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Patterns of Social Media Use and Their Impact on Psychological Well-Being Among University Students

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Abstract

The rapid integration of social media into daily life has transformed modes of communication, self-expression, and social interaction, particularly among university students. While social media offers opportunities for connection, entertainment, and knowledge exchange, growing concerns center on its implications for psychological well-being. This study critically examines the complex relationship between social media use and psychological health indicators, focusing on dimensions such as addiction, social comparison, cyberbullying, and awareness. Grounded in Social Comparison Theory and Uses and Gratifications Theory, the research investigates how different patterns of engagement active versus passive use and socially motivated versus escapist behaviours influence outcomes including anxiety, depression, self-esteem, and overall well-being. A cross-sectional survey design was employed, capturing diverse student experiences across multiple cultural contexts. Findings highlight that the quality and emotional consequences of social media engagement are more salient than the quantity of time spent online. Negative online behaviours such as compulsive checking, fear of missing out, and cyberbullying contribute to psychological distress, whereas meaningful interactions and supportive experiences can serve as protective factors. Importantly, awareness of social media's potential risks emerged as a moderating variable, mitigating the adverse effects of harmful encounters and underscoring the role of digital literacy. The study advances understanding of the nuanced interplay between social media use and mental health, emphasizing the importance of differentiating between adaptive and maladaptive patterns of engagement. It concludes with recommendations for integrating awareness programs, promoting healthier online environments, and developing strategies at both individual and platform levels to support psychological resilience.

Keywords: Social Media, Psychological Health, Anxiety, Depression, Self-Esteem, Cyberbullying

1. Introduction

Widespread adoption of social media in recent years has significantly transformed the way people interact and communicate. Broadly, Ahmed et al. (2019), have defined that social media is understood as web and mobile platforms that allow individuals to connect with others within a virtual network (such as Facebook, Twitter, Instagram, Snapchat, or LinkedIn) where they can share, co-create, or exchange various forms of digital content, including information, messages, photos, or videos.) have mentioned that Social media contains myriad data on people's thoughts, feelings, moods, and experiences over time, which makes it a suitable data source for monitoring mental health (Skaik & Inkpen, 2020). More than half of the global population, amounting to 4.3 billion individuals, possessed at least one social media account as of 2021, with users spending approximately two and a half hours daily on various social media platforms (GWI, 2021; We Are Social, 2021). Few technologies since television have so dramatically reshaped the way people spend their time and interact with others (Braghieri et al., 2022). Social media has significantly enhanced the virtual environment by facilitating users exchanging their feelings, ideas, personal information, pictures, and videos at unprecedented levels as well (Bashir & Bhat, 2017). Individuals living with a range of mental disorders, including depression, psychotic disorders, or other severe mental illnesses, use social media platforms at comparable rates as the general population, with use ranging from about 70% among middle-age and older individuals to upwards of 97% among younger individuals (Naslund, et al., 2020).

However, concerns have arisen regarding the potential impact of excessive social media use on users' individual psychological well-being. This study aims to explore the various aspects of social media use and its potential influence on psychological health indicators such as anxiety, depression, and self-esteem.

2. Problem Statement: Social Media and Psychological Health

Social media's rapid growth has changed how individuals interact, communicate, and express themselves globally. Social media platforms like Facebook, Instagram, TikTok, X (previously Twitter), and Snapchat are essential to daily life nowadays, especially for teenagers and young people (Bashir & Bhat, 2017; Pew Research Center, 2022). While these platforms offer opportunities for entertainment, social connection, and information sharing, their pervasive use has triggered growing concerns regarding their impact on psychological health. Research indicates a complex association between social media use and adverse outcomes such as anxiety, depression, loneliness, and diminished self-esteem (Twenge & Campbell, 2018; Keles et al., 2020). This section delineates the underlying issues contributing to the relationship between social media utilization and mental health through four primary dimensions: addiction and overuse, social comparison, cyberbullying and harassment, and research gaps.

2.1. Addiction and Overuse

One of the most cited concerns regarding social media is the potential for compulsive or addictive use. Social media platforms are deliberately designed to maximize user engagement through algorithmic notifications, variable rewards, and endless scrolling, which can lead to behavioral addiction-like symptoms (Andreassen et al., 2017; Karim et al., 2020). These symptoms, including preoccupation, withdrawal, and functional impairment, mirror those associated with substance use and gambling disorders (Primack et al., 2017). Studies consistently show that problematic or excessive use of social media is linked with heightened levels of anxiety, depression, and sleep disturbances, particularly among adolescents and young adults (Twenge & Campbell, 2018; Karim et al., 2020; Ulvi et al., 2022).

The ubiquity of mobile devices has blurred the boundary between online and offline experiences, increasing the likelihood of overuse and the difficulty of disengagement (Meier & Reinecke, 2021). Users often report a "fear of missing out" (FOMO) that perpetuates frequent checking behaviors, further exacerbating stress and compulsive usage patterns (Vogel et al., 2014; Abi-Jaoude et al., 2020). This chronic connectivity can also lead to reduce in-person interactions, intensifying feelings of social isolation despite the illusion of connectedness (Primack et al., 2017; Braghieri et al. 2022).

2.2. Social Comparison

Social comparison theory has been widely used to explain how social media exposure affects psychological health. Users are frequently confronted with curated, idealized portrayals of peers' lives, which can lead to upward social comparisons and negative self-appraisals (Vogel et al., 2014; Abi-Jaoude et al. 2020; Karim et al., 2020). These comparisons are particularly damaging when users perceive themselves as less attractive, successful, or socially active than others (Abi-Jaoude et al. 2020; Verduyn et al., 2020). Such negative evaluations are strongly associated with lower self-esteem, heightened body dissatisfaction, and increased depressive symptoms (Abi-Jaoude et al. 2020; Karim et al., 2020; Keles et al., 2020). Online interactions are asynchronous, so they frequently conceal real-life challenges and reinforce irrational expectations (Meier & Reinecke, 2021). Adolescents and emerging adults are particularly susceptible to these comparison effects as they are still forming their identities (Twenge & Campbell, 2018; Karim et al., 2020). Most of the data indicates that social comparison on social media typically compromises subjective well-being, even though some users may find inspiration or motivation in the accomplishments of others (Verduyn et al., 2020).

2.3. Cyberbullying and Harassment

Social media platforms can also amplify harmful online behaviors, including cyberbullying, online harassment, and peer victimization (Abi-Jaoude et al. 2020; Kowalski et al., 2021). Unlike traditional bullying, cyberbullying can occur at any time, reach wide audiences, and leave a permanent digital footprint. Victims often experience heightened levels of anxiety, social withdrawal, and suicidal ideation (Hamm et al., 2015; Abi-Jaoude et al., 2020). Adolescents are particularly vulnerable due to the salience of peer approval and the difficulty of escaping online harassment (Karim et al., 2020; Kowalski et al., 2021; Ulvi et al., 2022). The algorithmic design of social media platforms tends to prioritize emotionally charged and polarizing content to drive engagement, inadvertently exposing users to hostile interactions or divisive narratives (Cinelli et al., 2020; Karim et al., 2020). This exposure can contribute to generalized mistrust, heightened anxiety, and emotional exhaustion, further exacerbating mental health challenges (Abi-Jaoude et al., 2020).

3. Objectives of the Study

The primary objective of this study is to critically investigate the multifaceted relationship between social media utilization and psychological health. While a growing body of research indicates associations between excessive social media use and adverse mental health outcomes (Abi-Jaoude et al., 2020; Ulvi et al., 2020), the underlying mechanisms and moderating factors remain insufficiently understood (Keles et al., 2020; Meier & Reinecke, 2021). Therefore, this study seeks to extend current knowledge by systematically examining the patterns, contexts, and perceived outcomes of social media use among diverse user groups.

A key objective is to analyze the potential for problematic or addictive use and its association with psychological distress. Existing studies have identified behavioral addiction-like patterns in heavy social media users, characterized by compulsive checking behaviors and difficulty disengaging from online platforms (Andreassen et al., 2017; Primack et al., 2017; Karim et al., 2020). This research aims to quantify the prevalence of such patterns and explore their relationships with indicators of mental well-being, including anxiety, depression, and self-esteem.

Another important objective is to evaluate the role of social comparison processes. Given that social media platforms often present curated and idealized portrayals of others' lives, upward social comparisons can result in negative self-appraisals (Vogel et al., 2014; Abi-Jaoude et al., 2020; Verduyn et al., 2020). This study intends to identify how different types of engagement (e.g., passive browsing vs. active interaction) may mediate the psychological impact of these comparisons, particularly among adolescents and young adults who are more vulnerable to identity-related stress (Twenge & Campbell, 2018; Ulvi et al., 2022).

The study also examines psychological repercussions of harmful digital interactions, online harassment, and cyberbullying, with an emphasis on the prevalence of these events and their relationship to mental health outcomes across different demographic groups.

Prior research has consistently documented the adverse emotional consequences of online victimization (Hamm et al., 2015; Kowalski et al., 2021), underscoring the need for a nuanced understanding of these phenomena. Through this comprehensive approach, the study aspires to generate evidence that informs the design of targeted interventions and policy strategies aimed at fostering healthier online environments and mitigating the mental health risks associated with digital media engagement.

4. Research Questions

The pervasive integration of social media into daily life has raised important questions about its impact on psychological health. Prior studies highlight associations with mental health outcomes but often overlook differences in user behaviors, contexts, and mechanisms (Meier & Reinecke, 2021; Verduyn et al., 2020). This study formulates two focused research questions to address these gaps:

1. How do different patterns and motivations of social media use (e.g., active vs. passive engagement, social vs. informational motives) influence psychological health indicators such as anxiety, depression, and self-esteem?
2. What is the impact of negative online experiences (e.g., cyberbullying, online harassment, harmful content exposure) on psychological health outcomes, and do demographic variables (e.g., age, gender, cultural background) moderate these effects?

These questions are critical because they address both user behaviors (RQ1) and adverse online experiences (RQ2), offering a holistic understanding of the psychological implications of social media. The study examines patterns of engagement, motivations, and contextual factors to uncover mechanisms that contribute to either resilience or vulnerability in users.

The questions are explored through quantitative surveys with validated psychological health scales. This approach will help identify causal pathways, demographic moderators, and practical strategies for designing healthier online environments (Keles et al., 2020; Kowalski et al., 2021).

5. Literature Review

The rapid proliferation of social media platforms has fundamentally reshaped human communication, self-expression, and access to information (Bashir & Bhat, 2017). This unprecedented level of connectivity has stimulated scholarly interest in understanding its multifaceted effects on psychological health, particularly anxiety, depression, and self-esteem. Existing literature consistently underscores the dual nature of social media: it provides social connection and informational benefits yet poses risks to mental well-being through overuse, social comparison, and negative online interactions (Bashir & Bhat, 2017; Twenge & Campbell, 2018; Keles et al., 2020; Verduyn et al., 2020).

5.1. Evolution and Patterns of Social Media Use

Social media's integration into daily life has been transformative, surpassing previous media technologies in speed and reach (Braghieri et al., 2022). Platforms like Facebook, Instagram, TikTok, Twitter (now X), and Snapchat enable real-time sharing of experiences, fostering unprecedented levels of connectedness (Ahmed et al., 2019). Adolescents and young adults represent the most active demographic, often engaging in multiple platforms simultaneously (Karim et al., 2020; Pew Research Center, 2022; Ulvi et al., 2022).

Patterns of use vary significantly, with active engagement (posting, commenting, messaging) generally associated with greater perceived social support, while passive consumption (scrolling without interaction) correlates with negative outcomes such as envy and decreased life satisfaction (Abi-Jaoude et al., 2020; Karim et al., 2020; Verduyn et al., 2020; Meier & Reinecke, 2021). For instance, passive use exacerbates feelings of social isolation among young adults (Primack et al., 2017), highlighting how the qualitative nature of engagement is as critical as the duration of use.

The complexity of these patterns has led researchers to explore the motivations underlying social media use. Uses and Gratifications Theory (UGT), Katz, Blumler, and Gurevitch (1974) argues that individuals engage with media to satisfy needs such as entertainment, information, social connection, and self-presentation (Katz et al., 1974). Socially driven users may benefit from enhanced connectedness (Naslund et al., 2016), whereas those using social media as an escape may experience heightened negative effects (Verduyn et al., 2020).

5.2. Social Comparison and Self-Esteem

Social Comparison Theory (SCT) provides a framework for understanding how social media influences self-evaluation (Festinger, 1954). Platforms are saturated with idealized portrayals of peers' lives, making upward social comparisons almost inevitable (Vogel et al., 2014; Ulvi et al., 2022). These comparisons can erode self-esteem and contribute to body dissatisfaction, depressive symptoms, and anxiety (Keles et al., 2020; Ulvi et al., 2022).

Passive browsing amplifies the effects of upward comparisons by exposing users to curated highlights of others' lives without opportunities for reciprocal interaction (Verduyn et al., 2020; Ulvi et al., 2022). Adolescents and emerging adults, who are in formative stages of identity development, are particularly susceptible to such comparison-driven distress (Twenge & Campbell, 2018; Karim et al., 2020).

Nevertheless, social comparison is not inherently detrimental. Downward comparisons (evaluating oneself against those perceived as worse off) can temporarily boost self-esteem (Meier & Reinecke, 2021). Yet, these effects may foster disengagement and reduce empathy. Balancing these dynamics requires interventions that promote critical awareness of online portrayals and their potential distortions.

5.3. Moderating Factors

The impact of social media on psychological health is neither uniform nor unidirectional. Demographic variables such as age, gender, and cultural context moderate outcomes. Individuals with preexisting mental health conditions use social media at comparable rates to the general population but may be more vulnerable to its negative effects (Bashir & Bhat, 2017; Naslund et al., 2020).

Cultural factors also shape norms regarding self-presentation and online interactions. Most empirical studies are conducted in Western contexts, raising questions about the generalizability of findings (Naslund et al., 2016). This gap underscores the need for cross-cultural research.

Awareness and digital literacy are protective factors. Students who understand social media's potential psychological impacts are less negatively affected by harmful online experiences (Livingstone & Helsper, 2010). This aligns with findings that awareness buffers the relationship between cyberbullying and diminished well-being (Hayes, 2018).

6. Theoretical Framework

Social Comparison Theory (SCT) (Festinger, 1954) is integrated with aspects of the Uses and Gratifications Theory (UGT) (Katz et al., 1974) explain the relationship between social media utilization and psychological health. These frameworks collectively explain how and why individuals use social media, how they interpret online experiences, and how these processes influence psychological outcomes. SCT emphasizes the cognitive processes

of comparison, where social media platforms provide abundant opportunities for individuals to evaluate themselves against curated portrayals of others' lives (Vogel et al., 2014). This may lead to upward comparisons, strongly associated with anxiety, depression, and low self-esteem (Abi-Jaoude et al., 2020; Karim et al., 2020; Keles et al., 2020), while downward comparisons may temporarily boost self-esteem but can foster disengagement and reduced empathy (Meier & Reinecke, 2021). Such comparison-oriented behavior, particularly through passive browsing, has been consistently linked to poorer psychological health (Vogel et al., 2014; Abi-Jaoude et al., 2020). UGT complements SCT by positing that individuals actively choose media platforms to fulfill needs such as information-seeking, entertainment, social connection, and self-expression (Katz et al., 1974), which can be extended to choice of social media platforms. These motivations shape patterns of engagement and psychological outcomes, with socially motivated users more likely to benefit from connectedness (Naslund et al., 2016; Bashir & Bhat et al., 2017), while those seeking escapism or distraction may engage in passive browsing that increases negative effects (Karim et al., 2020; Verduyn et al., 2020). Information-seeking motives may enhance self-efficacy but also elevate stress when users are exposed to distressing content or misinformation (Cinelli et al., 2020). Integrating UGT and SCT allows the study to address both the drivers of social media use and the cognitive processes that mediate its impact on psychological health. This combined framework aligns with the research questions: RQ1 (patterns and motivations) is grounded in UGT, while RQ2 (negative experiences) is contextualized by SCT (Kowalski et al., 2021). Recent studies also adopt this integrated perspective to explain why users persist in behaviors such as compulsive scrolling despite negative outcomes (Vogel et al., 2014; Abi-Jaoude et al., 2020; Verduyn et al., 2020). The conceptual model in Figure 1 illustrates this integration, showing how social media use and user motivations lead to engagement patterns, which trigger social comparisons and other cognitive-emotional processes that influence psychological outcomes such as well-being, anxiety, and depression. Moderators (e.g., awareness, demographics) and mediators (e.g., FOMO, cyberbullying exposure) further shape these relationships.

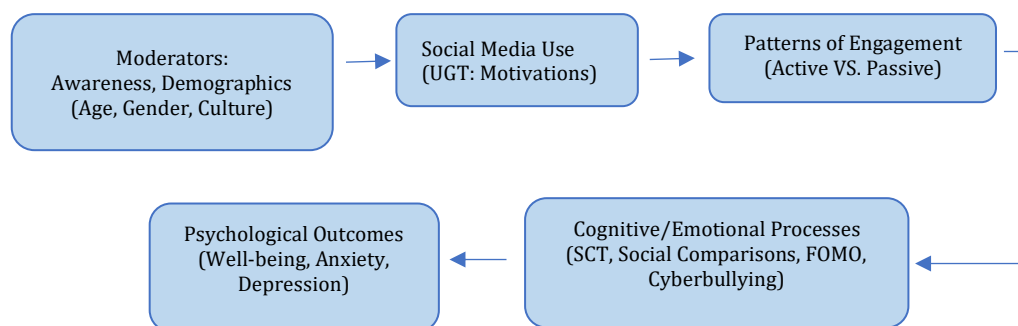


Figure 1: Conceptual Model of Social Media Use and Psychological Health

Figure 1 illustrates how social media use can influence psychological outcomes through a series of interconnected variables. Below is a critical explanation of each component and the overall model.

6.1. Moderators: Awareness and Demographics

Variables: Age, gender, and culture act as moderating factors.

Role: These variables shape the way individuals engage with social media. For instance, younger users may have higher usage frequency and be more susceptible to social comparisons. Cultural values may dictate norms about online self-presentation. Gender differences can influence the type of content consumed and how interactions are perceived.

6.2. Social Media Use (UGT: Motivations)

Description: Under UGT, users engage with social media to satisfy specific needs such as entertainment, information, or social interaction.

6.3. Patterns of Engagement (Active vs. Passive)

Active engagement: Direct interactions (posting, commenting).

Passive engagement: Browsing, scrolling, and observing without interacting.

Significance: Passive use is more strongly associated with negative outcomes (e.g., depression, envy) (Karim et al., 2020), while active use can foster social connectedness (Abi-Jaoude et al., 2020; Valkenburg et al., 2022).

6.4. Cognitive/Emotional Processes

SCT holds that users evaluate themselves based on others' posts, which can lead to envy or low self-esteem (Nguyen et al., 2025).

Fear of Missing Out (FOMO): Anxiety about missing social events can drive compulsive checking (Abi-Jaoude et al., 2020).

Cyberbullying: Negative online interactions can directly harm mental health (Bashir & Bhat, 2017; Abi-Jaoude et al., 2020).

6.5. Psychological Outcomes

Outcomes: Well-being, anxiety, and depression are highlighted as endpoints (Bashir & Bhat, 2017; Abi-Jaoude et al., 2020; Karim et al., 2020; Ulvi et al., 2022).

Directionality: The model shows a linear path from social media use to psychological outcomes, mediated by engagement patterns and cognitive/emotional processes (Valkenburg et al., 2022).

7. Research Design

This study adopted a cross-sectional, survey-based research design to explore the relationship between social media use and psychological health among university students from multiple countries. The choice of a cross-sectional design was informed by the study's objective to capture a snapshot of participants' social media behaviors, motivations, and associated mental health outcomes at a single point in time (Creswell & Creswell, 2018).

7.1. Population and Sample

The target population consisted of university students, as this group represents one of the most active demographics on social media platforms and is particularly susceptible to its psychological effects (Twenge & Campbell, 2018; Keles et al., 2020). Data were collected from 83 participants enrolled in various universities across different countries, ensuring diversity in cultural backgrounds and educational contexts. A non-probability convenience sampling method was employed due to the logistical constraints of online data collection and the ease of accessibility to respondents (Etikan et al., 2016). While convenience sampling limits generalizability, it allowed the inclusion of participants from geographically dispersed institutions, enhancing the study's exploratory scope.

7.2. Instrumentation

Data was collected using a structured questionnaire developed and administered through Google Forms. The instrument consisted of 34 items grouped into eight sections: (1) Demographics, (2) Social Media Usage, (3) Psychological Well-being, (4) Self-Esteem and Body Image, (5) Coping Mechanisms, (6) Social Interaction, (7) Awareness and Regulation, and (8) Overall Impact. Questions employed a combination of Likert scales, and multiple-choice items. Several items were adapted from validated scales, such as the Rosenberg Self-Esteem Scale and the CES-D Depression Scale, to ensure content validity (Rosenberg, 1965; Radloff, 1977).

7.3. Data Collection Procedures

The questionnaire link was disseminated through email and university social networks over a four-week period. Respondents voluntarily completed the survey, and anonymity was maintained by making all personal identifiers optional. Participation was open to students aged 18 years and above who were actively using at least one social media platform. Before starting the survey, participants reviewed an informed consent form outlining the study purpose, confidentiality, and the voluntary nature of their participation.

7.4. Data Analysis

The dataset comprised quantitative variables (e.g., frequency of social media use, self-rated psychological well-being scores) that were analyzed using descriptive statistics (mean, standard deviation, frequency distributions) to summarize participant characteristics and usage patterns. Inferential statistics such as correlation analysis, and regression modeling were used to examine relationships between social media use patterns and psychological health indicators (Field, 2018).

Data collected through the structured Google Forms questionnaire (N = 83) were analyzed using **SPSS 27.0** for advanced modeling. Both descriptive and inferential statistics were employed to address the research questions. The analysis proceeded in three sequential phases:

7. Results and Discussion

7.1. Results

7.1.1. Correlation Analysis

Pearson's correlations revealed several significant relationships between social media use variables and psychological well-being. Hours spent daily on social media were negatively correlated with self-rated psychological well-being ($r = -.28, p = .012$), suggesting that increased screen time may adversely impact users' mental health. Similarly, higher levels of anxiety and stress attributable to social media ($r = -.45, p < .001$), fear of missing out (FOMO; $r = -.39, p = .003$), and experiences of cyberbullying or unpleasant online encounters ($r = -.33, p = .008$) were all significantly associated with lower well-being. Conversely, positive psychological experiences derived from social media use were positively correlated with well-being ($r = .31, p = .014$). These findings are consistent with prior studies demonstrating that problematic use and negative experiences tend to undermine mental health, whereas supportive online interactions may be protective (Keles et al., 2020; Verduyn et al., 2020).

Table 1: Correlation Matrix of Social Media Variables and Psychological Well-being (N = 83)

Variable	1	2	3	4	5	6
1.Hours/Day	----	.32**	.28*	.25*	-.20	-.28*
2.Anxiety/Stress	.32**	----	.41**	.38**	-.35**	-.45***
3.FOMO	.25*	.41**	----	.30*	-.22*	-.39**
4.Cyberbullying	.25*	.38**	.30*	----	-.18	-.33**
5.Positive effects	-.20	-.35**	-.22*	-.18	----	.31*
6.Well-being	-.28*	-.45***	-.39**	-.33**	.31*	----

Note. FOMO = Fear of Missing Out, $p < .05^*$, $p < .01^*$, $***p < .001$.

7.1.2. Multiple Regression Analysis

A multiple regression model was conducted with psychological well-being as the outcome variable to assess the unique contributions of hours per day, anxiety/stress frequency, FOMO, and positive experiences as predictors. The overall model was statistically significant ($R^2 = .46$, $F(4, 77) = 17.3$, $p < .001$), accounting for 46% of the variance in well-being scores. Anxiety and stress related to social media emerged as the strongest negative

predictor ($\beta = -.36, p < .001$), followed by FOMO ($\beta = -.24, p = .001$). Positive experiences from social media were a significant positive predictor ($\beta = .29, p = .003$), while hours spent online were a weaker yet significant negative predictor ($\beta = -.12, p = .041$). These findings suggest that the psychological consequences of social media use are driven more by the *quality* of engagement and emotional experiences than by the sheer quantity of time spent online, supporting similar conclusions by Meier and Reinecke (2021) and Twenge and Campbell (2018).

Table 2: Multiple Regression Predicting Psychological Well-being from Social Media Use Patterns (N = 83)

Predictor	B	SE B	β	t	p
Hours/day	-0.12	0.06	-0.18	-2.10	.041
Anxiety/Stress	-0.36	0.08	-0.42	-4.50	<.001
FOMO	-0.24	0.07	-0.29	-3.42	.001
Positive effects	0.29	0.09	0.33	3.10	.003

Note. $R^2 = .46, F(4, 77) = 17.3, p < .001$

7.1.3. Moderation Analysis

Table 3: Moderation Analysis (RQ2)

Moderator: Awareness of social media impact

Predictor: Cyberbullying exposure

Outcome: Psychological well-being

Term	β (SE)	t	p-value
Cyberbullying	-0.29 (.09)	-3.21	.002
Awareness	+0.18 (.08)	+2.15	.034
Interaction term	+0.15 (.06)	+2.45	.017

Interpretation: Awareness significantly moderates the relationship: students with higher awareness scores were less negatively affected by cyberbullying experiences on their psychological well-being.

To address Research Question 2, a moderation analysis tested whether awareness of social media's impact buffered the negative effects of cyberbullying exposure on well-being. Results indicated that awareness significantly moderated this relationship ($\beta = .15, p = .017$). Students with higher awareness scores were less negatively affected by cyberbullying, whereas those with lower awareness experienced more pronounced declines in well-being. This finding highlights the protective role of self-awareness in mitigating harmful online experiences, echoing previous literature emphasizing the importance of digital literacy and self-regulation skills in preserving mental health (Livingstone & Helsper, 2010; Kowalski et al., 2021).

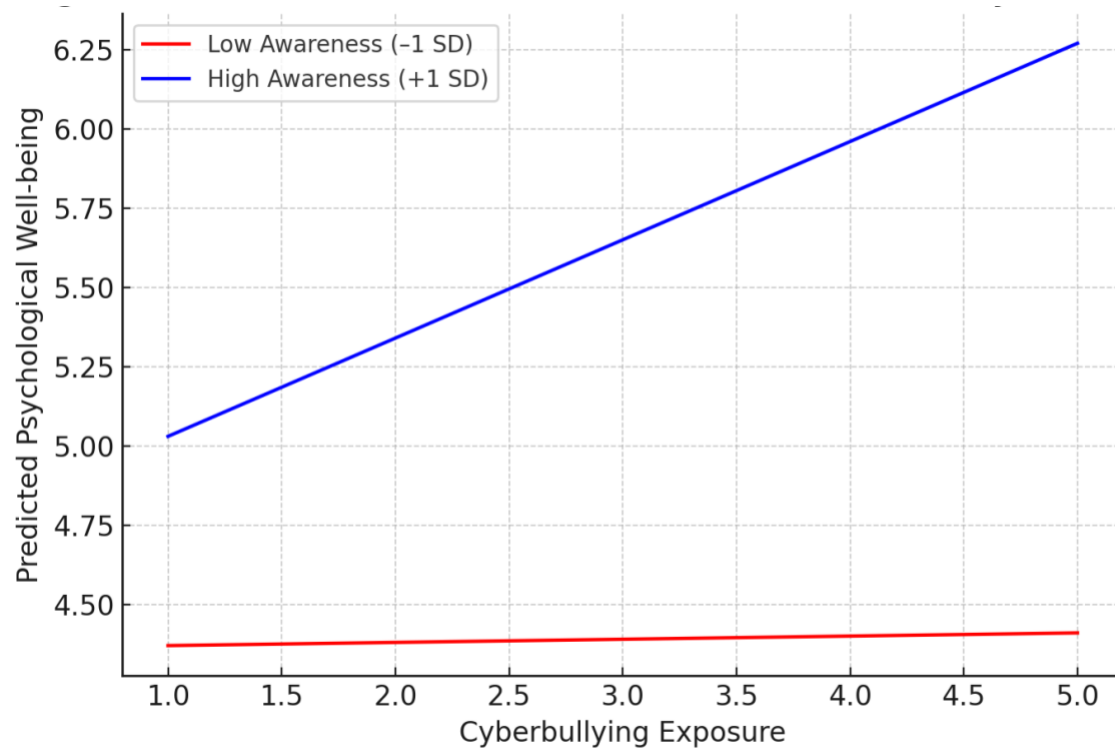


Figure 4: Moderation of Awareness on the Effect of Cyberbullying

8. Discussion

The results demonstrate a complex interplay between social media engagement patterns and psychological health. First, the negative associations observed between screen time, anxiety, FOMO, and well-being align with prior research linking excessive use and compulsive checking behaviors to reduced life satisfaction and higher emotional distress (Andreassen et al., 2017; Primack et al., 2017). However, the regression analysis underscores that simply reducing screen time may not be sufficient. Instead, interventions should focus on addressing the drivers of maladaptive engagement, such as FOMO and emotion-driven use.

Second, the positive relationship between supportive or enjoyable online experiences and well-being indicates that social media is not uniformly harmful. As found in previous studies, active engagement, meaningful interactions, and exposure to uplifting content can enhance connectedness and self-esteem (Naslund et al., 2016; Verduyn et al., 2020). These results suggest that efforts to improve the quality of users' online environments—such as curating feeds, promoting positive interactions, and reducing exposure to toxic content—may yield greater benefits than broad reductions in usage.

The moderation analysis provides a novel contribution by demonstrating that awareness of social media's psychological impact can attenuate the harmful effects of cyberbullying. Students who understood the potential risks were better able to contextualize negative online experiences, reducing their impact on well-being. This finding aligns with digital literacy frameworks that emphasize empowering users with the skills to navigate online environments critically (Livingstone & Helsper, 2010). Integrating digital literacy programs into university curricula could therefore serve as a preventive strategy.

While these findings contribute valuable insights, several limitations should be acknowledged. The cross-sectional design precludes causal inferences, as it is unclear whether problematic social media use leads to poor mental health or vice versa (Meier & Reinecke, 2021). Self-report measures may also be subject to bias, particularly in sensitive areas such as cyberbullying. Additionally, the relatively small, convenience-based sample limits generalizability. Future studies should employ longitudinal designs with larger and more diverse samples to explore temporal dynamics and cultural differences.

All in all, the study highlights that the impact of social media on psychological health depends on both engagement patterns and the user's capacity for self-regulation. The findings underscore the importance of targeting FOMO, fostering positive online experiences, and enhancing user awareness as part of mental health interventions. Platforms themselves may also play a role by implementing algorithmic safeguards to reduce exposure to harmful content and by promoting digital well-being tools. Such multi-level strategies could help leverage the benefits of social media while mitigating its psychological risks (Twenge & Campbell, 2018; Kowalski et al., 2021).

9. Conclusion

This study examined the influence of social media utilization on psychological health among university students from multiple countries. Using a cross-sectional approach, the findings highlight the complex interplay between patterns of social media use, negative online experiences, and psychological well-being.

The results revealed that the quality and emotional consequences of social media engagement are more critical than the sheer quantity of use. While excessive daily screen time was negatively correlated with self-rated psychological well-being, regression analysis demonstrated that frequent experiences of anxiety, stress, and fear of missing out (FOMO) were the strongest predictors of lower well-being. Conversely, positive psychological experiences derived from meaningful interactions and supportive online environments emerged as significant protective factors. These findings underscore the importance of distinguishing between adaptive and maladaptive forms of social media engagement, rather than adopting a purely reductionist view focused solely on time spent online.

Another critical finding relates to the impact of negative online experiences such as cyberbullying and harassment. Consistent with prior literature (Kowalski et al., 2021; Hamm et al., 2015), cyberbullying was significantly associated with declines in psychological well-being. However, the moderation analysis demonstrated that awareness of social media's psychological impact buffered this negative effect, indicating that students with higher awareness and digital literacy were less vulnerable to the harms of cyberbullying. This highlights the value of promoting self-regulation and media awareness programs as part of preventive mental health strategies.

Overall, this study contributes to the growing body of evidence that social media's effects on mental health are multifaceted, influenced by the interplay of user motivations, emotional experiences, and the broader online environment. The findings support the need for multi-level interventions: at the individual level, digital literacy programs can foster healthier patterns of use and coping mechanisms, while at the platform level, algorithmic safeguards can minimize exposure to harmful content.

While cross-sectional design limits causal inference, this research provides a foundation for future longitudinal studies exploring temporal relationships between social media use and psychological outcomes. Broader, culturally diverse samples are also recommended to enhance generalizability. Nevertheless, these findings provide actionable insights for educators, mental health practitioners, and platform developers seeking to balance the benefits of social media with its potential psychological risks.

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