventive initiatives, encourage responsible digital involvement, and incorporate psychosocial support services.

Keywords: social media usage, university students; physical health; psychological distress

Introduction

Being sociable creatures by nature, humans need on other people's company to survive. The extensive usage of social media has transformed communication in today's society by facilitating social relationships. As a result, many young adults now include social media use into their everyday

routines. According to recent research, young adults' social media usage patterns vary greatly and can have complicated relationships with mental health outcomes. While some studies show a strong correlation between heavy usage and increased symptoms of anxiety and depression (e.g., Das et al., 2025; Cabezas-Klinger et al., 2025), others emphasize that the type of engagement, such as active posting versus passive scrolling, may more strongly predict future mental health issues (Yu et al., 2024). Furthermore, systematic reviews indicate that social media use reflects a variety of experiences shaped by social comparison, cyberbullying, and lifestyle factors that impact psychological well-being rather than consistently producing harm or benefit (Cabezas-Klinger et al., 2025; Ahmed et al., 2024). These results highlight how crucial it is to consider social media's quality and context in addition to its quantity when assessing its impact on young people's lives.

Social media use and Physical health

The relationship between social media use and psychological well-being has been extensively studied, but less is known regarding the relationship between social media use and physical health. The current study was aimed to look into the relationship between social media usage and different measures of physical health in order to fill this knowledge gap. There is some evidence that social media use can have a positive impact on health, but the literature has mostly concentrated on health risks. For example, some research investigates how different levels of social media use are related to well-being across young adult development, highlighting a U-shaped association (Singh, Ben, et al., 2026).

According to research, young adults who use social media excessively have biological and physical health indicators that are linked to negative health outcomes (such as inflammation and somatic symptoms) (Lee et al., 2022). Furthermore the study demonstrated a positive correlation between social media use and physical health and offered more proof of the threats to biological and somatic physical health that come with social media use.

Furthermore, a cross-sectional study by Mahevish et al. (2023) reported a strong correlation between higher social media use and poor physical health outcomes, such as lower assessments of physical well-being, particularly among female students. Excessive use of social media use was significantly associated with worse physical health in this study of university students (e.g., decreased physical well-being and somatic complaints). For female participants, correlations with physical health issues were significantly significant (e.g., $r = .40$, $p < .001$). It was supported that social media use and deteriorations in students' physical health are related.

Moreover, Szwedo et al. (2024) conducted a study, which shows the longitudinal predictive impact of social media engagement patterns on afterwards physical health outcomes, is in line with these conclusions. This longitudinal study demonstrated that characteristics of social media interactions in early adulthood i.e., age 21, particularly posts indicating positive peer social connections, predicted better physical health outcomes later in life i.e. age 28, such as lower inflammation, better sleep quality, better physical functioning, and lower BMI. On the other hand, years later, posts against peer norms were associated with poorer physical health.

Additionally, a study by Rodriguez et al. (2023) found that increased screen time and social media use positively predicted increases in physical health complaints over time among adolescents, such as headache, neck/shoulder pain, and muscle/joint pain.

Another study looked at relationships between young individuals' self-reported social media use and somatic complaints, medical visits, and biological markers of physical health (such as chronic inflammation as determined by C-reactive protein). It showed that using social media was positively correlated with lower physical health markers (Lee et al., 2022).

A recent cross-sectional study looked at the relationship between young individuals (18–30 years old) who use social media and their levels of physical activity and sedentary behavior. Excessive social media use was found to be adversely connected with physical activity participation and positively correlated with a sedentary lifestyle, indicating a possible risk for worse physical health

(Jain, V., 2025).

Another study looked at relationships between university students' usage of social media, reasons for exercising, negative body image, and health-related behaviors. Results show that lower levels of self-reported physical activity and greater time spent sedentary are associated with increased usage of social media (Zeeni et al., 2025).

Social media use and Psychological distress

A number of studies found that children and adolescents who use social media have lower psychological well-being and more symptoms of anxiety, sadness, and psychological distress. For example, according to a systematic review and meta-analysis, 42.66% of Pakistani university students had depression symptoms (Khan et al., 2021).

Cabezas et al., 2025 conducted a systematic review and meta-analysis that revealed a significant heterogeneity, a favorable overall correlation between social media risk exposures and mental health issues in teenagers and young adults. Additionally, a cross-sectional study involving 511 medical students revealed a strong correlation between psychological distress levels and inappropriate social media use (Vaezpour, Parmida, et al., 2024).

Furthermore, a study by Shiraly, R. (2024) found that university students who used social media more frequently had higher levels of psychological discomfort and maladaptive coping mechanisms. Anxiety symptoms and problematic social networking use are key elements of psychological distress, according to another meta-analysis.

Another cross-sectional study conducted by Das, S. (2025), indicates that accessing social media for more than four hours a day was linked to greater levels of anxiety and depression, which are significant markers of more general psychological distress.

Higher social media use was found to be a significant predictor of psychological distress among medical students in a cross-sectional study by Shiraly, Ramin, et al. (2024). Individuals who spent more time on social media were more likely to utilize maladaptive coping mechanisms and had higher distress levels. Additionally, a study with Taiwanese university students by Huang, Po-Ching, et al. (2023) found a strong positive correlation between problematic social media use (addiction) and psychological discomfort, including anxiety and depression.

Theoretical Framework

The relationship between social media use and physical health can be understood through an **integrated framework combining Digital Well-being Theory, Compensatory Internet Use Theory, Social Comparison Theory, the Biopsychosocial Model, and Behavioral Self-Regulation Theory. Together, these theories explain how social media influences physical health through psychological, behavioral, and social pathways.**

Digital Well-Being Theory

Emerging from digital sociology and health literature, Digital Well-Being Theory is a conceptualisation of how digital behaviours, such as social media sharing and involvement, impact overall well-being (damage and benefit). It emerged from digital sociology and health literature. This theory acknowledges that social media can simultaneously encourage both positive (social support) and negative (distress, burnout) consequences (Büchi, M., 2021).

Compensatory Internet Use Theory (Analogue for Coping Use)

This framework posits that people use social media to deal with psychosocial stressors that occur offline, which could lead to more problematic use and suffering. Despite coming from general internet use research, it is often used in contemporary cyber psychology studies of social media (Kardefelt-Winther, D., 2014).

Social Comparison Theory

According to Social Comparison Theory, social media platforms foster environments that are full of upward social comparisons, in which users contrast their bodies, fitness levels, and lifestyles with idealized online representations. These comparisons have the potential to affect self-esteem, body image, and health-related behaviors. Maladaptive behaviors like extreme dieting, excessive exercise, or decreased willingness to exercise might be encouraged by exposure to unrealistic fitness or diet-related content. Stress reactions that have a detrimental impact on physical health can also be brought on by persistently low self-esteem (L. Festinger, 1954).

Biopsychosocial model

According to the Biopsychosocial Model, social, psychological, and biological elements interact to produce health outcomes. Each of these areas is impacted by social media; for example, more screen time can lead to sedentary behavior and interfere with circadian rhythms and sleep quality. Psychologically, stress brought on by social media, cyber bullying, and comparison pressure can trigger physiological stress pathways that impact cardiovascular and immune systems. Socially, social media can either exacerbate social isolation or improve social support (i.e. fitness communities, for example), both of which have an impact on physical health outcomes (Engel, G. L., 1980).

Behavioral Self-Regulation Theory

According to Behavioral Self-Regulation Theory; self-monitoring, goal-setting, feedback, and reinforcement are some of the ways that social media affects through health-related behaviors. Digital communities, fitness influencers, and health-tracking applications can improve diet and exercise habits by increasing incentive and accountability. On the other hand, self-regulation may be compromised and unhealthy behaviors may result from an excessive dependence on outside validation or false health information (M. F. Scheier & Carver, 1998).

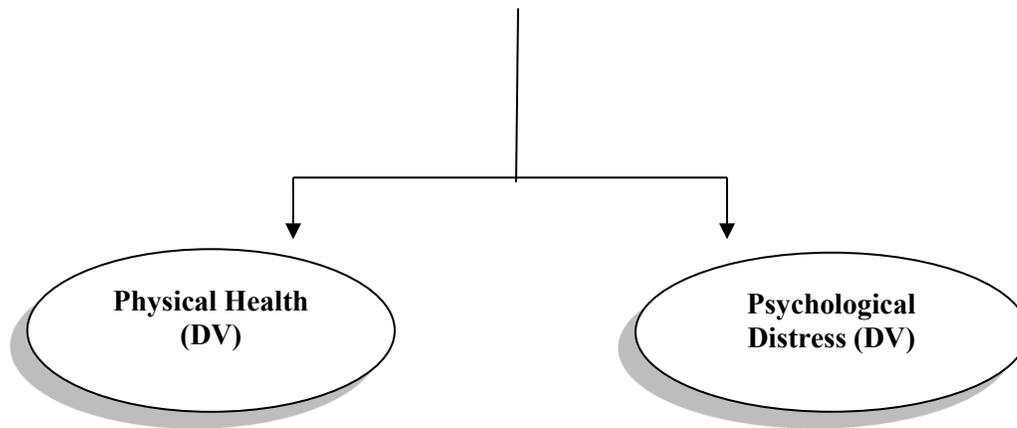
Rationale

Social media's rapid expansion has drastically changed university students' everyday life, including their social connections, academic participation, and health-related habits. Excessive and uncontrolled use of social media has been linked to negative physical health outcomes, including sleep disturbances, eye strain, fatigue, and sedentary lifestyles, as well as increased psychological distress, including anxiety, depression, stress, and emotional dysregulation, even though social media provides opportunities for connectivity, information sharing, and emotional support. The association in terms of social media usage and psychological well-being has been studied quite extensively, but less is known regarding the relationship between social media use and physical health. The current study is aimed to address a significant public health concern i.e. the widespread impact of social media on people's physical and mental health in order to fill this knowledge gap. The psychological implications of social media have been studied in the past, but its downstream effects on physical health have received significantly less attention. It shows that the damage is not just behavioral or surface-level; rather, social media can increase psychological stress, which can lead to physiological disturbances, bad lifestyle choices, and heightened susceptibility to physical health issues. The findings may help educators, mental health specialists, and policy makers to create evidence-based interventions, digital literacy initiatives, and preventative measures to encourage better social media usage and improve students' general wellbeing.

Conceptual Framework



Social Media Usage (IV)



- **Path A:** Social Media Usage → Physical Health
- **Path B:** Social Media Usage → Psychological Distress.

The conceptual framework proposes that university students' use of social media has a strong impact on their physical and mental well-being. Increased sedentary behavior, poor sleep quality, and unfavorable social comparison are just a few of the behavioral and psychosocial changes that can result from excessive or problematic social media use. These changes can worsen physical health outcomes and raise psychological discomfort. Individual and demographic characteristics like gender, coping mechanisms, and social support can affect how strong these associations are.

The proposed conceptual model is grounded in Digital Cage Theory by Akbaş, A. (2025) which proposed that frequent use and ongoing engagement demands, social media use produces a psychological "cage" that traps users in usage cycles that lead to emotional suffering and undesirable behavioral patterns. By portraying social media addiction as an entangling digital world, it explains why excessive use may have a detrimental effect on wellbeing and life quality (Akbaş, A., 2025).

Method

Objectives

1. To examine the relationship between social media usage and physical health among university students.
2. To examine the relationship between social media usage and psychological distress among university students.
3. To investigate the impact of social media usage on physical health among university students.
4. To investigate the impact of social media usage on psychological distress among university students.
5. To examine gender differences in terms of social media usage, physical health and psychological distress among university students.
6. To examine family system differences in terms of social media usage among university students.

Hypotheses

H1: There will be a positive relationship between social media usage and physical health among university students.

H2: There will be a positive relationship between social media usage and psychological distress

among university students.

H3: Social media usage will significantly predict physical health among university students.

H4: Social media usage will significantly predict psychological distress among university students.

H5: There will be significant gender differences in terms of social media usage, physical health and psychological distress among university students.

H6: There will be significant family system differences in terms of social media usage among university students.

Operational definitions

The operational definitions of variables are as follow;

Social Media Usage

Social media usage is defined as the frequency with which a person participates in specific activities on social networking sites (such as Facebook and Instagram), excluding direct messaging, throughout the course of the previous week (Tuck and Thompson, 2024).

Physical health

According to Schat and Kelloway (2003), Physical health i.e. somatic health is defined as the existence of physical symptoms (e.g., gastrointestinal issues and sleep disturbances) reported by employees, which are used as an index of health strain associated with exposure to workplace violence and aggression.

Psychological distress

According to Kessler and colleagues, psychological distress is a general condition of emotional discomfort marked by signs of sadness and anxiety. It represents an individual's overall degree of mental health issues, usually determined by the frequency of symptoms like anxiety, sadness, restlessness, and despair throughout the previous 30 days. (Kessler et al., 2002).

Research Design

Cross-sectional correlation research design was used to investigate the impact of social media on physical health and psychological distress among university students. Data was gathered using standardized, self-report questionnaires that were distributed both physical and online via google forms.

Sample

The sample comprised of 212 under graduate university students aged between 18 to 24 years of age. The data was gathered through convenient sampling technique from National University of Modern Languages, National Defense University and IQRA University.

Inclusion criteria: ages 18-24.

Exclusion criteria: below age 18 and above 24.

Research Instruments

Following instruments will be used in the study.

Demographics

Basic demographic information of the subjects in relation to age, gender, educational level, socioeconomic system, family system, residential status and social media usage were collected.

Social Media Use Scale (SMUS) (Tuck & Thompson, 2024)

The Social Media Use Scale (SMUS) developed by Tuck and Thompson (2024) is a 17-item measure with four subscales: i.e. Image-Based (5 items): 1, 2, 3, 4, 5. Comparison-Based (3 items): 6, 7, 8. Belief-Based (4 items): 9, 10, 11, 12. Consumption-Based (5 items): 13, 14, 15, 16, 17. Reverse-

keyed items are not reported. Scoring requires summing scores for the items that fall under each subscale to get an overall score for that dimension. The scale Items scored on 9-scale ranging from Never to Hourly or more. Internal consistencies for items in all the three studies was good ($\alpha = .77-.83$).

Physical Health Questionnaire (PHQ) (Schat & Kelloway, 2000, 2003)

PHQ is a psychometrically sound instrument that can be used to measure four dimensions of somatic health: gastrointestinal problems, headaches, sleep disturbances, and respiratory illness. The PHQ is a shortened and modified version of the health scale developed by Spence et al. (1987) in their study of the Type A behavior pattern. A revised and abbreviated (14-item) version of Spence et al.'s (1987) scale was used by Rogers and Kelloway (1997) and Schat and Kelloway (2000, 2003) in their studies of workplace aggression and violence. Schat and Kelloway (2000, 2003) used the same 14-item scale as Rogers and Kelloway (1997), but rather than using the four subscales separately, they created an overall index of somatic health based on all the items. In both of these studies, the subscale and overall scale reliabilities were above $\alpha = 0.80$.

The Kessler Psychological Distress Scale (K10) (Kessler et al. (2002)

The Kessler Psychological Distress Scale (K10) is a simple measure of psychological distress. The K10 scale comprises of 10 questions about emotional states each with a five-level response scale. The measure can be used as a brief screen to identify levels of distress. Each item is scored from one 'none of the time' to five 'all of the time'. Low scores indicate low levels of psychological distress and high scores indicate high levels of psychological distress. The 2001 Victorian Population Health Survey adopted a set of cut-off scores that may be used as a guide for screening for psychological distress. These are outlined as likelihood of having a mental disorder (psychological distress) i.e. 10 - 19 likely to be well, 20 - 24 likely to have a mild disorder, 25 - 29 likely to have a moderate disorder and 30 - 50 likely to have a severe disorder. Internal consistencies for items in all the three studies were excellent in general population samples ($\alpha = .89-.93$).

Procedure

The data was gathered from various universities of Islamabad. Participants provided signed informed consent. Social media usage was assessed through Social Media Usage Scale (SMUS) developed by Tuck and Thompson (2024), Physical health was evaluated using Physical Health Questionnaire (PHQ) developed by Schat and Kelloway (2000, 2003). Additionally the Kessler Psychological Distress Scale (K10) developed by Kessler et al. (2002) to analyze the psychological distress. Data was collected through standardized, self-report questionnaires distributed physical and online via google forms.

Statistical Analysis

Statistical analysis of the results was conducted using SPSS version 25.0 for data analysis. Descriptive statistics was used to determine means, standard deviation and frequencies of the demographic sheet. The Pearson's correlation analysis was used to examine the relationship between social media usage, physical health and psychological distress. Lastly, regression analysis was conducted to determine that social media usage was a statistically significant predictor of physical health and psychological distress.

Ethical Considerations

- Informed consent was obtained from all participants, ensuring their anonymity and confidentiality.
- Participants were informed i.e. they may withdraw at any point from study without worrying about consequences.

- Permissions were also obtained from authors of each questionnaire prior to administering them.

Results

The present study is aimed to investigate the impact of social media usage on physical health and psychological distress among university students. The research is designed to assess the predictive role of social media usage in explaining issues in physical health and psychological distress. The results of the research in form of analysis, as done in SPSS, are presented in tables below along with description that clarifies the patterns and associations observed within the sample.

Table 1: Demographic details of the participants (n= 200), Frequencies (f) & Percentages (%).

| <i>Variables</i> | <i>Category</i> | <i>F</i> | <i>%</i> |
|------------------------|-----------------|----------|----------|
| Gender | Male | 88 | 41.5 |
| | Female | 124 | 58.5 |
| Age | 17-19 | 75 | 37.1 |
| | 20-22 | 127 | 62.9 |
| Social Economic Status | Lower Class | 3 | 1.4 |
| | Middle Class | 185 | 87.3 |
| | Upper Class | 24 | 11.3 |
| Family System | Nuclear | 146 | 68.9 |
| | Joint | 66 | 31.1 |
| Residence | Hostelite | 67 | 31.6 |
| | Day Scholar | 145 | 68.4 |

f=Frequency, %= percentage

The demographics of the study participants are listed in Table 1. According to the table, 58.5% of participants were female and 41.5% were male. The participants were between the ages of 17 and 19 and 20 to 22. The percentage of their age ranges was 37.1 and 62.9 whereas the socioeconomic status percentages showed that 1.4% sample was comprised of lower class, 87.3 for middle class and 11.3 were upper class. Family system was comprised of 68.9% nuclear and 31.1 joint family systems. Moreover 31.6 of the sample were comprised of hostelites whereas 68.4 were day scholar students.

Table 2: Mean (M), Standard Deviation (SD) and Cronbach's Alpha Reliability Coefficient of SUMS (Social Media Usage Scale), PHQ (Physical Health Questionnaire) and K10 (Psychological Distress Scale) (n=212).

| <i>Variables</i> | <i>K</i> | <i>A</i> | <i>M</i> | <i>SD</i> | <i>Range</i> | | <i>Skewness</i> | <i>Kurtosis</i> |
|------------------|----------|----------|----------|-----------|---------------|------------------|-----------------|-----------------|
| | | | | | <i>Actual</i> | <i>Potential</i> | | |
| SMUS | 17 | .80 | 46.03 | (15.7) | 18-105 | 17-153 | 1.086 | 1.47 |
| PHQ | 14 | .77 | 47.75 | (11.6) | 20-77 | 14-98 | .144 | -.34 |
| K10 | 10 | .85 | 26.74 | (9.64) | 10-45 | 10-50 | -.072 | -.89 |

Note. α = Cronbach Alpha; M=Mean, SD=Standard Deviation; K= Number of Items

Table 2 presents an overview of the psychometric properties of the major study variables, including

reliability coefficients, descriptive statistics, and distribution indices. Cronbrach’s Alpha Reliability for the scale of Social Media Use Scale (SMUS) is .80 which reveals that the scale is reliable and internally consistent for measuring the use of social media in the current study. Additionally, Cronbach's alpha Reliability for Physical Health Questionnaire (PHQ) is .77, and for Kessler Psychological Distress Scale (PHQ) it is .85 which reveals that the scales are reliable and internally consistent for measuring physical health and psychological distress in the present study. Additionally, the data of 212 respondents was subjected to tests for skewness, kurtosis, mean, standard deviation, and normality. Since skewness and kurtosis values fall between -1 and +1 and -3 and +3, respectively, they show that the data was normally distributed (Sekaran, 2003).

Table 3: Pearson’s correlation among the scales of SUMS (Social Media Usage Scale), PHQ (Physical Health Questionnaire) and K10 (Psychological Distress Scale) (n=212)

| Variables | SMUS | PHQ | K10 |
|-----------|------|--------|--------|
| SMUS | - | .336** | .259** |
| PHQ | | - | .588** |
| K10 | | | - |

Note; SMUS=Social Media Usage Scale; PHQ = Physical Health Questionnaire; K10=Kessler Psychological Distress Scale *p<0.05, **p= <0.01

Table 3 displays the correlation matrix. It shows the relationship between social media usage, physical health and psychological distress among university students. The results demonstrated that social media usage appears to be significantly positively correlated with physical health ($r=.33^{**}$, $p<0.01$) which suggests that excessive social media engagement is associated with increased somatic symptoms burden. Furthermore, Social Media Usage appears to be significantly positively correlated with Psychological Distress ($r=.25^{**}$, $p<0.01$) which suggests that excessive social media engagement is associated with increased psychological distress.

Table 4: Simple Linear Regression among SUMS (Social Media Usage Scale) and PHQ (Physical Health Questionnaire) (n=212.)

| Variable | B | S.E | t | p | 95% CI | |
|--------------------|-----|-----|------|-----|--------|-----|
| | | | | | LL | UL |
| Social Media Usage | .24 | .05 | 5.16 | .00 | .15 | .34 |

$$R=.336, R^2=.113, \Delta R^2= .108$$

Note: CI=Confidence Interval, UL=Upper Limit, LL= Lower limit *p<.05, **p<.01, ***p<.001

The table 4 shows the findings of the regression analysis conducted between the predictor variable; social media usage, and the outcome variable physical health. The results showed that social media usage significantly predicts ($p < 0.001$) the scores on the physical health questionnaire. The positive sign shows direct relation among the two variables. $B = .24$, $SE = .05$, $\beta = .336$, $p < .001$, suggesting that excessive social media usage was associated with more physical complaints. Additionally, the 95% confidence interval further supporting the finding that social media usage was a significant predictor of physical health.

Table 5: Simple Linear Regression among SUMS (Social Media Usage Scale) and K10 (Psychological Distress Scale) (n=212.)

| Psychological Distress | | | | | | |
|------------------------|-----|-----|------|-----|--------|-----|
| Variable | B | S.E | t | p | 95% CI | |
| | | | | | LL | UL |
| Social Media Usage | .13 | .03 | 3.88 | .00 | .06 | .20 |

$R=.259, R^2=.067, \Delta R^2= .063$

Note: CI=Confidence Interval, UL=Upper Limit, LL= Lower limit * $p<.05$, ** $p<.01$, *** $p<.001$

The table 5 shows the findings of the regression analysis conducted between the predictor variable; social media usage, and the outcome variable psychological distress. The results showed that social media usage significantly predicts ($p < 0.001$) the scores on the psychological distress scale. The positive sign shows direct relation among the two variables. $B = .137, SE = .0315, \beta = .259, p < .001$, suggesting that excessive use of social media was linked to higher psychological distress. Additionally, the 95% confidence interval further supporting the result that social media usage was a significant predictor of psychological distress. These findings support the study hypothesis that social media usage leads to increased psychological distress.

Table 6: Mean, standard deviations, and t-scores of Social Media Usage, Physical Health and Psychological Distress based on gender (n=212)

| Variables | Male (n=88) | | Female (n=124) | | T | P | 95% CI | | Cohen's d |
|-----------|----------------|-------|-------------------|-------|-------|-----|--------|-------|--------------|
| | M | S.D | M | S.D | | | LL | UL | |
| SMUS | 43.23 | 14.03 | 48.02 | 16.61 | -2.20 | .02 | -9.07 | -0.50 | 0.31 |
| PHQ | 42.95 | 10.02 | 51.15 | 11.59 | -5.36 | .00 | -11.2 | -5.18 | 0.75 |
| K10 | 24.09 | 8.39 | 27.06 | 8.09 | -2.59 | .01 | -5.23 | -0.71 | 0.36 |

Note: CI=Confidence Interval, UL=Upper Limit, LL= Lower limit

Table 6 indicates the results of t-test used to assess the mean differences on Social Media Usage Scale, Physical Health Questionnaire and Psychological Distress scale based on gender. The findings reported significant mean differences on SMUS with $t(210) = 0.02, p < .05$ which suggests that girls tended to have a greater tendency of social media usage on SUMS ($M= 48.02, SD = 16.61$) as compared to the boys ($M= 43.23, SD = 14.03$). Cohen's d value was 0.31 (< 0.50), indicating a small effect size.

Additionally, results showed highly significant mean differences on PHQ with $t(210) = 0.00, p < .05$

which suggests that girls have greater inclination of physical health on PHQ ($M= 51.15$, $SD = 11.59$) as compared to the boys ($M= 42.95$, $SD = 10.02$). Cohen's d value was 0.75 (< 0.80), indicating a medium effect size.

In addition, findings showed significant mean differences on K10 with $t(210) = 0.01$, $p < .01$ which suggests that girls tended to have greater tendency of psychological distress on K10 ($M= 27.06$, $SD = 8.09$) compared to the boys ($M= 24.09$, $SD = 8.39$). Cohen's d value was 0.36 (< 0.50), indicating a small effect size.

Table 7: Mean, standard deviations, and t-scores of of Social Media Usage, Physical Health and Psychological Distress based on family system (n=212)

| Variables | Male (n=88) | | Female (n=124) | | T | P | 95% CI | | Cohen's d |
|-----------|----------------|-------|-------------------|-------|-------|-----|-----------|------|--------------|
| | M | S.D | M | S.D | | | LL | UL | |
| SMUS | 47.71 | 16.83 | 42.33 | 12.29 | 2.61 | .01 | 1.31 | 9.44 | 0.36 |
| PHQ | 48.31 | 11.88 | 46.50 | 11.14 | 1.04 | .29 | - 1.59 | 5.22 | 0.15 |
| K10 | 25.33 | 8.50 | 26.92 | 7.88 | -1.28 | .19 | - 4.02 | .84 | 0.19 |

Note: CI=Confidence Interval, UL=Upper Limit, LL= Lower limit

Table 7 indicates the results of t-test used to assess the mean differences on Social Media Usage Scale, Physical Health Questionnaire and Psychological Distress scale based on family system. The findings showed significant mean differences on SMUS with $t(210) = 0.01$, $p < .05$. Results revealed that participants from Nuclear family system tended to have a greater tendency of social media usage on SMUS ($M= 47.71$, $SD = 16.83$) than those from Joint Family system ($M= 42.33$, $SD = 12.29$). Cohen's d value was 0.36 (< 0.50), indicating a small effect size.

Furthermore, findings showed insignificant mean differences on PHQ with $t(210) = 0.29$, $p > .05$ which suggests physical health was no longer based on family system in order to be encountered by participants. The value of Cohen's d was 0.15 (< 0.20) which indicated extremely small effect size. Similarly, findings reported insignificant mean differences on K10 with $t(210) = 0.19$, $p > .05$ which suggests that there was no role of family system in order to experience psychological distress. The value of Cohen's d was 0.19 (< 0.20) which indicated extremely small effect size.

Discussion

The purpose of this study is to determine the effect of social media use on physical health and psychological distress in the current sample. Social media usage is defined as the frequency with which a person participates in specific activities on social networking sites. Physical health is the existence of physical symptoms (e.g., gastrointestinal issues and sleep disturbances) reported by employees, which are used as an index of health strain associated with exposure to workplace violence and aggression. Whereas psychological distress is a general condition of emotional discomfort marked by signs of sadness and anxiety. It represents an individual's overall degree of mental health issues, usually determined by the frequency of symptoms like anxiety, sadness, restlessness, and despair throughout the previous 30 days. The Social Media Usage Scale (SMUS), Physical Health Questionnaire (PHQ) and Kessler Psychological Distress Scale (K10) scales were employed to assess the social media usage, physical health and psychological distress respectively. The psychometric properties and analysis of the scales showed higher reliability and validity for not

only the overall scales. The Cronbach's alpha of the Social Media Usage Scale (SUMS) is 0.80 which says that this scale is reliable to measure social media usage for the intended study. Also, the Cronbach's alpha of Physical Health Questionnaire (PHQ) is 0.77 indicating that it is reliable and internally consistent scale for measuring physical health in the present study. Furthermore, it is evident that the Kessler Psychological Distress Scale (K10) is reliable and internally consistent tool for measuring psychological distress in the present study based on its Cronbach's alpha of 0.85. Additionally, skewness and kurtosis values, which fall between -1 and +1 and -3 and +3, respectively, show that the data was normally distributed (Sekaran, 2003).

It was hypothesized that there will be a positive relationship between social media usage and physical health among university students (H1). The results showed that social media usage appears to be significantly positively correlated with physical health ($r=.33^{**}$, $p<0.01$) which suggests that excessive social media engagement is associated with increased somatic symptom burden (Table 3). According to research, young adults who use social media excessively have biological and physical health indicators that are linked to negative health outcomes (such as inflammation and somatic symptoms) Lee et al. (2022). Furthermore the study demonstrated a positive correlation between social media use and physical health and offered more proof of the threats to biological and somatic physical health that come with social media use.

Consistent with these findings, a cross-sectional study by Mahevis et al. (2023) reported a strong correlation between higher social media use and poor physical health outcomes, such as lower assessments of physical well-being, particularly among female students. Excessive use of social media use was significantly associated with worse physical health in the current study of university students (e.g., decreased physical well-being and somatic complaints). For female participants, correlations with physical health issues were significantly significant (e.g., $r = .40$, $p < .001$). It was supported that social media use and deteriorations in students' physical health are related.

Furthermore, another study looked at relationships between young individuals' self-reported social media use and somatic complaints, medical visits, and biological markers of physical health (such as chronic inflammation as determined by C-reactive protein). It showed that using social media was positively correlated with lower physical health markers (Lee et al., 2022).

Another study examined the relationships between university students' usage of social media, reasons for exercising, negative body image, and health-related behaviors. Results show that lower levels of self-reported physical activity and greater time spent sedentary are associated with increased usage of social media (Zeeni et al., 2025).

Moreover, Szwedo et al. (2024) conducted a study, which shows the longitudinal predictive impact of social media engagement patterns on afterwards physical health outcomes, is in line with these conclusions. This longitudinal study demonstrated that characteristics of social media interactions in early adulthood i.e., age 21, particularly posts indicating positive peer social connections, predicted better physical health outcomes later in life i.e. age 28, such as lower inflammation, better sleep quality, better physical functioning, and lower BMI. On the other hand, years later, posts against peer norms were associated with poorer physical health. Additionally, a study by Rodriguez et al. (2023) found that increased screen time and social media use positively predicted increases in physical health complaints over time among adolescents, such as headache, neck/shoulder pain, and muscle/joint pain.

It was further hypothesized that there will be a positive relationship between social media usage and psychological distress among university students (H2). The results revealed that social media usage appears to be significantly positively correlated with psychological distress ($r=.25^{**}$, $p<0.01$) which suggests that excessive social media engagement is associated with increased psychological distress (Table 3).

Consistent with this, Cabezas et al., 2025 conducted a systematic review and meta-analysis that revealed a significant heterogeneity, a favorable overall correlation between social media risk exposures and mental health issues in teenagers and young adults. Additionally, a cross-sectional

study involving 511 medical students revealed a strong correlation between psychological distress levels and inappropriate social media use (Vaezpour et al., 2024).

Furthermore, a study by Shiraly, R. (2024) found that university students who used social media more frequently had higher levels of psychological discomfort and maladaptive coping mechanisms. Anxiety symptoms and problematic social networking use are key elements of psychological distress, according to another meta-analysis.

Furthermore, higher social media use was found to be a significant predictor of psychological distress among medical students in a cross-sectional study by Shiraly et al. (2024). Individuals who spent more time on social media were more likely to utilize maladaptive coping mechanisms and had higher distress levels. Additionally, a study with Taiwanese university students by Huang, Po-Ching et al. (2023) reported a strong positive association between problematic use of social media (addiction) in terms of psychological discomfort, including anxiety and depression.

Another meta-analysis highlighted that **problematic social networking use and anxiety symptoms**, which are core components of psychological distress. (Du, Mingxuan, et al., 2024). Another cross-sectional study conducted by Das, S. (2025), indicates that accessing social media for more than four hours a day was linked to greater levels of anxiety and depression, which are significant markers of more general psychological distress.

The third hypothesis was that social media usage will significantly predict physical health among university students (H3). The findings revealed that social media usage positively predicted physical health ($\beta = .33, p < .001$) which suggests that (Table 4).

Consistent with these findings, Szwedo et al. (2024) conducted a study, which shows the longitudinal predictive impact of social media engagement patterns on afterwards physical health outcomes, is in line with these conclusions. This longitudinal study demonstrated that characteristics of social media interactions in early adulthood i.e., age 21, particularly posts indicating positive peer social connections, predicted better physical health outcomes later in life i.e. age 28, such as lower inflammation, better sleep quality, better physical functioning, and lower BMI. On the other hand, years later, posts against peer norms were associated with poorer physical health.

Additionally, a study by Rodriguez et al. (2023) found that increased screen time and social media use positively predicted increases in physical health complaints over time among adolescents, such as headache, neck/shoulder pain, and muscle/joint pain.

It was also hypothesized that social media usage will significantly predict psychological distress among university students (H4). The findings revealed that social media usage positively predicted psychological distress ($\beta = .26, p < .001$) (Table 5).

The results were consistent with a cross-sectional study conducted by Shiraly et al. (2024) reported that higher social media use was found to be a significant predictor of psychological distress among medical students. Individuals who spent more time on social media were more likely to utilize maladaptive coping mechanisms and had higher distress levels.

The fifth hypothesis was that there will be significant gender differences in terms of social media usage, physical health and psychological distress among university students (H5). To assess gender differences in terms of social media usage, the findings reported significant mean differences on SMUS with $t(210) = 0.02, p < .05$ which suggests that girls tended to have a greater tendency of social media usage on SUMS ($M = 48.02, SD = 16.61$) as compared to the boys ($M = 43.23, SD = 14.03$) (Table 6).

Consistent with these findings, a study was conducted by Salman & Ashraf (2024). According to this study, female postgraduate students reported using social media for academic reasons on a daily basis at a considerably higher frequency (77.1%) than male students (65.7%). This suggests that there are gender variations in the intentional use of social media platforms in higher education.

One more study was conducted by Twenge, Jean M., et al. (2020). In this analysis of over 200,000 adolescents, girls spent more time on smart phones, social media, and texting than boys, demonstrating significant gender differences in overall digital media use patterns that include social

media.

Furthermore, to assess the gender differences in terms of physical health, the results reported highly significant mean differences on PHQ with $t(210) = 0.00$, $p < .05$ which suggests that girls have greater inclination of physical health on PHQ ($M = 51.15$, $SD = 11.59$) as compared to the boys ($M = 42.95$, $SD = 10.02$).

The findings were consistent in a study by Zhang et al. (2025), somatic symptoms were more central to the psychosocial symptom network in female participants than in male participants.

In another study conducted by Grasshoff, Julia, et al. (2025), women consistently reported significantly higher levels of physical complaints (such as physical fatigue, headaches, insomnia, etc.) as compared to men across occupational groups in a large repeated cross-sectional population study in Germany (approximately 58,000 participants).

In addition, to assess the gender differences in terms of psychological distress, the results reported significant mean differences on K10 with $t(210) = 0.01$, $p < .01$ which suggests that girls tended to have greater tendency of psychological distress on K10 ($M = 27.06$, $SD = 8.09$) compared to the boys ($M = 24.09$, $SD = 8.39$).

Consistent with these findings, recent studies, female university students report much higher levels of stress, anxiety, and psychological suffering than their male counterparts. In psycho-physiological tests, for example, female students showed higher levels of anxiety and worse mental health overall (Ouyang & Dai., 2025). Comparably, qualitative research reveals additional academic pressure and role expectations for female students (Khan et al., 2025), and large cross-sectional studies found higher psychological distress, stress, and anxiety scores among female students during the COVID-19 period (Rodríguez et al., 2025) and qualitative research reveals that female students face additional role expectations and academic pressure (Khan et al., 2025).

The final hypothesis was that there will be significant family system differences in terms of social media usage among university students (H6). The findings revealed significant mean differences on SMUS with $t(210) = 0.01$, $p < .05$ which suggests that participants from nuclear family system tended to have a greater tendency of social media usage on SMUS ($M = 47.71$, $SD = 16.83$) as compared to those from joint Family system ($M = 42.33$, $SD = 12.29$) (Table 7).

To support this hypothesis a study conducted by Bhattacharya & Black (2023) reported that younger adults i.e. under 25, a group similar to "youngsters," those from nuclear families scored higher on internet addiction and usage, which correlates with more engagement with social networking and online platforms?

Additionally, a number of studies conducted in Pakistan demonstrate that the use of social media by young people decreases in-person family interactions, particularly in situations where family networks are more nuclear or independent (and thus less frequent intergenerational interaction) (Farrukh, Hassan & Ramazan., 2025).

Limitations

1. The study may rely on self-reported measures of social media usage, physical health complaints, and psychological distress, which can be influenced by recall bias and social desirability effects.
2. The cross-sectional research design limits the ability to establish causal relationships between social media usage and health outcomes.
3. The sample may be restricted to university students from selected institutions, which may limit the generalizability of findings to other age groups or educational contexts.
4. Variations in types of social media platforms and patterns of use (e.g., academic vs. recreational use) may not be fully captured.

5. Potential confounding variables such as pre-existing health conditions, academic workload, sleep patterns, and personality traits may not be comprehensively controlled.

Recommendations

1. Future research should adopt longitudinal or experimental designs to better understand the causal pathways between social media usage and physical and psychological health outcomes.
2. Educational institutions should implement awareness programs promoting healthy digital habits and balanced social media use among university students.
3. University counseling services and clinicians should integrate digital well-being assessments into routine mental and physical health screenings.
4. Future studies should explore moderating and mediating variables such as gender, coping strategies, social support, and sleep quality to provide a more nuanced understanding of the observed relationships.

Conclusion

In conclusion, the present study highlighted that excessive and unregulated social media usage is significantly associated with increased physical health complaints and heightened psychological distress among university students. Prolonged screen time, disrupted sleep patterns, and sedentary lifestyles contribute to physical discomfort, while constant online engagement, social comparison, and academic distraction intensify stress, anxiety, and emotional exhaustion. These findings highlight the dual burden of digital overuse on students' overall well-being and emphasize the need for a balanced approach to social media engagement. Addressing these challenges is essential for promoting healthier lifestyles, improving mental health outcomes, and fostering a supportive academic environment for university students.

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