International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2025: 7.089

Social Media Use, Self-Esteem, and Loneliness among Emerging Adults

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Abstract: ***This study explored the correlation between social media integration, self-esteem, and loneliness in emerging adults in India. A quantitative, cross-sectional design involving correlational analysis with a sample size of 50 participants aged between 19 and 29 years (33 males and 17 females) was used, selected via convenience and snowball sampling technique. The data was collected using an online survey that included the SMUIS, RSES, and UCLA Loneliness Scale, Version 3. Statistical analyses including descriptive statistics, Cronbach's alpha coefficient, Pearson correlations, and simple linear regression analysis were conducted in IBM SPSS Statistics. There was no significant relationship between social media integration and self-esteem, r(48) = -.025, p = .864, or loneliness, r(48) = .003, p = .983, as well as no significant prediction of self-esteem and loneliness by social media integration. Self-esteem and loneliness correlated very weakly in a negative direction but without achieving significance, r(48) = -.252, p = .077. Therefore, it appears that aggregate social media integration is not adequate to account for individual differences in self-esteem and loneliness.***

Keywords: social media use, self-esteem, loneliness, emerging adults

1. Introduction

The role of social media has become an integral part of communication, self-presentation, and interaction. The relevance of its use becomes especially evident during the period of emerging adulthood which is defined as a time of identity exploration, relationship changes, educational and occupational changes, and increased independence [1,2]. For emerging adults, the usage of social media can serve as means of sustaining relationships, obtaining social feedback, building an identity, and comparing themselves with others.
Hence, studies from the domain of psychology have investigated whether there is a connection between social media usage and self-esteem as well as loneliness. Self-esteem is considered as the global evaluation of one's own value [3], while loneliness is the state of mind that occurs due to the difference between desired and current social relations [4,5].

On the other hand, the scientific literature does not offer conclusive evidence that more time spent using social media is necessarily bad or good. According to the social comparison theory, being exposed to idealized self-presentation can promote upward social comparison and lower self-evaluation [6,7]. On the contrary, the hyperpersonal perspective claims that CMC can contribute to the facilitation of positive self-presentation and feedback [8]. Finally, empirical research points out that active social interaction may foster social bonding, while some forms of passive exposure may be detrimental to well-being [9-11].
More recent evidence further suggests that the size of these relationships is generally small and that outcomes vary according to the type and context of use. Meta-analytic and review evidence has questioned whether aggregate measures such as frequency or duration adequately capture the psychologically relevant aspects of social media behaviour [12-15]. Recent work has also highlighted problematic or compulsive use as a potentially more consistent correlate of loneliness than ordinary use [16,17].
The Indian context remains comparatively underrepresented in this literature. Although Indian studies have examined social media, fear of missing out, self-esteem, social connectedness, and loneliness, the evidence remains limited and often focuses on specific forms of problematic use or university populations [18-21]. The present study therefore examined the relationship between social media integration, self-esteem, and loneliness among Indian emerging adults using established psychometric measures.

2. Literature Survey

2.1 Studies Related to Social Media Use

Social media research has evolved from investigating if virtual connections replace real-life interactions to studies that examine the use of digital media in more differentiated ways. Relationships between social capital and use of Facebook were investigated by Ellison et al. [22]. Additionally, Jenkins-Guarnieri et al. [23] created the Social Media Use Integration Scale (SMUIS) to evaluate the integration of social media into users' life practices and emotions in contrast to the mere evaluation of how much time was spent on using social media.

Research conducted on active and passive use have led to inconclusive results.Burke et al. [9] found that direct communication was associated with social well-being, whereas Verduyn et al. [10] reported that passive Facebook use could undermine affective well-being through processes such as social comparison and envy. Subsequent reviews have shown that the active–passive distinction is more complex than originally assumed and that average associations between social media use and well-being are often small [14,24].

2.2 Studies Related to Self-Esteem

Self-esteem research provides similarly mixed evidence. Social comparison theory suggests that exposure to idealised online representations may lower self-evaluation [7]. According to Kross et al. [25] and Shakya and Christakis [26], the use of Facebook was linked to reduced well-being. On the other hand, Gonzales and Hancock [27] have found that the view of one's Facebook profile may lead to an improvement in self-esteem. Based on meta-analysis findings, there is a weak relationship between social network use and low self-esteem [12,13].

2.3 Studies Related to Loneliness

Research on loneliness also indicates that the relationship depends on the nature of engagement. Active and directed online communication may support social connection, whereas passive use may be less beneficial [9,11]. Population and cohort studies have reported associations between social media or online experiences and loneliness, but recent evidence suggests that compulsive use, online victimisation, or broader patterns of online behaviour may explain more variance than social media use alone [17]. Similarly, a meta-analysis recently came up with the conclusion that the link between the usage of social media and loneliness is very small, especially with problematic/addictive usage [16].

2.4 Research Gap

Evidence from India is available, albeit to some extent. In one study, Rajan et al. [18] explored the usage of Instagram and how it correlates with fear of missing out and loneliness amongst Indians youth, and Saggar [19] explored connections between social media usage, connectedness, and self-esteem. Associations regarding social media addiction, self-esteem, and loneliness have been observed by Chopra and Sethi [20] and Mushtaq and Soni [21]. Taken together, these findings suggest that problematic or qualitatively different patterns of use may be more informative than aggregate exposure alone. The present study addresses this issue by examining social media integration alongside both self-esteem and loneliness in one sample of Indian emerging adults.

3. Problem Definition

There is an existing conflict in the literature about the connection between social media usage and self-esteem and loneliness, with some authors reporting negative connections while others neutral or positive. Much of the evidence also comes from Western populations, while Indian emerging adults remain comparatively understudied. A further issue is that measures of social media use differ substantially, with aggregate frequency or duration measures potentially obscuring meaningful differences in how social media is integrated into everyday life. The present study therefore investigated whether social media integration was associated with self-esteem and loneliness and whether social media integration significantly predicted these outcomes among emerging adults in India.

4. Methodology / Approach

4.1 Research Design

A cross-sectional research design using correlation and quantitative approaches was employed. The study explored the interrelationships between social media integration, self-esteem, and loneliness as well as predicting how social media integration influences the two psychological variables using simple linear regression.

4.2 Participants and Sampling

The last set of the samples was 50 emerging adults between the ages of 19 to 29 years. The participants were identified using non-probability sampling methods together with the snowball sampling approach via the online survey. The sample consisted of 33 males (66.0%) and 17 females (34.0%). The inclusion criteria for the eligible participants involved being in the stated age bracket, using one social media site, reading and understanding English enough to fill the questionnaire, and giving consent.

4.3 Measures

A brief socio-demographic questionnaire was used to obtain data about age, gender, education and social media usage. The level of social media integration was evaluated with the help of 10-item Social Media Use Integration Scale (SMUIS; Jenkins-Guarnieri et al., 2013). The SMUIS is a measure of Social Integration and Emotional Connection (SIEC; six items) and Integration into Social Routines (ISR; four items). A higher score means a higher level of integration. Self-esteem was assessed with the help of 10-item Rosenberg Self-Esteem Scale (RSES; [3]). A higher score indicates a higher level of global self-esteem.

The possible score ranges were 10–50 for the SMUIS, 10–40 for the RSES, and 20–80 for the UCLA Loneliness Scale. In the present sample, internal consistency was $\alpha = .86$ for the SMUIS, $\alpha = .67$ for the RSES, and $\alpha = .71$ for the UCLA Loneliness Scale.

4.4 Procedure

The data collection was done by Google Forms survey that included informed consent, socio-demographic questions, and the three standardized tools. It took about 10–15 minutes to complete the survey. The survey link was distributed through email and social networking platforms, and early respondents were encouraged to share it with eligible contacts. Responses were collected anonymously and screened against the inclusion and exclusion criteria before analysis.

4.5 Statistical Analysis

Data were analysed using IBM SPSS Statistics. Frequencies and percentages were used to describe the sample, while means, standard deviations, and observed ranges were calculated for the study variables. Cronbach's alpha was used to assess internal consistency. Pearson product-moment correlations were calculated to test the relationships specified

in H1–H3. Simple regression analyses were conducted to test if the SMUIS total score could predict RSES and UCLA Loneliness score for hypothesis four. The statistical analysis was done using a two-tailed test at $p < .05$.

4.6 Ethical Considerations

Participation was voluntary and based on informed consent. Participants were informed that they could discontinue participation without penalty and that responses would be treated confidentially and analysed at the group level. No identifying information was retained in the research dataset.

5. Results & Discussion

5.1 Sample Characteristics

The sample consisted of 50 emerging adults, including 33 males (66.0%) and 17 females (34.0%).

Table 1: Gender distribution of participants (N = 50)

Gender	n	%
Male	33	66
Female	17	34
Total	50	100

5.2 Reliability and Descriptive Statistics

The average total score of SMUIS was 32.42 (SD = 6.24), where the scores varied between 10 and 44. Self-Esteem was 28.88 (SD = 3.16; range = 22 - 37), whereas the average loneliness was 45.38 (SD = 6.24; range = 30 - 53). The SMUIS showed excellent internal consistency (α = .86). However, the RSES (α = .67) and UCLA Loneliness Scale (α = .71)

Table 3: Descriptive statistics for study variables (N = 50)

Variable	Possible Range	M	SD	Min	Max
SMUIS Total	10–50	32.42	6.24	10	44
SIEC	6–30	18.34	4.14	6	26
ISR	4–20	14.08	2.67	4	20
RSES	10–40	28.88	3.16	22	37
UCLA Loneliness	20–80	45.38	6.24	30	53

5.3 Correlational Analysis (Testing H1–H3)

Integration of social media was not found to be significantly associated with self-esteem, $r(48) = -.025$, $p = .864$, or loneliness, $r(48) = .003$, $p = .983$. Hence, hypotheses H1 and H2 were not supported. Weak negative correlation between self-esteem and loneliness, $r(48) = -.252$, $p = .077$, was also noted but did not attain the threshold of significance.

Table 4: Pearson correlation matrix among study variables

Variable	1	2	3	4	5
1. SMUIS Total	—				
2. SIEC	0.95	—			
3. ISR	0.87	0.67	—		
4. Self-Esteem	-0.03	-0.13	0.14	—	
5. Loneliness	0	0.03	-0.04	-0.25	—

Note: Correlations are Pearson's r. Significance was evaluated using two-tailed tests at $p < .05$.

Table 5: Summary of correlational hypothesis tests

Hypothesis	Relationship	r	p	Result
H1	Social media use–Self-esteem	-0.025	0.864	Not supported
H2	Social media use–Loneliness	0.003	0.983	Not supported
H3	Self-esteem–Loneliness	-0.252	0.077	Not supported

5.4 Regression Analysis (Testing H4)

Social media integration did not significantly predict self-esteem, $B = -.013$, $SE = .073$, $R^2 = .001$, $F(1,48) = 0.03$, $p = .864$. It also did not significantly predict loneliness, $B = .003$, $SE = .144$, $R^2 < .001$, $F(1,48) = 0.00$, $p = .983$. H4 was therefore not supported. The regression models explained essentially none of the variance in either outcome.

5.5 Findings of the Study

Overall, social media integration was neither significantly correlated with nor predictive of self-esteem or loneliness in the present sample. Self-esteem and loneliness showed a weak negative, non-significant association. Thus, H1–H4 were not supported.

5.6 Discussion of Findings

The absence of significant relationships between social media integration and either self-esteem or loneliness is consistent with recent evidence indicating that aggregate measures of social media use often show only small associations with psychological outcomes. Meta-analytic work has suggested that problematic use and particular forms of engagement may be more relevant than ordinary or aggregate use [13,16,24]. The present findings therefore should not be interpreted as evidence that social media has no psychological effects. Rather, they suggest that the degree to which social media is integrated into everyday life may be too broad a measure to capture the specific processes through which online behaviour affects well-being.

The findings also differ from studies reporting negative associations between social media use and self-esteem or loneliness [12,25,26]. One explanation is statistical power: with N = 50, the present study was better positioned to detect medium or large effects than the small associations commonly reported in meta-analyses. A second explanation is measurement specificity. The SMUIS assesses integration, emotional connection, and routine use but does not distinguish active from passive engagement or specifically identify compulsive use. If different forms of engagement have opposing associations with psychological outcomes, an aggregate score may attenuate the observed relationships.

The negative association between self-esteem and loneliness, although not statistically significant, was stronger than either construct's association with social media integration. This direction is consistent with literature conceptualising self-esteem and loneliness as interconnected aspects of psychosocial adjustment [28-30]. However, the p value exceeded .05, so the present study does not provide sufficient evidence to conclude that the association is statistically reliable.

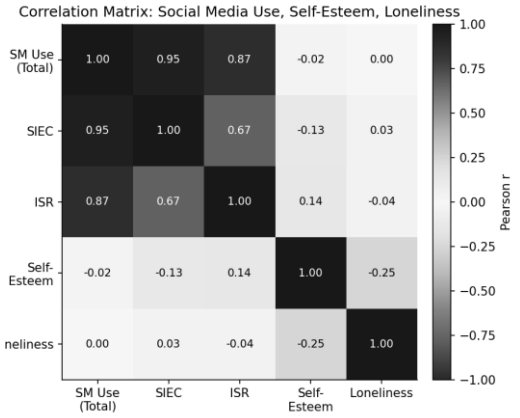

Figure 1: Correlation heatmap of study variables

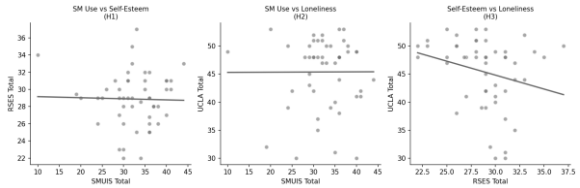

Figure 2: Scatterplots for hypothesis-relevant relationships

5.7 Limitations of the Study

The sample size was small, and the sample was drawn using convenient and snowball sampling; this limited the statistical power and generalisability of the study. There was an unequal distribution of gender among the participants, and the research design was cross-sectional; this prevented any causation from being established. The use of self-report measures in all constructs used in the study could be a cause of response bias. The internal consistency of RSES and UCLA scale used was relatively low in this study.

5.8 Implications of the Study

5.8.1 Theoretical Implications

These results point to a need for a careful consideration of broader social media integration strategies and strengthen the importance of looking into more focused forms of engagement, especially active and passive ones, in research of psychological effects**.**

5.8.2 Practical Implications

These results suggest that it would be incorrect to treat social media usage as a single risk factor. Digital literacy programs and psychological interventions could find it useful to look into the ways and reasons why emerging adults use digital media, not just the amounts of their use.

5.8.3 Social Implications

This lack of significant associations indicates that social media should not be considered as something unambiguously good or bad. It would be better to have a more complex discourse on the ways of usage rather than on social media itself.

5.9 Recommendations

Further research needs to employ large sample sizes of around 150 to 200 respondents or more. Researchers also need to take into account the use of probability or stratified sampling, as well as exploring both active and passive use cases. In addition, longitudinal or experimental research design is recommended. Moreover, including other demographic aspects, such as marital status, would be valuable.

6. Conclusion

The present study examined whether social media integration was associated with self-esteem and loneliness among 50 Indian emerging adults aged 19–29 years. Neither the correlation nor regression analyses showed a statistically significant relationship between social media integration and self-esteem or loneliness. Self-esteem and loneliness showed a weak negative association that did not reach statistical significance. The findings therefore do not support the four hypotheses tested in this sample.

The results should be interpreted within the study's methodological boundaries. In particular, the findings should not be taken to mean that social media is psychologically irrelevant. Instead, they suggest that a broad measure of social media integration may not adequately capture the specific forms of online engagement that are associated with psychological outcomes. This is consistent with new findings showing that problematic, compulsive, or context-driven usage may provide better information than an aggregated form of measurement.

7. Future Scope

Any future research work must be done with the help of a sufficiently large sample size and even better, with the use of power analysis for a priori. Probability sampling or even stratified sampling methods will give more accurate results especially when it comes to representing the genders and geographic backgrounds of the participants. Research can also classify usage as active usage and passive usage, differentiate between platform-specific behavior, and take into account problematic and compulsive usage and mediation/moderation processes including social comparison and social support online. Any longitudinal and experimental design is needed here as well.

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