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## Mental Health in Youth: Investigating the Impact of Social Media Usage on Adolescent Anxiety and Depression Levels

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**ABSTRACT**

The relationship between social media use and adolescent mental health has become a hot topic concerning its implications to psychologists, educators and policymakers alike. This report aims to the extent to which social media is a contributing factor to each of the two mental health concerns of anxiety and depression. Based upon a mixed-method methodology, we conducted quantitative and qualitative data collection from participants aged 13-19. Using standardised tools such as the Generalised Anxiety Disorder (GAD-7) scale and Patient Health Questionnaire (PHQ-9), our quantitative method was deployed on 200 participants whilst qualitative data was collected on a smaller sample of 20 participants through semi-structured interviews where the sample was established through a random splitting of students. The findings indicate a statistically significant positive correlation between time spent on Instagram and TikTok respectively and symptoms of anxiety and depression as evidenced by the following: 38 per cent reported being cyber bullied which resulted in higher levels of stress and emotional withdrawal, 68 per cent identified a social comparison in relation to anxiety and depression, which also caused feelings of inadequacy and low self-worth, and lastly, 71 per cent reported sleep disruptions which were related to poor sleep hygiene and emotional instability.

The stories told through qualitative interviews emphasized how adults, children's emotional health, validation, FOMO, and peer pressure could contribute to idealized representations of themselves online. These outcomes underscore the urgent need for mental health strategies that include digital literacy efforts, parental awareness, and school-based approaches that advocate for moderate and conscientious use of social media. This study helps add to the scholarly discussions about how, although social media connects and allows access to information to adolescents, its toxic and unregulated use creates significant threats to adolescents' mental well-being.

**Keywords:** social media use, adolescent mental health, anxiety and depression, cyberbullying, digital literacy

## INTRODUCTION

### Background

The digital age has fundamentally changed the ways that adolescents communicate, learn, and socialize. Social media apps like Instagram, TikTok, and Snapchat have profound effects on teenage life, and have become part of growing up where adolescents learn, express themselves, and connect with their peers. Emerging evidence suggests that this environment brings concerns, as the greater amount of time spent on social media, it correlates with many adolescent complaints including anxiety, depression, and other mental health issues. These mental health trajectories suggest the need to investigate the potential downside of life online and how it impacts their emotional health.

### Rationale of the Study

Although concerns regarding the mental health of youth continue to grow, the direct and indirect implications of social media are still being under-explored in many educational and parental settings. By investigating the exact mechanisms—cyberbullying, peer pressure, and comparison—through which social media influences mental health, this study aims to fill an important gap in both research and practice.

### Objectives

- To assess how often adolescents use social media.
- To investigate the relationships between social media use and symptoms of anxiety and depression.
- To investigate mediating variables such as: cyberbullying, social comparison, and sleep disruption.
- To establish actionable suggestions for key stakeholders, including parents, educators, and policymakers.

## REVIEW OF LITERATURE

**Social Media and Adolescent Development**
Adolescence is a critical developmental stage marked by identity development, intense emotions, and increased vulnerability. According to Twenge et al. (2017), social media has taken precedence over face-to-face interaction in an era when identity continues to be defined by others.

**Anxiety and Depression Trends in Adolescents**
According to the World Health Organization (2021) mental health disorders impact one in seven adolescents across the world. Many in this population report increased anxiety and depressive symptoms, often related to their online usage. Researchers have also established a direct link between screen time and emotional distress.

**The Impact of Cyberbullying**
Cyberbullying can be defined as online bullying, harassment, threatening, and humiliation. Cyberbullying can lead to severe trauma in girls and boys lasting into adulthood. Hinduja and Patchin (2014) indicate that those who are victims of cyberbullying are far more likely to experience suicidal thoughts and social withdrawal.

**Idealized Persona and Social Comparison**
Nesi and Prinstein (2015) found social media to be a host for social comparison of lives and between adolescents often compare themselves to the embellished images of their peers online. As a result, they may suffer from lower self-esteem and exhibit symptoms of depressive behaviour.

**Sleep Deprivation and Circadian Rhythm Disruption**
Levenson, Shensa, and Primack (2016) found a strong relation to using social media at night and sleep disturbance. It is also documented that lack of sleep plays a significant role in mood disorders, and reduces cognitive function like attention and memory.

**RESEARCH METHODOLOGY**

**Research Design**
A mixed-methods research design was employed in this study to gain a holistic understanding of the phenomenon. Quantitative data was collected through structured questionnaires and qualitative data through semi-structured interviews.

**Population and Sample**
The population of interest comprised adolescents aged 13-19 years who attended schools in both urban and suburban contexts. A total of 200 students were included in the study, selected by stratified random sampling, to represent the population by gender, age, and socio-economic status.

**Instruments Used**
-Generalized Anxiety Disorder Scale (GAD-7)
-Patient Health Questionnaire (PHQ-9)
- Social Media Engagement Questionnaire (customized questionnaire to capture frequency and nature of use)
- Interview protocol focusing on emotional responses, cyberbullying experiences, and sleep habits

**Data Collection Procedure**
Ethical/consent forms were sought from participants and guardians. Surveys were sent electronically and were submitted anonymously. Interviews were conducted in the same room while being supervised to ensure participants could comply with ethical standards.

**Data Analysis Techniques**
Quantitative data were analyzed using SPSS for correlation and regression analysis. Qualitative data were thematically coded to maintain recurrent themes and individual stories.

**RESULTS & DISCUSSION**

**Patterns of Social Media Usage**
The majority of respondents indicated usage of social media on average of 3–6 hours per day, with the most used platforms being Instagram (85%), TikTok (72%), and Snapchat (68%). There was usage was notably higher over the weekend.

**Levels of Anxiety and Depression**
Based on GAD-7 and PHQ-9 scores:
- 62% had moderate to severe anxiety
- 54% had moderate to severe symptoms of depression

**Correlation Analysis**
Pearson correlation analysis indicated:
- Social media use - anxiety: $r = 0.52$, $p < 0.01$
- Social media use - depression: $r = 0.47$, $p < 0.01$

**Influencing Factors**
- Cyberbullying: 38% experienced some form of bullying online that caused emotional distress and isolation.
- Social Comparison: 68% stated they compare their lives negatively to others they see online.
- Sleep Disturbance: 71% admitted to using their phones late into the evening and had been struggling to fall asleep or woke tired.

**Corresponding Themes Discovered from Interview Analysis**
- Dependency for emotional validation ("likes" and "followers")
- Pressure to continually present an idealized version of self to others
- Example of exclusion and/or fear of not being "in the loop" (FOMO)
- Feelings of inadequacy while comparing themselves to influencers or peers

The findings reflect that while social media offers connectedness and enjoyment, it also comes at a substantial emotional and psychological cost. Cyberbullying, frequent social comparison, and sleep deprivation are direct mediators of the negative effects of social media. As noted in the qualitative data, there is a need for better emotional and coping education.

**CONCLUSION**
Ultimately, this study has demonstrated that social media overuse and lack of regulation add to the current epidemic of anxiety and depression in adolescents. Social media can still provide major opportunities to communicate and engage in identity exploration, but

measures can be taken to ensure safe use. The interventions for mental health issues need to include a focus on digital behaviour and the development of healthier strategies for engagement. Schools can begin by addressing digital literacy and wellness, and families need to discuss expectations and boundaries around devices.

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