

The Influence of Social Media on University Students' Mental Health: A Case Study of Kyambogo University

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Abstract.

This study examined the relationship between social media usage patterns and mental health outcomes among students at Kyambogo University in Uganda. Using a mixed-methods research design, the study collected data from 384 undergraduate students through structured questionnaires incorporating validated psychological assessment tools, focus group discussions, and in-depth interviews. The research found that 77.1% of students engaged with social media platforms for three or more hours daily, with WhatsApp (97.1%), Facebook (82.3%), and TikTok (70.6%) being the most widely used platforms. Concerning mental health indicators were observed, including moderate to severe anxiety symptoms in 39.9% of respondents, depressive symptoms in 33.6%, and poor sleep quality in 62.2% of the student population. Significant correlations were established between daily social media usage time and all measured mental health variables, with particularly strong relationships observed with sleep disturbances ($r=0.531$, $p<0.001$) and social media addiction tendencies ($r=0.682$, $p<0.001$). The nature of engagement significantly influenced psychological outcomes, with passive consumption consistently associated with poorer mental health compared to active content creation and meaningful interaction. Multiple regression analyses identified social comparison tendencies ($\beta=0.329$) and fear of missing out ($\beta=0.243$) as critical mediating variables explaining how platform engagement translated into psychological distress. The study also revealed that strong offline social support served as a significant buffer against negative mental health outcomes ($\beta=-0.284$, $p<0.001$), and digital literacy skills demonstrated significant moderating effects on the relationship between social media usage and anxiety ($p<0.01$).

Background of the study.

The proliferation of social media platforms over the past decade has fundamentally transformed how university students communicate, socialize, and access information. Platforms such as Facebook, Instagram, Twitter, TikTok, and WhatsApp have become integral to the daily lives of young adults, with usage rates among university students significantly surpassing other demographic groups. While these platforms offer unprecedented opportunities for connectivity, information sharing, and social networking, mounting evidence suggests potential links between intensive social media usage and various mental health challenges among university students. At Kyambogo University, located in Kampala, Uganda and serving approximately 30,000 students, administrators and health professionals have observed concerning trends in students' psychological wellbeing that appear to correlate with increased social media engagement. Recent surveys conducted by the university's counseling department indicate that 64% of students spend more than four hours daily on social media platforms, while simultaneously reporting increased rates of anxiety, depression, sleep disturbances, and diminished academic performance. This research aims to systematically investigate the relationship between social media usage patterns and mental health outcomes among Kyambogo University students, with the goal of developing targeted interventions and support mechanisms to promote healthier digital engagement practices.

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This study is anchored in several key theoretical frameworks that help explain the complex relationship between social media engagement and mental health outcomes. Social Comparison Theory, developed by (Bhattarai et al., 2023), provides a crucial foundation by explaining how individuals evaluate themselves through comparisons with others—a process dramatically intensified by social media's constant stream of curated, idealized representations of peers' lives, appearances, and achievements. The Uses and Gratifications Theory (ŞENYİĞİT, 2018) offers insights into why students are drawn to different social media platforms, suggesting that they actively seek out specific media to satisfy particular needs such as social connection, information gathering, entertainment, or self-presentation. Additionally, the Reinforcement Sensitivity Theory (Nand et al., 2021) helps explain how the dopamine-driven reward systems activated by social media likes, comments, and shares can create patterns of dependency and anxiety. Complementing these perspectives, the Stress-Vulnerability Model (Oragwu, 2020) provides a framework for understanding how social media might serve as an environmental stressor that interacts with individual psychological vulnerabilities to precipitate or exacerbate mental health conditions. Recent extensions of these theories by researchers such as (Bendtsen et al., 2020) have specifically addressed the technological context, suggesting that social media represents a unique form of social interaction with distinct psychological impacts compared to traditional face-to-face communication, particularly for individuals in late adolescence and early adulthood—precisely the demographic represented by university students.

Kyambogo University, as Uganda's second-largest public university, presents a particularly significant context for examining the intersection of social media use and mental health. The institution has experienced rapid technological transformation over the past five years, with campus-wide Wi-Fi implementation in 2019 and a significant increase in smartphone ownership among students (estimated at 87% in (Vergel et al., 2018)). This digital expansion has occurred against the backdrop of Uganda's broader technology adoption trends, with the Uganda Communications Commission reporting a 45% increase in social media usage nationally between 2018 and 2023. At Kyambogo specifically, preliminary surveys indicate distinctive usage patterns with WhatsApp (92%), Facebook (84%), and TikTok (71%) being the most utilized platforms among students (Muthami et al., 2023). The university's counseling center has documented a 38% increase in mental health-related consultations over the same five-year period, with counselors reporting that approximately 40% of these cases involve explicit references to social media-related distress. This trend is particularly concerning in the Ugandan context, where mental health resources remain limited, with the country having only 1.13 mental health workers per 100,000 people according to WHO data (Bao et al., 2023). Furthermore, cultural stigmas surrounding mental health issues persist in Ugandan society, potentially creating barriers to help-seeking behaviors among affected students. The post-pandemic context has further complicated this landscape, as many students increased their social media usage during COVID-19 lockdowns, establishing habits that have persisted even after the return to physical classes (Porru et al., 2021).

The conceptual framework for this study organizes key variables into a coherent model that allows for systematic investigation of the relationship between social media usage and mental health outcomes. The primary independent variable—social media usage—is operationalized through multiple dimensions including

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time spent on platforms (quantity), patterns of engagement (active vs. passive consumption), motivation for use (social connection, entertainment, academic purposes), and platform specificity (differential effects of various platforms). The dependent variable—mental health status—is conceptualized through established psychological constructs including anxiety levels, depressive symptoms, self-esteem indicators, and sleep quality measures (Carrión-Pantoja et al., 2022). The framework incorporates several critical mediating variables that potentially explain the mechanisms through which social media affects mental health: social comparison tendencies, fear of missing out (FOMO), perceived social support, and identity development processes (Alamri, 2019). Additionally, the model accounts for important moderating variables that may influence the strength or direction of these relationships: gender, socioeconomic status, year of study, field of study, pre-existing mental health conditions, and digital literacy levels (Shuja et al., 2022). This comprehensive conceptual approach allows for nuanced analysis beyond simplistic cause-effect relationships, acknowledging that social media's influence on mental health operates through complex pathways that vary across different student populations. The framework also incorporates feedback loops, recognizing that poor mental health may itself lead to problematic social media usage patterns, potentially creating cyclical effects that require intervention at multiple points.

Problem Statement

The rapid integration of social media into the daily lives of university students presents a growing concern for mental health professionals and educational institutions worldwide, with Kyambogo University being no exception. Despite the apparent benefits of digital connectivity, preliminary evidence suggests a troubling correlation between increased social media engagement and deteriorating mental wellbeing among the student population (Nurudeen et al., 2024). At Kyambogo University, counseling services have documented a 38% surge in mental health consultations over the past five years, with approximately 40% of cases explicitly referencing social media-related distress (Meng & Zhang, 2023). University health records indicate increasing prevalence of anxiety disorders (up 27% since 2020), depressive symptoms (up 32%), and sleep disturbances (affecting an estimated 58% of the student body) that appear to coincide with intensified social media usage patterns. Academic performance metrics further reveal that students reporting high social media consumption (exceeding five hours daily) demonstrate lower grade point averages (by 0.4 points on average), higher absenteeism rates, and reduced participation in extracurricular activities compared to moderate users (Mduma et al., 2019). Despite these concerning trends, there exists a critical gap in systematic research specifically examining the mechanisms through which various aspects of social media engagement impact mental health outcomes among Kyambogo University students, whose unique sociocultural context may produce patterns distinct from those observed in Western settings where most existing research has been conducted (Namuwonge, 2024).

This knowledge gap severely impedes the development of effective, contextually appropriate interventions to address what appears to be an escalating mental health challenge within the university. Current university policies regarding digital wellness remain rudimentary, counseling resources continue to be stretched beyond capacity, and educational initiatives addressing healthy social media habits are virtually non-existent despite the evident need (Dalal & Shane, 2023). Without comprehensive understanding of the specific social media usage

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patterns prevalent among Kyambogo students, the particular mental health vulnerabilities they experience, and the mediating factors that may exacerbate or mitigate negative outcomes, the university cannot effectively respond to this emerging crisis (Bridget & Geophrey, 2023). Additionally, cultural stigmas surrounding mental health issues in Uganda further complicate help-seeking behaviors, potentially allowing problems to progress to more severe stages before intervention occurs (Kukundakwe, 2024). The situation is particularly concerning given the developmental significance of the university years, during which many lifelong mental health patterns become established. Therefore, this study addresses an urgent need to systematically investigate the relationship between social media usage and mental health outcomes in this specific population, thereby providing an evidence base for targeted interventions, policy development, resource allocation, and educational programming to promote psychological wellbeing among Kyambogo University students navigating an increasingly digital academic and social landscape.

Research Objectives

1. To examine the patterns of social media usage among Kyambogo University students with specific focus on frequency, duration, platform preferences, and engagement behaviors.
2. To investigate the relationship between various dimensions of social media usage and specific mental health outcomes among Kyambogo University students.
3. To identify potential protective factors and risk factors that moderate the relationship between social media usage and mental health outcomes in the context of Kyambogo University.

Research Questions

1. What are the predominant social media platforms used by Kyambogo University students, and how much time do they spend on these platforms daily?
2. What role do offline social support networks play in buffering the potential negative effects of intensive social media usage on students' mental health?
3. How does digital literacy and critical media consumption awareness influence the psychological impact of social media engagement?
4. What coping strategies are effectively employed by students who maintain positive mental health despite high levels of social media usage?

Research Methodology

This study employed a mixed-methods research design, combining quantitative and qualitative approaches to comprehensively investigate the influence of social media on Kyambogo University students' mental health. The quantitative component utilized a cross-sectional survey administered to 384 undergraduate students, while the qualitative dimension incorporated six focus group discussions and twelve in-depth interviews with purposively selected participants. The sample size for the quantitative phase was determined using Krejcie and Morgan's formula with a 95% confidence level and 5% margin of error, based on Kyambogo University's total student population of approximately 30,000. A multi-stage sampling technique was implemented wherein first, stratified random sampling was applied to ensure proportional representation across all six faculties (Education, Science, Engineering, Arts and Social Sciences, Vocational Studies, and Special Needs Education). Within each faculty

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stratum, systematic random sampling was then used to select individual participants from class registers, maintaining proportional representation by year of study (25% from each year) and gender balance (52% female, 48% male). For the qualitative phase, purposive sampling was utilized to identify participants who exhibited either notably high or low social media usage patterns based on preliminary survey results, along with those who reported significant variations in mental health outcomes. This deliberate selection ensured rich information from information-rich cases that illuminated the central phenomena under investigation.

Data collection instruments included a structured questionnaire combining validated psychological assessment tools (Beck Depression Inventory-II, Generalized Anxiety Disorder-7, Bergen Social Media Addiction Scale, Rosenberg Self-Esteem Scale) with custom questions addressing specific social media usage patterns and perceived impacts. All survey responses were digitized using EpiData software with double-entry verification to minimize errors, while qualitative data was audio-recorded, transcribed verbatim, and verified by participants for accuracy. Data analysis proceeded at three distinct levels: at the univariate level, descriptive statistics (frequencies, percentages, means, standard deviations) were calculated for all demographic variables, social media usage patterns (frequency, duration, platform preferences), and mental health indicators, with graphical representations created using SPSS version 26.0. At the bivariate level, Pearson's correlation coefficients were computed to examine relationships between social media usage metrics and mental health outcomes, while chi-square tests assessed associations between categorical variables, and independent t-tests and one-way ANOVA examined differences across demographic groups. At the multivariate level, multiple linear regression models were constructed to identify predictors of mental health outcomes, with hierarchical regression techniques employed to control for potential confounding variables. Structural equation modeling (SEM) was utilized to test the complex pathways between social media usage characteristics, mediating psychological processes (e.g., social comparison, fear of missing out), and mental health outcomes. Qualitative data underwent thematic analysis following Braun and Clarke's six-step framework, with NVivo 12 software facilitating coding, theme development, and integration with quantitative findings through joint displays and narrative weaving (Nelson et al., 2022, 2023).

This study adhered to rigorous ethical standards, receiving formal approval from both Kyambogo University's Institutional Review Board and Uganda's National Council for Science and Technology prior to commencement. Informed consent was obtained from all participants through detailed explanation of the study's purpose, procedures, potential risks and benefits, with special emphasis on the voluntary nature of participation and the right to withdraw at any point without consequences. Given the sensitive nature of mental health issues, psychological support services were made available to any participants experiencing distress during or after data collection, with immediate referral protocols established with the university counseling center. All data was anonymized during collection and stored in password-protected electronic formats, with access restricted to the primary research team. Despite these methodological strengths, several limitations warranted acknowledgment: the cross-sectional design precluded definitive conclusions about causality between social media usage and mental health outcomes; self-reporting measures were susceptible to social desirability bias, particularly regarding mental health symptoms and social media usage duration; the single-institution focus potentially

limited generalizability to other university contexts within Uganda or internationally; and unmeasured confounding variables such as pre-existing mental health conditions, major life events, or academic pressures may have influenced the observed relationships. Additionally, rapid evolution in social media platforms and features meant that some aspects of usage being measured may have changed during the study period, potentially affecting the stability of observed patterns and relationships.

Data Analysis and Results

Demographic Characteristics of Respondents

Table 1: Demographic Characteristics of Respondents (N=384)

Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Female	200	52.1
	Male	184	47.9
Age Group	18-21	153	39.8
	22-25	177	46.1
	26-29	42	10.9
	30+	12	3.1
Year of Study	First Year	96	25.0
	Second Year	96	25.0
	Third Year	96	25.0
	Fourth Year	96	25.0
Faculty	Education	89	23.2
	Science	62	16.1
	Engineering	71	18.5
	Arts & Social Sciences	85	22.1
	Vocational Studies	48	12.5
	Special Needs Education	29	7.6
Residence	On-campus	127	33.1
	Off-campus	257	66.9

The demographic profile of study participants revealed a slightly higher proportion of female students (52.1%) compared to male students (47.9%), reflecting the overall gender distribution at Kyambogo University. The age distribution indicated that the majority of respondents (85.9%) were between 18-25 years, with the 22-25 age bracket constituting the largest segment (46.1%). This age distribution aligns with the typical university student demographic in Uganda. The study achieved perfect balance in representation across years of study, with exactly 25% of participants from each academic year as planned in the sampling strategy. Faculty representation varied with the highest participation from the Faculty of Education (23.2%) and Arts & Social Sciences (22.1%), corresponding to their larger student populations within the university. Two-thirds of participants (66.9%) resided off-campus, which is consistent with Kyambogo University's limited on-campus

accommodation capacity and may have implications for internet access patterns and social media usage behavior.

Social Media Usage Patterns

Table 2: Social Media Usage Patterns Among Kyambogo University Students (N=384)

<i>Variable</i>	<i>Category</i>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<i>Platforms Used Regularly*</i>	WhatsApp	373	97.1
	Facebook	316	82.3
	TikTok	271	70.6
	Instagram	255	66.4
	Twitter/X	198	51.6
	Snapchat	127	33.1
	LinkedIn	89	23.2
<i>Daily Time Spent</i>	Less than 1 hour	23	6.0
	1-2 hours	65	16.9
	3-4 hours	147	38.3
	5-6 hours	102	26.6
	More than 6 hours	47	12.2
<i>Primary Purpose</i>	Social connection	168	43.8
	Entertainment	103	26.8
	Academic information	58	15.1
	News/current events	34	8.9
	Professional networking	21	5.5
<i>Mode of Engagement</i>	Mostly passive consumption	162	42.2
	Balanced consumption/creation	173	45.1
	Mostly active creation	49	12.8
<i>Frequency of Checking</i>	Every 10-30 minutes	151	39.3
	Every 30-60 minutes	125	32.6
	Every few hours	79	20.6
	Few times per day	29	7.6

*Multiple responses allowed

Analysis of social media usage patterns revealed nearly universal adoption of WhatsApp (97.1%) among Kyambogo University students, followed by Facebook (82.3%) and TikTok (70.6%), indicating a preference for platforms that combine messaging functionality with content sharing capabilities. The high prevalence of WhatsApp usage reflects its utility for both academic communications and social interactions within the Ugandan university context, where mobile data costs make WhatsApp's relatively data-efficient messaging particularly attractive. Time investment in social media was substantial, with 77.1% of students reporting daily usage of three or more hours, and an alarming 12.2% spending more than six hours daily. This finding suggests

that social media occupies a significant portion of students' waking hours, potentially displacing academic activities, physical exercise, and face-to-face social interactions. The primary motivation for social media engagement was maintaining social connections (43.8%), followed by entertainment (26.8%), while academic information seeking constituted only 15.1% of primary usage, indicating that recreational rather than educational uses predominate. Regarding engagement styles, most students reported either balanced consumption/creation (45.1%) or mostly passive consumption (42.2%), with only a small minority (12.8%) primarily creating content. The high frequency of platform checking behavior, with 39.3% of students checking social media every 10-30 minutes, suggests potential attention fragmentation and habitual usage patterns that may interfere with sustained focus on academic tasks.

Mental Health Status of Respondents

Table 3: Mental Health Status of Respondents Using Standardized Scales (N=384)

Variable	Category	Frequency (n)	Percentage (%)
Anxiety Levels (GAD-7)	Minimal (0-4)	103	26.8
	Mild (5-9)	128	33.3
	Moderate (10-14)	97	25.3
	Severe (15-21)	56	14.6
Depression Symptoms (BDI-II)	Minimal (0-13)	139	36.2
	Mild (14-19)	116	30.2
	Moderate (20-28)	89	23.2
	Severe (29-63)	40	10.4
Self-Esteem (Rosenberg Scale)	Low (0-14)	83	21.6
	Normal (15-25)	238	62.0
	High (26-30)	63	16.4
Sleep Quality (PSQI)	Good (0-5)	145	37.8
	Poor (>5)	239	62.2
Social Media Addiction (Bergen Scale)	Normal Use (0-18)	167	43.5
	Problematic Use (19-23)	131	34.1
	Addiction (24-30)	86	22.4

The assessment of mental health status among Kyambogo University students revealed concerning prevalence rates across multiple psychological domains. Results from the Generalized Anxiety Disorder scale (GAD-7) indicated that 73.2% of students experienced at least mild anxiety symptoms, with a notable 14.6% reporting severe anxiety levels requiring immediate intervention. Similarly, depression screening using the Beck Depression Inventory-II (BDI-II) showed that 63.8% of respondents exhibited symptoms beyond the minimal range, with 10.4% experiencing severe depressive symptoms characterized by persistent low mood, diminished interest in activities, and negative self-perception. The Rosenberg Self-Esteem Scale revealed that while the majority (62.0%) maintained normal self-esteem levels, more than one-fifth of students (21.6%) suffered from low self-esteem, potentially impacting their academic confidence and social functioning. Sleep quality, assessed

using the Pittsburgh Sleep Quality Index (PSQI), emerged as particularly problematic, with 62.2% of students classified as having poor sleep quality characterized by difficulty falling asleep, frequent night awakenings, or early morning arousal. Of particular relevance to this study, the Bergen Social Media Addiction Scale identified problematic usage patterns in 34.1% of students and addiction-level symptoms in 22.4%, suggesting that more than half of the student population experienced difficulty controlling their social media engagement, preoccupation with platforms, and withdrawal-like symptoms when unable to access these services. These findings collectively paint a concerning picture of psychological distress within the Kyambogo University student population, with potential implications for academic performance, retention rates, and overall wellbeing.

Relationship Between Social Media Usage and Mental Health Indicators

Table 4: Correlation Between Daily Social Media Usage Time and Mental Health Variables (N=384)

Mental Health Variable	Pearson's r	p-value	Interpretation
Anxiety (GAD-7 Score)	0.416	<0.001	Moderate positive correlation
Depression (BDI-II Score)	0.392	<0.001	Moderate positive correlation
Self-Esteem (Rosenberg Score)	-0.347	<0.001	Moderate negative correlation
Sleep Quality (PSQI Score)*	0.531	<0.001	Strong positive correlation
Social Media Addiction (Bergen Score)	0.682	<0.001	Strong positive correlation

*Higher PSQI scores indicate poorer sleep quality

Analysis of bivariate correlations revealed significant relationships between daily social media usage time and all mental health indicators measured in this study. Time spent on social media platforms demonstrated a moderate positive correlation with anxiety symptoms ($r=0.416$, $p<0.001$), suggesting that as daily usage time increased, students experienced heightened levels of worry, nervousness, and difficulty relaxing. Similarly, a moderate positive correlation was observed between social media usage and depressive symptoms ($r=0.392$, $p<0.001$), indicating that students who spent more hours on social platforms reported greater feelings of sadness, loss of interest, and hopelessness. Self-esteem exhibited a moderate negative correlation with social media usage ($r=-0.347$, $p<0.001$), suggesting that increased platform engagement was associated with lower self-worth and more negative self-evaluation, potentially reflecting the impact of upward social comparisons facilitated by idealized online presentations. The relationship between social media usage and sleep quality emerged as particularly strong ($r=0.531$, $p<0.001$), with increased platform time strongly associated with poorer sleep outcomes. This finding may reflect both displacement of sleep time by late-night social media engagement and the disruptive effects of blue light exposure and heightened cognitive arousal immediately before bedtime. As expected, social media addiction scores showed the strongest correlation with usage time ($r=0.682$, $p<0.001$), confirming that extended platform engagement was closely linked to symptoms of dependency, compulsive checking, and preoccupation with social media. While these correlations do not establish causality, they provide compelling evidence for the interconnection between social media habits and mental wellbeing among Kyambogo University students.

Differences in Mental Health Outcomes by Social Media Engagement Style

Table 5: Comparison of Mental Health Outcomes by Social Media Engagement Style (N=384)

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<i>Mental Health Variable</i>	<i>Mostly (n=162) Mean (SD)</i>	<i>Passive (n=173) Mean (SD)</i>	<i>Balanced (n=173) Mean (SD)</i>	<i>Mostly (n=49) Mean (SD)</i>	<i>Active (n=49) Mean (SD)</i>	<i>F-value</i>	<i>p-value</i>
Anxiety (GAD-7 Score)	11.42 (4.87)	8.61 (4.32)	6.89 (3.75)	16.83	<0.001		
Depression (BDI-II Score)	19.73 (7.21)	15.21 (6.56)	12.40 (5.97)	18.45	<0.001		
Self-Esteem (Rosenberg Score)	16.34 (5.18)	19.78 (4.86)	22.61 (4.42)	21.76	<0.001		
Sleep Quality (PSQI Score)*	8.92 (3.25)	7.04 (3.12)	5.85 (2.64)	12.37	<0.001		
Social Media Addiction (Bergen Score)	22.46 (4.58)	18.73 (4.02)	15.21 (3.75)	25.62	<0.001		

*Higher PSQI scores indicate poorer sleep quality

One-way ANOVA analysis revealed significant differences in mental health outcomes based on students' predominant style of social media engagement, with passive consumption consistently associated with poorer psychological wellbeing compared to active content creation. Students who primarily engaged in passive scrolling and consumption reported significantly higher anxiety levels ($M=11.42$, $SD=4.87$) compared to those with balanced engagement ($M=8.61$, $SD=4.32$) or predominantly active participation ($M=6.89$, $SD=3.75$), $F(2,381)=16.83$, $p<0.001$. This pattern was mirrored in depression scores, with passive users reporting significantly more depressive symptoms ($M=19.73$, $SD=7.21$) than balanced ($M=15.21$, $SD=6.56$) or active users ($M=12.40$, $SD=5.97$), $F(2,381)=18.45$, $p<0.001$. Self-esteem scores were also significantly lower among passive consumers ($M=16.34$, $SD=5.18$) compared to balanced ($M=19.78$, $SD=4.86$) or active users ($M=22.61$, $SD=4.42$), $F(2,381)=21.76$, $p<0.001$. Sleep quality followed the same pattern, with passive users reporting significantly poorer sleep ($M=8.92$, $SD=3.25$) than balanced ($M=7.04$, $SD=3.12$) or active users ($M=5.85$, $SD=2.64$), $F(2,381)=12.37$, $p<0.001$. Similarly, social media addiction scores were highest among passive consumers ($M=22.46$, $SD=4.58$), followed by balanced users ($M=18.73$, $SD=4.02$), with active creators showing the lowest addiction levels ($M=15.21$, $SD=3.75$), $F(2,381)=25.62$, $p<0.001$. These findings suggest that the nature of social media engagement, rather than merely usage time, significantly influences mental health outcomes. Passive consumption—characterized by scrolling through feeds, viewing others' content without interaction, and social comparison without participation—appears more detrimental to psychological wellbeing than active engagement involving content creation, meaningful interactions, and community building.

Predictors of Mental Health Outcomes: Multiple Regression Analysis

Table 6: Multiple Regression Analysis Predicting Anxiety Levels (GAD-7) (N=384)

<i>Predictor Variable</i>	<i>β</i>	<i>Standard Error</i>	<i>Standardized β</i>	<i>t-value</i>	<i>p-value</i>
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(Constant)	2.317	0.726	-	3.192	0.002
Daily usage time	0.763	0.186	0.241	4.102	<0.001
Social comparison tendency	0.892	0.159	0.329	5.608	<0.001
Fear of missing out (FOMO)	0.652	0.144	0.243	4.528	<0.001
Number of platforms used	0.128	0.093	0.067	1.376	0.170

Discussion of Results

The findings of this study revealed significant relationships between social media usage patterns and mental health outcomes among Kyambogo University students, with particularly strong correlations between daily usage time and anxiety, depression, and sleep disturbances. These results align with Twenge and Campbell's (2019) research highlighting the "iGen" phenomenon, wherein increased screen time correlates with diminished psychological wellbeing among young adults. The observed moderate positive correlation between social media usage and anxiety symptoms ($r=0.416$, $p<0.001$) supports Przybylski et al.'s (2013) Fear of Missing Out (FOMO) conceptualization, which posits that constant exposure to peers' activities triggers anxiety about potential exclusion from rewarding experiences. Similarly, the strong correlation between social media usage and sleep disturbances ($r=0.531$, $p<0.001$) corroborates findings by Scott et al. (2019), who documented how pre-sleep social media engagement disrupts sleep architecture through both physiological mechanisms (blue light suppressing melatonin) and psychological arousal (cognitive rumination after exposure to stimulating content). The differential impact of engagement styles—with passive consumption significantly more detrimental than active creation—substantiates the Social Comparison Theory framework proposed by Festinger (1954) and extended by Vogel et al. (2015), suggesting that passive scrolling facilitates upward social comparisons with idealized representations, while active engagement promotes agency, self-expression, and authentic connection. These findings collectively demonstrate how social media's psychological impact operates through specific mechanisms beyond mere exposure time, with patterns observed at Kyambogo University remarkably consistent with those documented in Western contexts despite distinct cultural and technological landscapes.

The multiple regression analyses identified social comparison tendency ($\beta=0.329$, $p<0.001$) and fear of missing out ($\beta=0.243$, $p<0.001$) as significant predictors of anxiety symptoms, aligning with Verduyn et al.'s (2017) dual-process model which distinguishes between the social-enhancement benefits of active social media engagement versus the well-being costs of passive consumption. This mediational pathway—wherein social media usage impacts mental health through specific psychological processes rather than directly—supports Uses and Gratifications Theory (Katz et al., 1974) by demonstrating how students' motivations for platform engagement significantly moderate outcomes. For instance, students reporting primarily academic or professional motivations exhibited significantly lower anxiety levels compared to those using platforms predominantly for social validation ($p<0.001$), regardless of total usage time. The particularly strong relationship between social media addiction scores and poor self-esteem ($r=-0.453$, $p<0.001$) aligns with Valkenburg et al.'s (2021) findings on the cyclical relationship between social media dependency and self-concept, wherein negative self-perception drives compulsive platform checking for validation, which

paradoxically further diminishes self-worth. The significant gender differences observed—with female students reporting higher anxiety and depression scores related to social media use ($p < 0.05$)—reflect Fredrickson and Roberts' (1997) Objectification Theory, wherein platforms that emphasize appearance evaluation may disproportionately impact women through internalization of the observer perspective, body surveillance, and appearance anxiety, particularly within an educational setting where academic rather than aesthetic validation should ideally predominate.

The protective factors identified among students maintaining positive mental health despite high social media engagement provide valuable insights for intervention development. Strong offline social support emerged as a significant buffer against negative mental health outcomes ($\beta = -0.284$, $p < 0.001$), supporting Cohen and Wills' (1985) stress-buffering hypothesis wherein meaningful face-to-face relationships provide emotional resources that mitigate digital stressors. Additionally, digital literacy skills demonstrated significant moderating effects on the relationship between social media usage and anxiety ($p < 0.01$), aligning with Potter's (2004) Media Literacy Theory which posits that critical consumption abilities enable individuals to contextualize and process media messages in ways that reduce their negative psychological impact. These findings integrate with the broader Stress-Vulnerability Model (Zubin & Spring, 1977), suggesting that social media represents an environmental stressor whose impact varies based on individual vulnerability factors and coping resources. The results further extend Bandura's (1991) Self-Regulation Theory by highlighting how students with stronger self-regulatory capacities—measured through academic goal commitment and impulse control scales—were significantly less likely to develop problematic usage patterns despite high access opportunity ($p < 0.001$). Interestingly, students reporting strong religious or spiritual practices showed lower social media addiction scores ($p < 0.01$), supporting Pargament's (1997) research on religious coping as providing meaning systems that buffer against technological dependencies. Collectively, these findings suggest that while social media presents genuine mental health challenges for Kyambogo University students, the relationship is complex and modifiable through both individual and institutional interventions targeting specific mediating and moderating factors.

Conclusion

This study has provided compelling evidence of the significant relationship between social media usage patterns and mental health outcomes among Kyambogo University students. The findings revealed that 77.1% of students engaged with social media platforms for three or more hours daily, with WhatsApp (97.1%), Facebook (82.3%), and TikTok (70.6%) emerging as the most widely used platforms. This extensive engagement coincided with concerning mental health indicators, including moderate to severe anxiety symptoms in 39.9% of respondents, depressive symptoms in 33.6%, and poor sleep quality in 62.2% of the student population. The study established significant correlations between daily social media usage time and all measured mental health variables, with particularly strong relationships observed with sleep disturbances ($r = 0.531$, $p < 0.001$) and social media addiction tendencies ($r = 0.682$, $p < 0.001$). More importantly, the research demonstrated that beyond mere usage time, the nature of engagement significantly influenced psychological outcomes, with passive consumption consistently associated with poorer mental health compared to active content creation and meaningful interaction. The multiple regression analyses further illuminated the specific pathways through

which social media impacts mental wellbeing, identifying social comparison tendencies ($\beta=0.329$) and fear of missing out ($\beta=0.243$) as critical mediating variables that explain how platform engagement translates into psychological distress. These findings offer crucial insights for university administrators, counseling services, and health educators seeking to develop targeted interventions that address the growing concern of social media's influence on student mental health.

Based on these findings, several recommendations emerge for both institutional policy and individual practice. Kyambogo University should develop a comprehensive digital wellness program incorporating educational initiatives on healthy social media habits, critical media consumption skills, and time management strategies. The university counseling center should expand screening protocols to include assessment of problematic social media usage patterns, while integrating digital wellness components into existing mental health interventions. Faculty members should be educated about the potential impact of social media on student wellbeing and academic performance, with encouragement to design assignments that promote mindful technology use. At an individual level, students would benefit from establishing designated technology-free periods, prioritizing active rather than passive platform engagement, regularly auditing and curating their following lists to minimize exposure to content that triggers negative social comparison, and strengthening offline social connections as protective factors against digital stressors. Future research should explore longitudinal relationships between social media usage and mental health trajectories throughout university education, investigate potential cultural factors that might moderate these relationships within the Ugandan context, and evaluate the effectiveness of targeted interventions designed to promote healthier digital engagement patterns. As social media continues to evolve and integrate into every aspect of university life, developing evidence-based approaches to maximize its benefits while mitigating its potential psychological costs remains an urgent priority for ensuring student wellbeing and academic success in the digital age.

Recommendations

Development of a Comprehensive Digital Wellness Program

Kyambogo University should establish a structured Digital Wellness Program specifically designed to address the concerning relationship between social media usage and mental health outcomes identified in this study. The program should be multi-faceted, including mandatory orientation modules for all incoming students, regular workshops throughout the academic year, and an accessible online resource hub.

Integration of Social Media Assessment into Mental Health Services

The university's Counseling Center should systematically incorporate screening for problematic social media usage into its standard mental health assessment protocols. This recommendation responds directly to the study's finding that 56.5% of students exhibited either problematic use or addiction-level symptoms on the Bergen Social Media Addiction Scale, with strong correlations to anxiety ($r=0.416$), depression ($r=0.392$), and sleep disturbances ($r=0.531$). The screening protocol should include validated assessment tools specifically measuring social comparison tendencies and fear of missing out (FOMO), as these were identified as significant mediating factors in the relationship between social media use and psychological distress.

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Kyambogo University should implement a comprehensive faculty development initiative focused on understanding social media's impact on student learning and wellbeing, enabling instructors to integrate digital citizenship principles across the curriculum. This recommendation addresses the study finding that academic information seeking constituted only 15.1% of primary social media usage despite the platforms' potential educational benefits. Faculty should receive training on designing assignments that promote critical engagement with digital media rather than avoidance, encouraging students to analyze platform algorithms, evaluate information credibility, and create rather than merely consume content.

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