

## Social Media Addiction, Stress, Anxiety, Depression, and Self-Perception among Undergraduate Students at the University of Nairobi, Kenya

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### Abstract

The purpose of this study is to examine the relationship between social media addiction and psychological factors such as stress, anxiety, depression, low self-esteem, and dissatisfaction among students at the University of Nairobi. A descriptive research design with a mixed-methods approach was employed, integrating quantitative and qualitative methodologies. The study targeted 13,869 students from the Faculty of Arts and Social Sciences, with a sample of 136 selected via simple random sampling using Cochran's formula. Data were collected through self-administered questionnaires and two focus group discussions. Quantitative data were examined through the use of descriptive and inferential statistics, including correlation analysis, while qualitative data were thematically analysed. Validity was ensured through member checking and expert reviews, and reliability was established using internal consistency and test-retest methods. Findings indicate that high social media usage correlates with increased stress and anxiety, driven by exposure to curated online personas, fear of missing out (FOMO), and pressure to maintain an idealised self-image. Depression and low self-esteem were prevalent among students who compared themselves unfavorably to peers, leading to dissatisfaction. Despite recognising these effects, students struggled to reduce usage due to addiction. The study recommends targeted interventions like mental health awareness programs, counselling, and digital literacy initiatives. These results highlight the significance of policies within institutions to promote responsible social media use, fostering balanced digital engagement to enhance student well-being.

**Key terms:** Anxiety, depression, self-perception, social media addiction, stress.

## 1.0 INTRODUCTION

Social media addiction has become a significant public health concern in contemporary society, with its pervasive use contributing to a wide range of psychological and emotional challenges. Social media addiction is characterised by an overwhelming and uncontrollable urge to engage with social networking platforms. This addiction has been linked to various mental health issues, including stress, anxiety, depression, low self-esteem, and dissatisfaction with life. Individuals who engage excessively with platforms such as Instagram, Facebook, X (Formerly Twitter), and TikTok often experience an inability to regulate their use, which can lead to emotional distress and cognitive fatigue (Kuss & Griffiths, 2017). Research increasingly indicates that excessive exposure to curated content on social media fosters negative psychological outcomes by promoting upward social comparisons, intensifying the fear of missing out (FOMO), and reinforcing perceptions of personal inadequacy (Nosrati et al., 2020).

University students are vulnerable to the harmful effects of social media addiction caused by a blend of academic pressure, social expectations, and the desire for self-validation in online environments. While social networking sites were initially intended to enhance interpersonal communication and foster connectivity, the excessive and often passive consumption of content has been linked to feelings of emotional isolation, life dissatisfaction, and diminished psychological well-being (Lin et al., 2016). The availability of digital technologies, along with the constant presence of social media platforms, has intensified compulsive behaviours among students, leading to increased feelings of anxiety, symptoms of depression, and stress (Woods & Scott, 2016). These psychological concerns often come from unrealistic self-comparisons, perceived inadequacies, and the pressure to maintain an idealised online persona.

The influence of cultural values and societal expectations also plays an important role in shaping digital behaviour and how individuals experience the psychological effects of social media use. In many developing countries, including Kenya, where mobile internet penetration continues to rise rapidly, the mental health implications of increased digital engagement among youth remain understudied. The connection between digital culture, school life, and mental health is important. It helps us understand social media addiction and how it affects young people's self-image and emotional strength.

Many studies show that social media addiction can cause mental health challenges like stress, anxiety, depression, and low self-esteem. However, there is not much research in Kenya on how these problems specifically affect university students. The lack of localised data limits the development of effective interventions aimed at mitigating the negative impact of social media use on students' well-being.

This research addresses this gap by analysing the connection between social media addiction and psychological well-being among university students, focusing specifically on how excessive use contributes to stress, anxiety, depression, and negative self-perception. The study draws on both global and local literature to contextualise the problem and assess its implications in the academic environment.

The objective of this study is to examine the extent to which social media addiction influences psychological outcomes among university students. The research aims to assess the amount of stress, anxiety, and depression caused by social media use; understand how social media use affects self-image among students and identify ways of promoting healthier online habits and improving emotional well-being.

Understanding the psychological dimensions of social media addiction is vital in promoting mental health awareness, especially among vulnerable student populations. This study is significant because it adds to the ongoing discussion on mental health and digital well-being in academic settings, providing useful insights that can guide policy, institutional support systems, and behavioural interventions aimed at fostering responsible social media use.

## 2.0 LITERATURE REVIEW

Social media addiction refers to the behavioural addiction characterised by excessive concern with social media, propelled by an irresistible desire to engage with it, and the allocation of so much time and energy to it that it disrupts other important areas of life. This compulsive behaviour often leads to emotional dependence, withdrawal symptoms when offline, and a failure to reduce use even if it causes negative consequences. Platforms such as Facebook, Instagram, Twitter, and TikTok offer instant feedback and social rewards that reinforce these addictive behaviours. Young people, particularly university students, are among the most affected groups due to their constant engagement in digital communication and social comparison.

The psychological effects associated with excessive social media use have been categorised into emotional issues such as anxiety and depression, cognitive challenges like distorted self-perception and fear of missing out, and behavioural consequences such as procrastination and antisocial tendencies. Research conducted by Bányai et al. (2017) reported that addiction to social media among university students is linked to emotional fatigue, lower academic performance, and reduced life satisfaction. Further studies by Nosrati et al. (2020) differentiate the psychological impacts into internalised symptoms such as depressive moods and externalised behaviours like irritability, which reflect the broader implications of digital overuse.

Empirical studies have consistently shown a strong connection between the use of social media and mental health challenges. For example, Lin et al. (2016) found that high levels of engagement with social media were strongly linked to the occurrence of depressive symptoms even after adjusting for demographic variables. Similarly, Woods and Scott (2016) found that using social media at night is connected to poor sleep quality, increased depression, and higher anxiety in young people. Keles et al. (2020) support these findings, showing that spending too much time on social media can hurt focus on schoolwork, lead to procrastination, and cause conflicts with others and behavioural problems.

Two prominent theoretical perspectives inform the understanding of social media's psychological impact. The Theory of Displaced Behaviour suggests that increased engagement in digital activities displaces time that would otherwise be allocated to beneficial behaviours such as physical exercise, sleep, and meaningful face-to-face interactions. This displacement leads to reduced opportunities for emotional support and coping mechanisms, ultimately exacerbating mental health challenges. In the context of students, prolonged screen time often contributes to physical inactivity, withdrawal from social support systems, and increased vulnerability to psychological distress.

Festinger's Social Comparison Theory further explains the psychological mechanisms behind the negative effects of social media. The theory posits that individuals evaluate their self-worth by comparing themselves to others. Social media platforms amplify this behaviour by exposing users to idealised portrayals of success, beauty, and happiness. When students encounter carefully chosen images and

stories of seemingly perfect lives, they often compare themselves to these ideals. This can make them feel inadequate, lower their self-esteem, and lead to dissatisfaction. Seeking approval online through likes and comments can be addictive. When people don't get the social approval they want, it can increase feelings of anxiety and depression. In this way, excessive time on social media significantly influences students' self-worth and overall psychological well-being.

Despite the growing volume of global research on this topic, few studies have focused specifically on university students in developing contexts such as Kenya. Cultural attitudes toward mental health, digital access, and peer dynamics may influence how social media addiction is experienced and perceived. Furthermore, there is limited research on how students' self-perception changes in relation to online engagement and how digital identities shape psychological outcomes. This study aims to address these gaps by assessing the nuanced relationship between social media use, mental health, and self-perception among university students in a Kenyan context.

### 3.0 METHODOLOGY

This study used a descriptive research design to explore and characterise variables related to social media addiction and psychological well-being among university students. This approach was chosen for its ability to provide a clear understanding of students' beliefs, behaviours, and attitudes, thereby giving a precise description of the issue being examined. A mixed-methods approach was adopted, combining both quantitative and qualitative methodologies. The qualitative component captured the lived experiences of students in relation to their social media use, while the quantitative component offered statistical insights into how excessive use correlates with mental health outcomes such as stress, anxiety, and depression.

The research focused on a group of 13,869 students who are registered in the Faculty of Arts and Social Sciences at the University of Nairobi. Using Cochran's formula, a representative sample size of 136 students was determined. To ensure fair representation, a simple random sampling technique was employed. The researcher and an assistant randomly approached students on campus and invited them to participate. Data collection involved both self-administered questionnaires and focus group discussions. Questionnaires were distributed physically and digitally to gather quantitative data, while qualitative data were obtained through two focus groups, each consisting of ten participants, who shared their experiences regarding social media use and its psychological effects. A pilot study was conducted at the Technical University of Kenya to pre-test the instruments, and the feedback received was used to refine the tools for clarity and the research instruments. Reliability was ensured using internal consistency measures and a test-retest method. Instruments were pre-tested on ten students who did not participate in the main study. Data analysis combined quantitative and qualitative techniques: descriptive and inferential statistics were utilised to analyse numerical data, including correlation analysis to assess the reliability.

Validity was ensured through member checking, expert reviews, and iterative revisions of the relationship between social media use and psychological distress; qualitative data were thematically analysed to interpret participants' subjective experiences. Ethical considerations were strictly observed, with confidentiality maintained and informed consent obtained from all participants. Participation was voluntary, and the information gathered was exclusively for academic purposes.

## 4.0 FINDINGS AND DISCUSSION

The study investigated the impact of excessive social media use on the psychological well-being of university students, revealing a complex interplay of perceptions and experiences. The findings highlight the diverse and sometimes contradictory views students hold regarding the relationship between social media use and mental health. A significant portion of respondents (51%) believed that increased social media usage contributes to psychological problems, particularly in areas such as stress, anxiety, and depression. These students felt that the constant digital engagement created pressure and negatively affected their emotional well-being. An additional 15 per cent were strongly convinced of this link, citing personal experiences and observations of peers as evidence of social media's detrimental impact on mental health.

In contrast, 15 per cent of respondents found the relationship between social media use and mental health issues to be unlikely, suggesting that they either perceived the connection as exaggerated or believed that other factors, such as academic stress or personal issues, were more influential. Furthermore, 6 per cent completely dismissed the connection, expressing the view that social media could not positively impact mental well-being by offering a sense of connection and community. Different views highlight the ongoing discussion about how digital engagement affects psychological outcomes, indicating that the effects of social media are not universally experienced or understood.

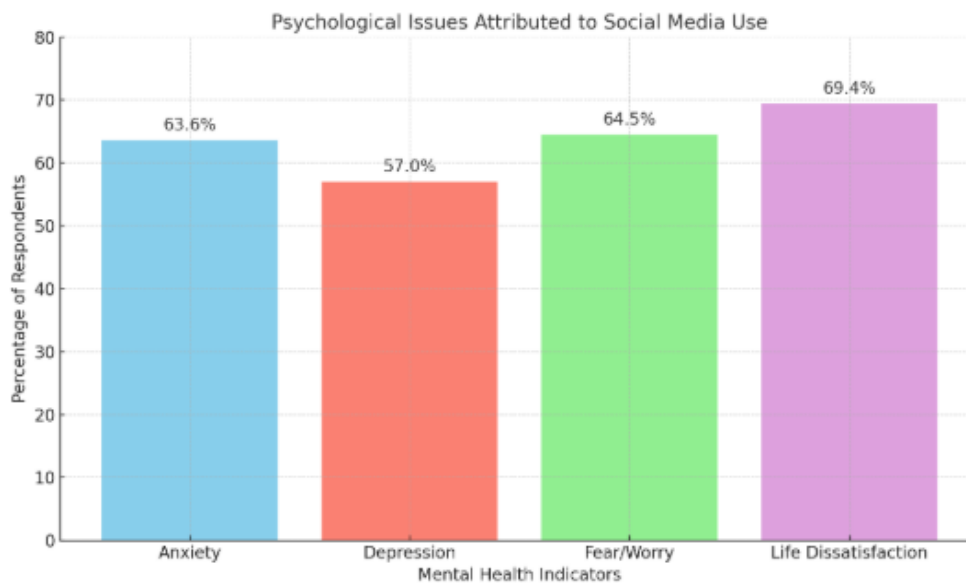
This diversity of opinion further stresses the need for a better understanding of how social media influences individuals in various ways, depending on their usage patterns, personality traits, and socio-environmental factors. As digital engagement continues to evolve, future research should explore these factors in depth to better inform interventions and strategies for promoting healthier social media usage among students.

**Table 1: Perceptions on the Link between Social Media Use and Mental Health**

Response Category	Percentage (%)
Agree (likely to contribute to problems)	51
Strongly Agree	15
Disagree (unlikely to contribute)	15
Strongly Disagree	6
Neutral/Undecided	13

Consistent with previous literature, the majority of respondents identified specific indicators of psychological distress associated with excessive social media use. These indicators were notably consistent with findings from prior studies on the negative effects of digital engagement on mental health. A significant 63.6 per cent of participants reported experiencing heightened anxiety as a result of increased social media usage. This suggests that constant exposure to online content may exacerbate feelings of unease and nervousness, particularly in relation to social interactions and self-perception. Additionally, 57 per cent of respondents noted experiencing depression or stress linked to their social media habits, with many describing how the pressure to maintain a certain online image or keep up with fast-paced digital environments contributed to their emotional strain. Furthermore, a striking 64.5 per cent of participants expressed persistent feelings of fear or worry, which aligns with the psychological impacts of social media, where concerns about online reputation, peer judgment, and missed opportunities become dominant.

A substantial 69.4 per cent of participants also associated excessive social media use with life dissatisfaction, underscoring how digital platforms, despite offering avenues for connection, can create a sense of unfulfillment when they become a primary source of engagement. These results align with existing research suggesting that compulsive social media engagement fosters negative psychological states such as social comparison, fear of missing out (FOMO), and emotional exhaustion. When individuals compare their real lives to the curated, idealised versions they see online, feelings of inadequacy and dissatisfaction tend to increase. The pervasive nature of FOMO further amplifies this dissatisfaction, leading to a cycle of over-engagement and heightened emotional distress. Overall, these findings reinforce the understanding that social media, when overused, can act as a significant driver of psychological distress and well-being concerns among students.



**Figure 1. Psychological Issues Attributed to Social Media Use**

The study further revealed that behavioural outcomes such as reduced academic concentration and antisocial tendencies were frequently observed among students who overused social media. Notably, 78.5 per cent of respondents reported witnessing difficulties in concentration, while 85.2 per cent cited behaviours such as teasing and impulsivity. These findings support studies that suggest problematic digital engagement impairs cognitive control and social regulation.

Moreover, participants' views on long-term mental health effects were explored. Overall, 64 per cent believed excessive use could result in psychiatric disorders, including chronic anxiety or depression. While 29 per cent were uncertain, only 7 per cent disagreed. This reflects the growing concern over digital reliance and its potential effects on mental strength, especially among university students balancing academic, social, and personal challenges.

While most results point to a negative relationship between excessive use of social media and psychological well-being, the range of opinions also indicates that individual differences such as coping style, digital habits, and social support may mediate these outcomes. Future research and institutional interventions should address these nuances to foster a healthier digital environment in academic settings.

## Discussion

The findings from this study reveal a complex relationship between social media use and psychological well-being, highlighting both positive and negative aspects. A considerable number of respondents concurred that excessive social media use contributes to various mental health challenges, including anxiety, stress, and depression. The results correspond with the increasing amount of research available, suggesting that social media, when overused, can have detrimental effects on users' mental and emotional states. However, some respondents were more cautious, asserting that the connection between social media use and mental health issues is not as straightforward or strongly established as often portrayed. This divergence in views points to the need for a more nuanced understanding of the issue, emphasising the importance of context and individual differences.

The study's findings also show that excessive use of social media may affect academic performance negatively. Many respondents reported that individuals who spend most of their time on social media tend to struggle with concentration, often finding it difficult to focus on academic tasks. This observation is consistent with previous research that links social media addiction with reduced cognitive attention and productivity. Behavioural issues, such as defiance of rules or engaging in teasing behaviour, were also noted, indicating that social media overuse may not only affect mental health but also influence social behaviours in negative ways. These findings support the argument that social media can foster an environment where distractions and unhealthy behaviours flourish, further affecting both personal and academic growth.

The study also revealed that many respondents associated social media use with unrealistic perceptions of life, particularly regarding self-image and success. This perception is exacerbated by the curated nature of content shared on social media platforms, where users often post idealised versions of their lives. As a result, users may experience feelings of inadequacy, jealousy, and low self-esteem, which can cause mental health challenges, including anxiety and depression. The link between social media use and unrealistic life expectations has been documented in other studies and underscores the psychological pressures associated with online life.

The research also emphasised the considerable influence of social media in fostering peer pressure, particularly in the context of adolescence and early adulthood. Participants shared that the strong desire to conform to the curated personas of others online often leads to stress and unhealthy comparisons. Social media platforms, with their constant reinforcement of idealised lifestyles and images, amplify these pressures, making individuals more susceptible to the need for social validation. This can contribute to an ongoing cycle where users, especially young people, seek external approval through likes, comments, and followers, often sacrificing authenticity and self-expression in the process. Over time, this can erode self-esteem and mental stability, as individuals increasingly measure their worth based on the approval they receive from others online, rather than from internal sources of confidence.

The study also found that peer pressure is not only a consequence of social media but also a driving force behind its excessive use. The fear of missing out (FOMO) and the constant need to stay updated on what others are doing online can lead individuals to spend unhealthy amounts of time on these platforms. This obsession with keeping up with others' posts and accomplishments can create an unrealistic benchmark of success and happiness, further deepening feelings of inadequacy or anxiety. In this way, the social

comparison fostered by social media can perpetuate a sense of disconnection, as users may begin to feel that their lives are not measuring up to those they see online.

However, the research also underscores that social media, when used responsibly and with awareness, can offer significant positive benefits. Social media platforms are not inherently detrimental; rather, it is how they are used that determines their impact. When approached mindfully, social media can serve as a valuable tool for learning, networking, and personal growth. In educational contexts, social media provides opportunities for students to exchange ideas, collaborate on projects, and access a wealth of information and resources. Online communities can also serve as vital sources of emotional support, allowing individuals to connect with others who share similar experiences, particularly when in-person support systems are limited.

In addition, social media can foster a sense of belonging and empowerment, especially for those who may not have access to physical communities that align with their interests or values. Whether through professional networks like LinkedIn or informal support groups on platforms like Facebook or Instagram, individuals can find spaces to share their struggles, celebrate their achievements, and seek advice from like-minded peers. This aspect of social media can be particularly valuable for personal development and mental health, as it offers opportunities for connection and support that may not be readily available offline.

While the negative aspects of social media cannot be overlooked, it is crucial to strike a balance. By adopting strategies such as setting boundaries around usage, engaging in mindful social media practices, and focusing on the positive aspects of online engagement, users can mitigate the risks associated with excessive social media use. Ultimately, social media has the potential to enhance personal and academic growth, provided it is used in a way that prioritises well-being and fosters genuine, meaningful connections.

To sum it up, the study confirms that social media use has a multifaceted impact on psychological well-being, with both beneficial and harmful effects. While excessive use can contribute to anxiety, stress, and depression, it also presents opportunities for social connection and knowledge sharing. The findings underscore the need for further research to explore how to mitigate the negative effects of social media while maximising its educational and social benefits. Future research should concentrate on creating approaches for promoting healthy social media habits, particularly among students, to safeguard their mental health and academic success.

Participants who spent more than 5 hours per day on social media reported the highest levels of anxiety (50%), stress (40%), and depression (35%). Moreover, a significant proportion of these participants also reported difficulties with concentration, further emphasising the cognitive impact of excessive social media use.

In contrast, those who spent 1-2 hours on social media daily reported comparatively lower levels of psychological issues. However, even at this lower frequency, a notable portion still experienced anxiety, stress, and depression. This suggests that while longer exposure to social media exacerbates psychological problems, even moderate use may contribute to mental health challenges.

## 5.0 CONCLUSION AND RECOMMENDATIONS

**Conclusion:** The findings of this study underscore the intricate relationship between social media use and students' psychological well-being. As highlighted by the perceptions of psychological well-being, students' strategies, and coping mechanisms, social media significantly influences how they perceive their own lives, achievements, and mental health. Excessive social media use, particularly in academic and social contexts, is strongly associated with negative perceptions of psychological disorders, such as stress, anxiety, depression, and other related symptoms.

The results also reveal a tendency among students to develop maladaptive coping mechanisms in response to the pressures of social media, which exacerbates feelings of inadequacy, social comparison, and low self-esteem. While social media platforms offer numerous benefits, including fostering connections and providing access to information, the overwhelming engagement with these platforms can create a distorted sense of reality, which in turn influences students' emotional and mental states. Through observation of these findings, this study emphasises the urgent need for students to adopt responsible and balanced social media usage. Implementing strategies such as digital detox, mindful usage, and better self-regulation can significantly mitigate the adverse effects on mental health. Furthermore, educational programs that focus on media literacy and self-care practices should be prioritised in academic settings.

**Recommendations:** This study calls for further research to enhance our comprehension of the intricate connection between social media consumption and mental health. Future studies could explore how different types of social media engagement affect various demographic groups, the long-term psychological impacts of sustained usage, and effective interventions to promote healthy social media habits among students. The results of this research serve as a critical foundation for developing practical, evidence-based solutions that can support students' mental well-being in an increasingly digital world

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