

Social Media Addiction and Self Esteem among Adolescent Students in Srikakulam, India

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Received: 01-01-2026 / Revised: 15-02-2026 / Accepted: 21-03-2026

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Conflict of interest: Nil

Abstract

Background: Adolescence is a critical developmental stage characterized by rapid physical, emotional, and social changes. During this period, individuals begin to form their identity, develop interpersonal relationships, and shape their self-concept.

Social media use is widespread among adolescents, and excessive engagement has been associated with adverse psychological outcomes, including behavioral addiction and impaired well-being. One of the important psychological factors influenced by social media use is self-esteem.

Aim: This paper aims to assess the social media addiction and self-esteem among adolescent students and the relationship between them in Srikakulam, India.

Material and Methods: A cross-sectional observational study was conducted among 200 adolescent students from classes 9th, 10th, Intermediate, and first-year MBBS in Srikakulam district, Andhra Pradesh. Participants were selected using a cluster-based sampling method. Sociodemographic details were collected, and social media addiction and self-esteem were assessed using the Bergen Social Media Addiction Scale and Rosenberg Self-Esteem Scale, respectively. Data were analyzed using descriptive statistics and Chi square tests.

Results: The present study involving 200 adolescent students, the majority of participants (84%) were classified as low risk for social media addiction, while 12.5% were at risk and only 3.5% were in the high-risk category. Social media addiction was slightly more common among males (73 low risk, 15 at risk, 4 high risk) compared to females (95 low risk, 10 at risk, 3 high risk). However, age group and place of stay showed significant associations, with higher risk observed among older adolescents (>18 years) and those residing in urban areas ($p = 0.003$ and $p = 0.03$ respectively). With regard to self-esteem, the majority of students (90%) demonstrated average self-esteem, while 8% had high self-esteem and only 2% had low self-esteem.

Conclusion: The present study concludes that while social media use is common among adolescent students, most adolescents are able to manage their usage without developing severe addiction, and their self-esteem levels remain largely stable. However, special attention should be given to older adolescents and those living in urban areas, as they may be more vulnerable to problematic social media use. Promoting digital awareness, balanced social media habits, and positive self-concept among adolescents may help prevent potential negative psychological effects in the future.

Keywords: Adolescents, social media addiction, self-esteem, mental health, cross-sectional study, urban population.

DOI: 10.25258/ijcpr.18.4.18

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Introduction

Adolescence is a critical developmental stage marked by rapid biological, psychological, and social changes. During this period, individuals form their identity, develop interpersonal relationships, and establish their self-concept. Self-esteem,

defined as an individual's overall evaluation of self-worth, plays a crucial role in psychological well-being and emotional adjustment during adolescence. Rosenberg described self-esteem as a key component of the adolescent self-image that

influences behaviour, coping mechanisms, and social interactions. Adolescents with healthy self-esteem generally demonstrate better resilience, social functioning, and mental health outcomes [3]. In recent years, the increasing availability of smartphones and internet connectivity has significantly expanded social media use among adolescents. Social networking platforms offer opportunities for communication, learning, and social engagement; however, excessive or uncontrolled use may lead to social media addiction, characterized by compulsive engagement, preoccupation with online interactions, and difficulty regulating usage. The Bergen Social Media Addiction Scale (BSMAS) developed by Andreassen et al. is a widely used instrument to assess problematic social media use and its behavioural addiction components. [2]

Emerging evidence suggests that excessive social media engagement may influence adolescents' psychological well-being, particularly self-esteem. Online social comparison and exposure to idealized content may negatively affect self-perception and body image. Colak et al. reported that body image may mediate the relationship between social media addiction and self-esteem among adolescents. Similarly, studies have demonstrated associations between higher social media addiction levels and lower self-esteem among young individuals. [4] A recent study among South Indian adolescents also highlighted the relationship between social media use, social comparison, and self-esteem. [5] However, limited research has explored this relationship among adolescents in smaller districts of India. Therefore, the present study aims to assess social media addiction and self-esteem among adolescent students in Srikakulam, India, and examine their relationship with selected socio-demographic factors.

Aims & Objectives

- To Estimate the social media addiction among Students.
- To determine the self-esteem of the students.
- To Study the relationship between social media addiction and self-esteem.
- To determine the association between social media addiction and various socio-demographic variables.

Methodology

This was an institution-based cross-sectional observational study conducted from July to December among adolescents studying in English-medium government and private schools and colleges in urban Srikakulam, Andhra Pradesh, India.

The study population consisted of school- and college-going adolescents aged between 13 and 19

years. Adolescents who were within the age group of 13–19 years, attending school or college, and whose parents or guardians provided written informed consent along with student assent were included in the study. Students aged below 13 years or above 19 years and those whose parents or guardians did not provide consent were excluded from the study.

Sample Size and Sampling Technique:

The sample size was calculated using the single proportion formula:

$$n = (Z^2 \times p \times (1 - p)) / d^2$$

where n = required sample size, p = prevalence of social media addiction (14.6%), d = margin of error (5%), and Z = standard normal deviate corresponding to a 95% confidence interval (1.96). The calculated sample size was 194, which was rounded off to 200 participants.

A cluster sampling technique was used to select the study participants. The study population was stratified based on educational level into three groups: students studying in 9th–10th class, intermediate students, and first-year MBBS students. Clusters were identified within each stratum, and a list of clusters was prepared. Clusters were then randomly selected, and all eligible students present within the selected clusters were included in the study.

Data Collection Technique - Data were collected using a semi-structured socio-demographic proforma that included variables such as age, gender, type of family, number of siblings, and place of residence. The Bergen Social Media Addiction Scale (BSMAS) was used to assess the level of social media addiction among adolescents. The BSMAS consists of six items rated on a Likert scale ranging from 1 (very rarely) to 5 (very often), with a total score ranging from 6 to 30, where higher scores indicate greater levels of social media addiction. Based on the total score, participants were categorized into low risk (6–18), at risk (19–23), and high risk (24–30) for social media addiction.

Self-esteem among adolescents was assessed using the Rosenberg Self-Esteem Scale (RSES), a widely used instrument for measuring global self-esteem. The scale consists of 10 items rated on a four-point Likert scale, with total scores ranging from 0 to 40. Based on the total score, self-esteem was categorized as low self-esteem (<15), average self-esteem (15–25), and high self-esteem (26–40).

All questionnaires were administered in printed paper format in a classroom setting under supervision to ensure uniformity in data collection. Written informed consent from parents or guardians was obtained prior to data collection, and

assent was obtained from the participating students. Each participant required approximately 15–20 minutes to complete the questionnaires.

Ethical Considerations - Ethical approval for the study was obtained from the Institutional Ethics Committee of Government Medical College. Permission to conduct the study was obtained from the respective school and college authorities. Confidentiality and anonymity of the participants were maintained throughout the study.

Statistical Analysis: The collected data were compiled and entered into Microsoft Excel and analyzed using Statistical Package for the Social Sciences (SPSS) software. The results were presented using tables and descriptive statistics.

The Chi-square test was applied to determine the association between social media addiction and

socio-demographic variables as well as self-esteem levels. A p-value <0.05 was considered statistically significant.

Results

The present study involving 200 adolescent students, the majority of participants (84%) were classified as low risk for social media addiction, while 12.5% were at risk and only 3.5% were in the high-risk category, indicating that most adolescents demonstrated controlled use of social media platforms.

Social media addiction was slightly more common among males (73 low risk, 15 at risk, 4 high risk) compared to females (95 low risk, 10 at risk, 3 high risk), although this association was not statistically significant (p = 0.25) as shown in Table 1.

Table 1: sociodemographic characteristics of participants

Gender	Low Risk (6-18)	At Risk (19-23)	High Risk (24-30)	Total
Male	73	15	4	92
Female	95	10	3	108
	168	25	7	200

Similarly, type of family and number of siblings did not show significant associations with social media addiction as shown in table 2 and Figure 1 respectively

Table 2: Type of family of participants

Type of Family	Low Risk	At Risk	High Risk	Total
Nuclear	114	17	4	135
Joint	44	6	1	51
Extended	10	2	2	14
	168	25	7	200

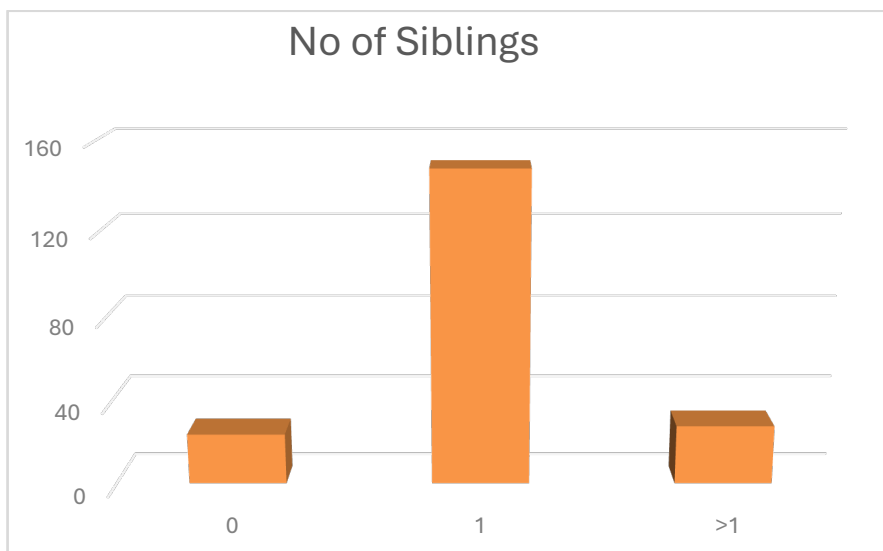


Figure 1: No of siblings of participants

However, age group and place of stay showed significant associations, with higher risk observed among older adolescents (>18 years) and those residing in urban areas (p = 0.003 and p = 0.03

respectively), suggesting that developmental stage and environmental exposure may influence social media use patterns as shown in table 3 and Figure 2 respectively.

Table 3: Age Group of the Participants

Age	Low Risk	At Risk	High Risk	Total
13-17	127	11	4	142
>18	41	14	3	58
	168	25	7	200

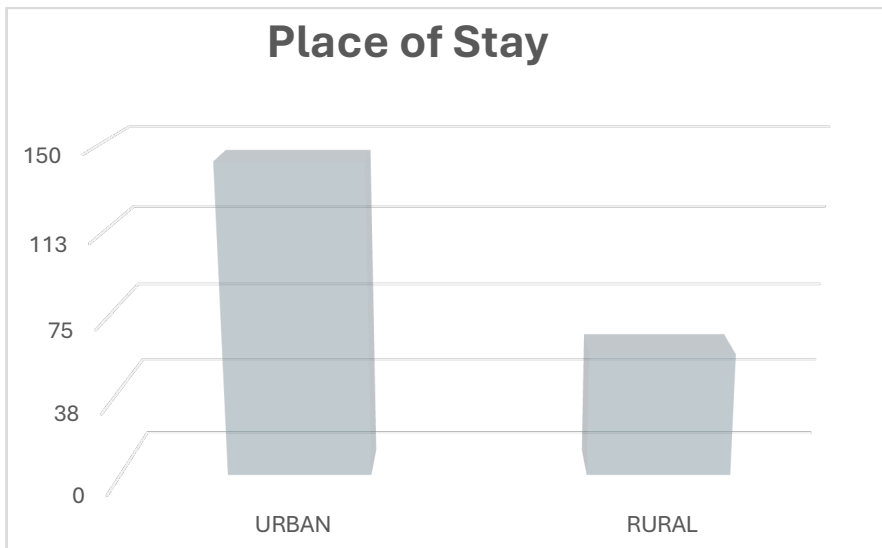


Figure 2: Place of Stay of the Participants

With regard to self-esteem, the majority of students (90%) demonstrated average self-esteem, while 8% had high self-esteem and only 2% had low self-esteem, reflecting generally healthy psychological well-being among the participants.

Most adolescents with average self-esteem were in the low-risk social media addiction category,

indicating a balanced relationship between social media use and self-perception.

Overall, the findings highlight that most adolescents maintain healthy levels of self-esteem and controlled social media usage, with only a small proportion exhibiting problematic patterns as shown in table 4.

Table 4: Self-esteem among the Adolescent Students and its relationship with social media addiction

Self Esteem	Low self Esteem (<15)	Average Self Esteem (15-25)	High Self Esteem(26-40)	Total
No. of Students	4	180	16	200

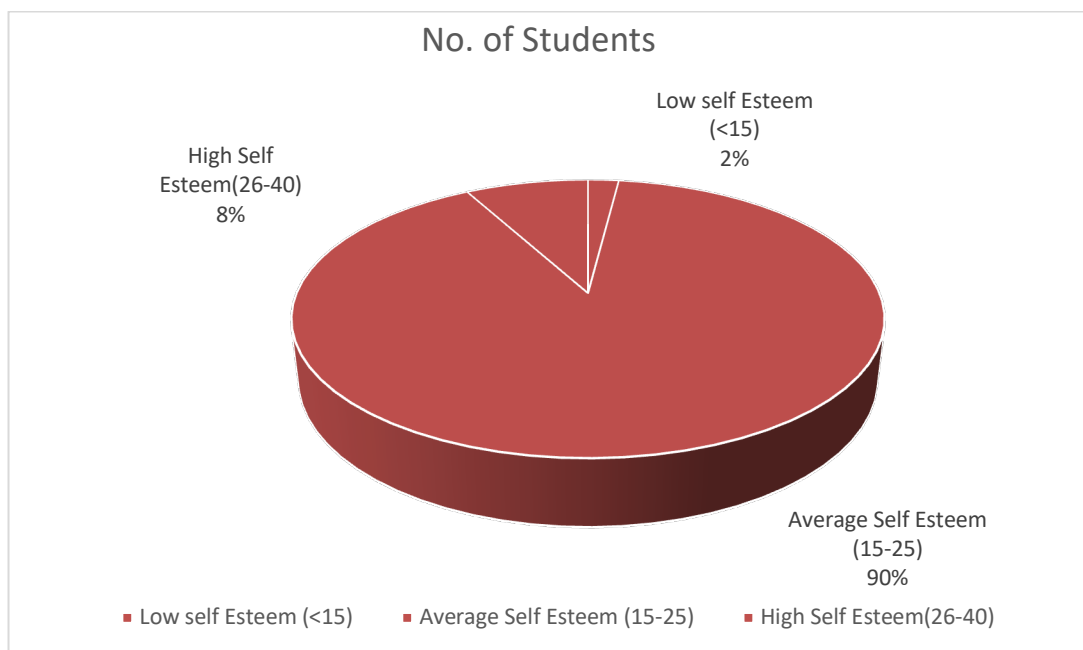


Figure 3: Self-esteem of participants

Table 5:

	Low Risk	At Risk	High Risk	Total
Low Self Esteem	3	1	0	4
Average Self Esteem	162	15	3	180
High Self Esteem	3	9	4	16
	168	25	7	200

Discussion

The present study assessed the prevalence of social media addiction and its relationship with self-esteem among adolescents. The findings revealed that the majority of participants (84%) fell into the low-risk category for social media addiction, while 12.5% were at risk and only 3.5% were classified as high risk. This suggests that most adolescents in the present sample demonstrate controlled and adaptive use of social media platforms. Similar findings have been reported in several studies which indicate that although social media use is widespread among adolescents, only a small proportion develop problematic or addictive patterns of use.

The slightly higher prevalence of social media addiction among males compared to females observed in the present study was not statistically significant. This finding is consistent with previous research by Andreassen et al. (2016) [2], who reported that gender differences in social media addiction are inconsistent and may vary across cultures and social contexts. Some studies suggest higher usage among females due to social interaction needs, whereas others report higher addictive tendencies among males due to gaming and online engagement behaviors.

The present study also found that type of family and number of siblings were not significantly associated with social media addiction. This finding suggests that family structure alone may not be a determining factor for problematic social media use. Previous research has similarly indicated that psychosocial factors such as parental monitoring, peer influence, and individual personality traits may play a more significant role than family composition alone (Kuss & Griffiths, 2017) [6].

However, age group showed a statistically significant association, with higher levels of social media addiction observed among adolescents aged above 18 years. This may be explained by increased autonomy, greater access to digital devices, and increased academic or social networking needs among older adolescents. Similar findings were reported by Bányai et al. (2017) [7], who noted that older adolescents and young adults tend to have greater engagement with social networking platforms, increasing the likelihood of problematic use. The study also demonstrated a significant association between place of residence

and social media addiction, with higher risk among adolescents residing in urban areas. Urban environments generally provide greater access to internet connectivity, smartphones, and digital technologies, which may facilitate more frequent social media usage. This observation is supported by earlier research indicating that urban adolescents tend to have higher exposure to digital media compared to their rural counterparts (Pantic, 2014) [8].

Regarding self-esteem, the majority of participants in the present study demonstrated average levels of self-esteem, with only a small proportion showing low self-esteem. This suggests that overall psychological well-being among the participants was relatively healthy. The relationship between social media use and self-esteem has been widely explored in previous studies. Research by Vogel et al. (2014) [9] indicates that excessive social media use may negatively affect self-esteem through mechanisms such as social comparison and perceived inadequacy.

In the present study, most adolescents with average self-esteem were found in the low-risk social media addiction category, suggesting that balanced social media usage may not adversely affect self-perception. This finding supports the view that moderate use of social media can serve positive functions such as social connectivity, information sharing, and emotional support (Kross et al., 2013) [10]. Overall, the findings of the present study indicate that although social media use is common among adolescents, only a small proportion demonstrate problematic patterns suggestive of addiction. Age and environmental exposure appear to play a significant role in influencing social media usage behaviors. These findings highlight the importance of promoting healthy digital habits and awareness among adolescents, particularly among older students and those residing in urban settings.

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