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Psychological Impact of Social Media Use on Self-Esteem Among Intern Doctors: A Cross-Sectional Study in Western India

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ABSTRACT

Introduction: Social media use is common among young doctors and may influence psychological well-being and self-esteem. This study assessed self-esteem, social media disorder, and their correlation among intern doctors.

Materials and Methods: This observational cross-sectional study was conducted among intern doctors from October 2025 to December 2025. The questionnaire was sent to 82 interns, of whom 60 provided complete responses, which were included in the final analysis. Data were collected using a structured questionnaire including demographic details, the Rosenberg Self-Esteem Scale (RSES), and the Social Media Disorder Scale (SMD). RSES scores were categorized as normal and high self-esteem, while SMD scores were categorized as low, moderate, and high/probable SMD. Pearson correlation and Chi-square test were used for statistical analysis.

Results: The mean age of participants was 23.4 ± 1.1 years. Among 60 interns, 32 (53.3%) were males, and 28 (46.7%) were females. The mean RSES score was 25.53 ± 3.09, while the mean SMD score was 2.87 ± 1.75. Normal self-esteem was observed in 29 (48.3%) participants, and high self-esteem in 31 (51.7%) participants. Low SMD was present in 23 (38.3%), moderate SMD in 28 (46.7%), and high/probable SMD in 9 (15.0%) participants. Pearson correlation showed a significant negative correlation between RSES and SMD scores ($r = -0.447$, $p = 0.0003$). A significant association was also found between the self-esteem category and the SMD category ($\chi^2 = 7.660$, $p = 0.0217$).

Conclusion: Higher social media disorder scores were significantly associated with lower self-esteem among intern doctors. Awareness regarding healthy social media use may help improve psychological well-being.

Keywords*: Self-esteem, Social media disorder, Intern doctors, Rosenberg Self-Esteem Scale, Social media use.*

INTRODUCTION

Self-esteem is an important psychological construct that reflects an individual's overall sense of self-worth, self-respect, and confidence. It influences emotional well-being, interpersonal relationships, academic performance, and overall mental health. Rosenberg described self-esteem as a positive or negative attitude toward the self, and the Rosenberg Self-Esteem Scale remains one of the most widely used tools for assessing this construct.[1,2]

Social media has become an integral part of daily life, especially among adolescents and young adults. It provides opportunities for communication, social connection, self-expression, and peer interaction. However, excessive or problematic use of social media may negatively affect psychological well-being. Previous studies have reported that higher social media use is associated with social comparison, body image concerns, anxiety, depressive symptoms, and lower self-esteem.[3,4]

The relationship between social media use and self-esteem is complex. Positive feedback, peer approval, and online social support may improve self-confidence in some individuals. In contrast, excessive engagement, upward social comparison, fear of missing out, cyberbullying, and dependence on online validation may reduce self-esteem. Studies have shown a

negative relationship between social media addiction and self-esteem, suggesting that individuals with higher problematic social media use tend to have lower self-esteem.[5]

Problematic social media use is commonly assessed using the Social Media Disorder Scale, which is based on addiction-like symptoms such as preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict.[6] Validation studies have shown that the 9-item SMD scale is a reliable and valid tool for assessing problematic social media use among adolescents.[6,7]

Among medical students and intern doctors, self-esteem and social media use are particularly relevant because this group faces academic pressure, professional expectations, long working hours, and frequent online engagement. Excessive social media use may affect self-perception, productivity, sleep, and emotional well-being. Therefore, studying the association between self-esteem and social media disorder in intern doctors can help identify the psychological impact of problematic social media use in this vulnerable professional group.

Hence, the present study was conducted to assess self-esteem using the Rosenberg Self-Esteem Scale, evaluate social media disorder using the Social Media Disorder Scale, and determine the correlation between self-esteem and social media disorder among intern doctors.

MATERIALS AND METHODS

Study design

The present study was an observational cross-sectional study conducted among intern doctors to assess the relationship between self-esteem and social media disorder.

Study duration

The study was conducted from October 2025 to December 2025.

Study population

The questionnaire was sent to 82 intern doctors. Out of these, 60 intern doctors submitted complete responses and were included in the final analysis.

Inclusion criteria

Intern doctors who were willing to participate and gave informed consent were included in the study.

Exclusion criteria

Intern doctors who did not give consent or submitted incomplete responses were excluded from the study.

Study tools

Data were collected using a structured questionnaire. It included demographic details such as age and gender, as well as 2 standardized scales.

The Rosenberg Self-Esteem Scale was used to assess self-esteem. It is a 10-item scale used to measure global self-esteem. Higher scores indicate better self-esteem.[8]

The Social Media Disorder Scale was used to assess problematic social media use. It includes 9 items based on addiction-like symptoms such as preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict.[6,7]

Scoring and categorization

Rosenberg Self-Esteem Scale scores were categorized as normal self-esteem and high self-esteem.[8]

RSES category	Score range
Normal self-esteem	15 to 25
High self-esteem	>25

Social Media Disorder scores were categorized as low, moderate, and high / probable SMD.

SMD category	Score range
Low SMD	0 to 2
Moderate SMD	3 to 4
High/probable SMD	≥5

Data collection procedure

After obtaining informed consent, the questionnaire was distributed among intern doctors during the study period. Participants completed the questionnaire voluntarily. Only complete responses were included in the final analysis. RSES and SMD scores were calculated for each participant according to the scoring system.

Statistical analysis

Data were entered and analyzed using appropriate statistical software. Quantitative variables were expressed as mean, standard deviation, median, minimum, and maximum. Categorical variables were expressed as frequency and percentage. The Pearson correlation test was used to assess the correlation between RSES and SMD scores. Chi-square test was used to assess the association between the self-esteem category and the social media disorder category. A p-value of <0.05 was considered statistically significant.

RESULTS

A total of 60 intern doctors were included in the final analysis. The mean age of the participants was 23.4 ± 1.1 years. Among them, 32 (53.3%) were males, and 28 (46.7%) were females. Most participants were in the 22 to 23 years age group, 42 (70.0%), followed by the 24 to 25 years age group, 16 (26.7%), and the 26 to 27 years age group, 2 (3.3%).

The mean Rosenberg Self-Esteem Scale score was 25.53 ± 3.09, with a median score of 26 and a range of 19 to 32. The mean Social Media Disorder score was 2.87 ± 1.75, with a median score of 3 and a range of 0 to 7.

Based on RSES categorization, 29 (48.3%) participants had normal self-esteem, and 31 (51.7%) had high self-esteem. No participant had low self-esteem.

Table 1: Rosenberg Self-Esteem Scale score distribution

RSES category	Score range	n	%
Normal self-esteem	15 to 25	29	48.3
High self-esteem	>25	31	51.7
Total	-	60	100

Based on SMD categorization, 23 (38.3%) participants had low SMD scores, 28 (46.7%) had moderate SMD scores, and 9 (15.0%) had high or probable SMD scores.

Table 2: Social Media Disorder score distribution

SMD category	Score range	n	%
Low SMD	0 to 2	23	38.3
Moderate SMD	3 to 4	28	46.7
High/probable SMD	≥5	9	15.0
Total	-	60	100

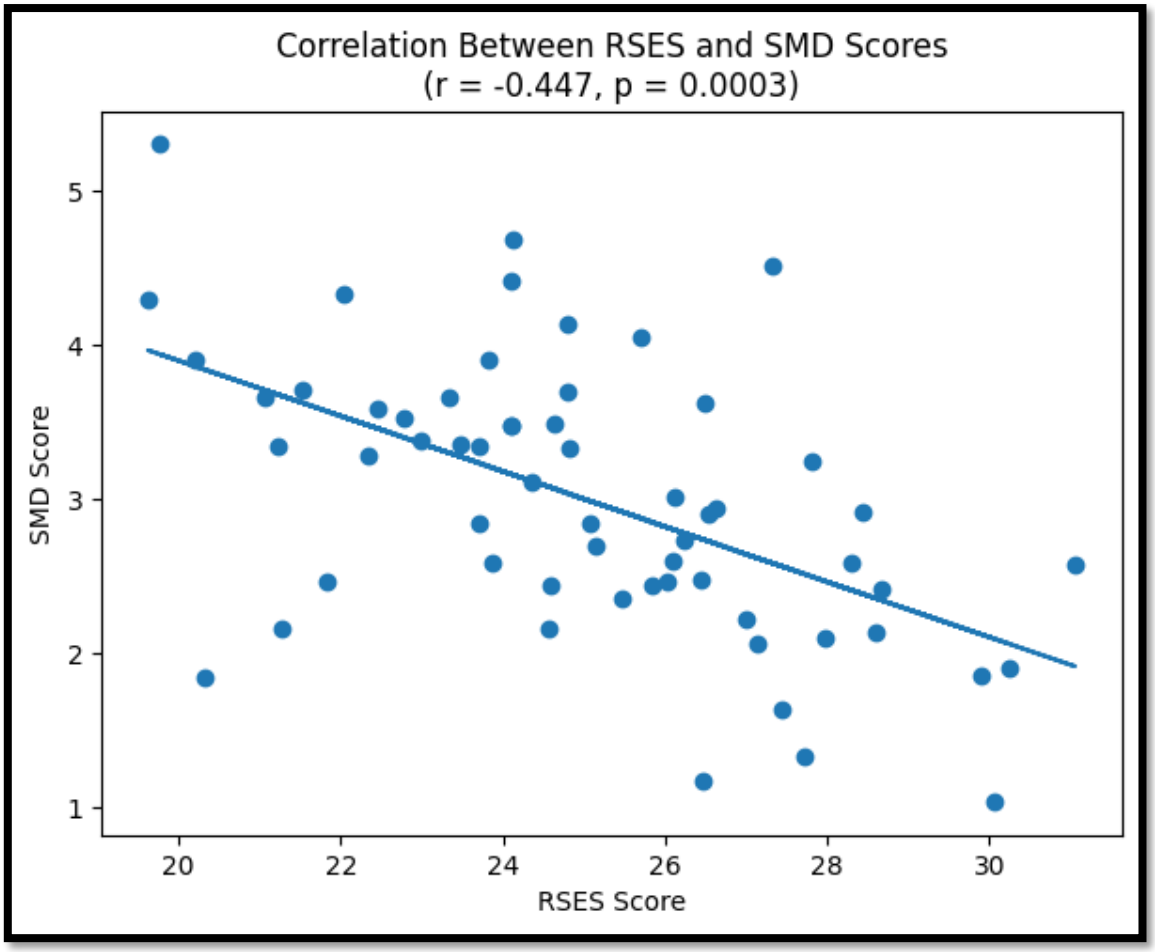
Table 3: Descriptive statistics of RSES and SMD scores

Variable	Mean ± SD	Median	Minimum	Maximum
RSES score	25.53 ± 3.09	26	19	32
SMD score	2.87 ± 1.75	3	0	7

Pearson correlation analysis showed a statistically significant negative correlation between RSES score and SMD score ($r = -0.447$, $p = 0.0003$). This shows that higher social media disorder scores were associated with lower self-esteem among intern doctors.

Table 4: Correlation between RSES and SMD scores

Variables	Test used	Correlation coefficient (r)	p value
RSES score vs SMD score	Pearson correlation	-0.447	0.0003



A statistically significant association was also found between the self-esteem category and the SMD category ($\chi^2 = 7.660$, $p = 0.0217$). High or probable SMD was seen in 8 out of 29 participants with normal self-esteem, while only 1 out of 31 participants with high self-esteem had high or probable SMD.

Table 5: Association between self-esteem and social media disorder categories

RSES category	Low SMD	Moderate SMD	High/probable SMD	Total
Normal self-esteem	8	13	8	29
High self-esteem	15	15	1	31
Total	23	28	9	60

Test used: Chi-square test, $\chi^2 = 7.660$, $p = 0.0217$.

Overall, the findings indicate that higher social media disorder scores were significantly associated with lower self-esteem among intern doctors.

DISCUSSION

The present study assessed the relationship between self-esteem and social media disorder among intern doctors. A total of 60 complete responses were analyzed from 82 questionnaires sent between October 2025 and December 2025. The mean age of participants was 23.4 ± 1.1 years, and males formed 53.3% of the study population. The mean RSES score was 25.53 ± 3.09, while the mean SMD score was 2.87 ± 1.75.

In the present study, 29 (48.3%) participants had normal self-esteem and 31 (51.7%) had high self-esteem. No participant had low self-esteem. This suggests that most intern doctors had preserved self-worth and confidence. However, despite the absence of low self-esteem, variation in self-esteem scores was still observed and was meaningfully related to social media disorder scores.

Based on SMD categorization, 23 (38.3%) participants had low SMD, 28 (46.7%) had moderate SMD, and 9 (15.0%) had high or probable SMD. This finding indicates that problematic social media use was present in a notable proportion of intern doctors. Since interns are exposed to academic stress, clinical workload, irregular sleep, peer comparison, and continuous digital communication, excessive social media use may act both as a coping behavior and as a source of psychological burden.

The main finding of the study was a statistically significant negative correlation between RSES and SMD scores. Pearson correlation showed r = -0.447 with p = 0.0003. This indicates that higher social media disorder scores were associated with

lower self-esteem. This finding is consistent with prior literature indicating that excessive or problematic social media use may be associated with lower self-esteem, possibly due to social comparison, dependence on online validation, reduced offline interaction, and exposure to idealized content.[3–5]

The categorical analysis also supported this association. A significant association was found between the self-esteem category and the SMD category, with $\chi^2 = 7.660$ and $p = 0.0217$. High or probable SMD was seen in 8 participants with normal self-esteem, but only 1 participant with high self-esteem. This suggests that participants with higher self-esteem were less likely to have a high or probable social media disorder.

The findings of the present study are comparable with those of Colak et al., who reported a negative relationship between self-esteem and social media addiction levels among adolescents.[3] Similarly, Malik also reported that excessive social media usage may contribute to lower self-esteem among adults.[4] The present study adds to this evidence by focusing on intern doctors, a group in which psychological well-being and digital behavior are highly relevant.

Woods and Scott observed that social media use in adolescents was associated with poor sleep quality, anxiety, depression, and low self-esteem.[9] Although the present study did not assess sleep, anxiety, or depression, the finding of higher problematic social media use among interns is clinically important because interns commonly experience irregular duty hours and sleep disruption. Therefore, sleep disturbance may be an important hidden factor linking social media disorder and lower self-esteem in this group.

Steinsbekk et al. studied the effect of social media use on appearance self-esteem from childhood to adolescence and reported that social media may influence self-esteem through appearance-related comparison.[10] The present study did not specifically assess appearance self-esteem, but the negative correlation between SMD and global self-esteem supports the broader concept that social media can affect self-perception. This comparison suggests that both general self-esteem and appearance-based self-esteem may be vulnerable to problematic exposure to social media.

Krause et al. emphasized that social network site use may have both beneficial and harmful effects on self-esteem.[11] This is important while interpreting the present study. Social media may provide peer support, communication, learning resources, and professional networking for intern doctors. However, when use becomes excessive or disorder-like, its harmful effects may become more prominent. Thus, the present study does not suggest that all social media use is harmful, but indicates that problematic use is associated with lower self-esteem.

Burrow and Rainone reported that positive social media feedback, such as likes, may influence self-esteem, but this effect may depend on an individual's sense of purpose.[12] This finding supports the present study, as interns with higher self-esteem may be less dependent on online approval. In contrast, those with normal, not high, self-esteem may be more affected by online feedback, which may explain why high or probable SMD was more common in the normal self-esteem group than in the high self-esteem group.

Köse and Doğan reported a significant relationship between social media addiction and self-esteem among Turkish university students.[13] Their findings are comparable to those of the present study because both studies involved educated young adult populations. The similarity suggests that the link between social media addiction and self-esteem is not limited to adolescents but is also relevant among university students and medical interns.

Andreassen et al. reported that addictive use of social media was related to self-esteem and narcissism.[14] This supports the present study, where higher SMD scores were associated with lower self-esteem. Their study also highlights that personality traits may influence social media behavior. Since the present study did not assess personality traits such as narcissism, impulsivity, or neuroticism, future studies among intern doctors should include these variables.

Jiang reported that problematic social media usage was associated with anxiety among university students during the COVID 19 pandemic, with psychological capital and academic burnout playing important roles.[15] Although the present study was not conducted during the pandemic and did not assess anxiety or burnout, the comparison is relevant because intern doctors are also exposed to academic and professional stress. Problematic social media use in this group may therefore be linked not only with self-esteem but also with stress, burnout, and emotional well-being.

The Social Media Disorder Scale used in the present study is based on addiction-like features such as preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict.[6] Validation studies have shown that the 9-item SMD scale is a reliable tool for assessing problematic social media use.[6,7] Therefore, the use of this scale strengthens the methodological validity of the present study.

The study has certain limitations. The sample size was small, and the study was conducted only among intern doctors, which may limit generalizability. The study was cross-sectional, so a causal relationship cannot be established. Self-reported responses may be affected by recall bias or social desirability bias. Also, other factors such as sleep quality, anxiety, depression, academic stress, and personality traits were not assessed.

Despite these limitations, the study highlights an important association between social media disorder and self-esteem among intern doctors. Regular screening for problematic social media use, digital well-being education, and stress management strategies may help improve psychological well-being in this group.

CONCLUSION

The present study found a significant negative correlation between self-esteem and social media disorder among intern doctors. Higher SMD scores were associated with lower RSES scores. A significant association was also observed between self-esteem category and SMD category.

Most participants had normal or high self-esteem, but 15.0% had high or probable social media disorder. Participants with high self-esteem were less likely to have high or probable SMD.

Thus, problematic social media use may be negatively associated with self-esteem among intern doctors. Awareness regarding healthy social media use and early identification of problematic use may help promote better psychological well-being among medical interns.

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