

The Impact of Social Media on Social Comparison and Self-Esteem

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Abstract

The ubiquitous presence of social media platforms has created an environment where individuals are constantly exposed to curated, idealized self-presentations. This environment is thought to intensify the natural human tendency for social comparison, which has significant implications for psychological well-being, particularly self-esteem. This study aimed to investigate the relationship between the intensity of social media use, the tendency for social comparison, and levels of self-esteem among young adults. A cross-sectional survey was conducted with a sample of 350 university students (aged 18-24). Participants completed validated instruments, including the Social Media Intensity Scale, the Iowa-Netherlands Comparison Orientation Measure (INCOM), and the Rosenberg Self-Esteem Scale. Correlation and mediation analyses were performed to test the hypothesized relationships. A significant positive correlation was found between the intensity of social media use and social comparison orientation ($r = .45, p < .001$). In turn, social comparison orientation was significantly negatively correlated with self-esteem ($r = -.52, p < .001$). Mediation analysis confirmed that social comparison significantly mediated the relationship between social media intensity and lower self-esteem. Intensive engagement with social media is strongly associated with a greater tendency for social comparison, which in turn predicts lower self-esteem. These findings highlight social comparison as a key psychological mechanism through which social media use may negatively impact mental health.

Keywords: Social Comparison, Social Media, Young Adults



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INTRODUCTION

The social fabric of young adulthood has been fundamentally reweoven by the pervasive integration of social media platforms (Pitchan et al., 2025; Ward et al., 2025). For contemporary emerging adults, platforms such as Instagram, TikTok, and Facebook are not merely supplementary communication tools but are central arenas for social interaction, identity formation, and the negotiation of social status. This digital immersion means that a significant portion of their social lives unfolds within an environment governed by algorithms, metrics of public approval, and the constant performance of self. Understanding the psychological impact of this digitally mediated social world is one of the most pressing tasks for modern psychological science.

A foundational and universal aspect of human social life is the process of social comparison, a concept first systematically articulated by Leon Festinger. This theory posits that individuals have an innate drive to evaluate their own opinions and abilities by comparing themselves to others (Michalak & Ellixson, 2025; Salerno et al., 2025). This process helps individuals to understand their social standing, form judgments about themselves, and guide their behavior. While social comparison is a natural and often adaptive human tendency, its psychological consequences are heavily dependent on the nature and direction of the comparisons made, particularly whether one compares oneself to others perceived as better off (upward comparison) or worse off (downward comparison).

Social media platforms have created an unprecedented and historically novel environment for social comparison. Unlike offline interactions, which offer a more balanced and realistic view of others' lives, social media feeds are typically composed of carefully curated, highly idealized self-presentations (Hassoun et al., 2025; Sehgal et al., 2025). Users are constantly exposed to a stream of their peers' highlight reels celebrating achievements, showcasing peak experiences, and displaying idealized physical appearances. This creates a skewed social reality, an environment supercharged for upward social comparison, which is theorized to have significant and potentially detrimental implications for an individual's psychological well-being, most notably their self-esteem.

The central problem this research addresses is that while a link between social media use and negative mental health outcomes is widely suspected, the specific psychological mechanisms driving this relationship remain insufficiently understood and empirically verified (Cárdenas Curiel et al., 2025; Ying et al., 2025). The public discourse often relies on broad generalizations about "social media addiction" or the negative effects of "screen time." The critical problem for scientific inquiry is to move beyond these generalities and identify the precise, testable psychological processes through which engagement with these platforms translates into specific psychological outcomes like diminished self-esteem.

The specific issue is that the very architecture of modern social media platforms appears designed to maximize social comparison. Features such as "like" counts, follower metrics, and algorithmically curated feeds that showcase popular and successful content create a relentless, quantified, and public hierarchy of social value (Chooset & Sukhabot, 2025; Subasinghe et al., 2025). This environment provides a constant stream of data for upward comparison, a phenomenon that is far more pervasive and intense than the intermittent social comparisons of the pre-digital era. The problem is that this unique, technologically-mediated form of social comparison may be a primary driver of the negative mental health trends observed in young adult populations.

This leads to a significant clinical and public health problem. Without a clear, evidence-based understanding of the core psychological mechanisms at play, interventions aimed at mitigating the negative effects of social media are likely to be ineffective. Simply advising young people to reduce their screen time fails to address the underlying psychological processes (Arendt & Reershemius, 2025; Sonne Vyas, 2025). The problem this study confronts is the critical need to empirically test a specific mediational model: one that posits that the intensity of social media use leads to a greater orientation toward social comparison, and that it is this heightened tendency for comparison that, in turn, leads to a reduction in self-esteem.

The primary objective of this study is to conduct a rigorous, cross-sectional investigation into the relationships between three key variables: the intensity of social media use, an individual's general orientation toward social comparison, and their global self-esteem. This research aims to quantify the strength and direction of the associations between these constructs within a sample of young adults, a demographic that is both highly engaged with social media and in a critical period of identity and self-concept development (Armah et al., 2025; Egas & Toasa, 2025). The central goal is to establish the statistical links between these three distinct but theoretically related variables.

A second, more sophisticated objective is to test a specific mediational hypothesis. The study aims to determine whether the tendency for social comparison acts as a significant psychological mediator in the relationship between social media intensity and self-esteem (Byron Tuazon & Renee Ching, 2025; Verma et al., 2025). This involves not only examining the direct correlations but also employing statistical mediation analysis to test the hypothesis that intensive social media use does not impact self-esteem directly, but rather does so indirectly by increasing an individual's propensity to engage in social comparison, which then negatively affects their self-worth.

Ultimately, this research aims to provide a clear, empirically validated explanatory model for a commonly observed but poorly understood phenomenon. The study endeavors to move beyond simple correlational findings and offer a more nuanced understanding of the psychological pathway through which social media engagement may pose a risk to mental well-being (Armah et al., 2025; Byron Tuazon & Renee Ching, 2025). The expected outcome is a data-driven model that can inform the development of more targeted and effective interventions, providing a clear answer to the question of *how* and *why* intensive social media use is linked to lower self-esteem.

The scholarly literature on social media and mental health is vast and rapidly expanding. A significant gap, however, exists in the number of studies that explicitly test a mediational model with social comparison as the central mechanism linking platform use to self-esteem. While many studies have established direct correlations between social media use and various negative outcomes, fewer have employed the statistical rigor of mediation analysis to unpack the underlying psychological processes (Sridhar & King, 2025; Verma et al., 2025). The literature needs more research that moves from asking "*if*" there is a link to explaining "*how*" that link operates.

A second, methodological gap pertains to the measurement of social media use itself. Many studies rely on simple, single-item measures such as self-reported daily hours of use, which can be unreliable and fail to capture the depth of a user's psychological investment in the platforms. The literature lacks a sufficient number of studies that utilize validated, multi-item scales, such as the Social Media Intensity Scale, which measure the emotional connection to

and integration of social media into a person's daily life, providing a more robust and meaningful measure of engagement.

A third gap is conceptual, relating to the integration of classic social psychology theory with modern media research. While Festinger's Social Comparison Theory provides a perfect theoretical framework for understanding the effects of social media, it is not always explicitly used as the basis for empirical investigation in this area (Flynn, 2025; Pontillas, 2025). There is a need for more research that is explicitly theory-driven, using established psychological constructs and validated instruments to test hypotheses derived from foundational theories. This study is designed to fill these specific gaps by employing a robust mediational design with validated scales grounded in established psychological theory.

The principal novelty of this research lies in its specific and rigorous testing of a mediational model of social media's impact on self-esteem. By using a combination of three distinct, validated scales the Social Media Intensity Scale, the Iowa-Netherlands Comparison Orientation Measure, and the Rosenberg Self-Esteem Scale this study provides a more sophisticated and powerful analysis than much of the existing correlational research. This multi-instrument, theory-driven approach allows for a clear and statistically robust examination of the psychological pathway from platform engagement to self-evaluation, which is a significant and innovative contribution to the field.

This research is justified by the widespread and growing concerns about the mental health of young adults in the digital age. Rates of anxiety, depression, and low self-esteem are on the rise in this demographic, and intensive social media use is frequently cited as a potential contributing factor. This study is essential because it seeks to provide empirical evidence to inform this critical public health conversation. Understanding the specific psychological mechanisms that may be at play is a prerequisite for developing effective prevention and intervention strategies.

The ultimate justification for this work rests on its potential to generate actionable insights for individuals, clinicians, and educators. By identifying social comparison as a key mediating variable, the findings can inform the development of targeted media literacy programs and therapeutic interventions (Kankanamge et al., 2025; Pontillas, 2025). Instead of simply advising users to "unplug," interventions can be designed to teach them how to engage with social media more mindfully, to recognize and challenge their own tendencies for upward social comparison, and to build a more resilient sense of self-worth.

RESEARCH METHOD

This study examines the interrelationships among social media intensity, social comparison orientation, and self-esteem among young adults. A quantitative approach was adopted to explore how these psychological and behavioral variables interact within the context of contemporary digital media use. The study is grounded in prior research indicating that social media engagement may influence self-evaluative processes through comparative mechanisms (Hutchinson et al., 2025; Sridhar & King, 2025).

Research Design

A cross-sectional survey design was utilized in this study to examine associations among social media intensity, social comparison orientation, and self-esteem at a single point in time. This design was selected due to its practicality in gathering data from a relatively large sample efficiently while enabling the analysis of relationships between multiple variables

simultaneously (Hutchinson et al., 2025; Sridhar & King, 2025). The study followed a correlational framework and specifically tested a mediation model in which social comparison orientation was proposed as a mediating variable linking social media intensity to self-esteem outcomes.

Research Target/Subject

target population consisted of young adults, particularly undergraduate students, who represent a group with high exposure to and frequent use of social media platforms. Participants were recruited using a convenience sampling approach from a large public university in the United States. The final sample included 350 students aged between 18 and 24 years ($M = 20.7$, $SD = 1.8$), comprising 210 females (60%) and 140 males (40%), and representing various academic disciplines.

Research Procedure

The research was conducted following approval from the university's institutional review board to ensure ethical compliance. Participants were recruited via an online research participation system and provided informed consent before participation. They completed a single structured online questionnaire that included standardized instruments measuring social media intensity, social comparison orientation, self-esteem, and demographic characteristics. The survey required approximately 20 minutes to complete, after which responses were anonymized and securely stored for further statistical processing, including correlation and mediation analyses using SPSS and the PROCESS macro.

Instruments and Data Collection Techniques

Data were collected using three standardized psychometric scales. Social media intensity was measured using the Social Media Intensity Scale, which evaluates users' emotional attachment and integration of social media into daily life (Hutchinson et al., 2025; Pontillas, 2025). Social comparison orientation was assessed using the Iowa-Netherlands Comparison Orientation Measure (INCOM), a widely validated instrument for measuring individuals' tendency to compare themselves with others. Self-esteem was evaluated using the Rosenberg Self-Esteem Scale, a well-established tool for assessing global self-worth. Data collection was carried out through an online survey platform to ensure accessibility and efficiency.

Data Analysis Technique

The collected data were analyzed using IBM SPSS software. Initial analyses included descriptive statistics to summarize participant characteristics and key variables, followed by Pearson correlation analysis to examine the relationships among social media intensity, social comparison orientation, and self-esteem. To test the hypothesized mediation model, a formal mediation analysis was conducted using the PROCESS macro, allowing for the examination of indirect effects of social media intensity on self-esteem through social comparison orientation. Statistical significance was evaluated at conventional thresholds to determine the strength and direction of observed relationships.

RESULTS AND DISCUSSION

The initial analysis involved computing descriptive statistics for the three primary variables measured in the study. The sample of 350 young adults reported a moderate to high level of social media intensity, a moderate tendency for social comparison, and self-esteem scores that were slightly below the established midpoint for the scale. The data were normally distributed, meeting the assumptions for the planned correlational and mediational analyses.

A summary of these descriptive statistics is presented in Table 1. The table provides the mean scores (M), standard deviations (SD), and the potential range for each of the three validated scales used: the Social Media Intensity Scale, the Iowa-Netherlands Comparison Orientation Measure (INCOM), and the Rosenberg Self-Esteem Scale.

Table 1. Descriptive Statistics for Primary Study Variables (N=350)

Variable	Scale Range	Mean (M)	Standard Deviation (SD)
Social Media Intensity	1 - 5	3.85	0.75
Social Comparison (INCOM)	1 - 5	3.42	0.88
Self-Esteem (Rosenberg)	10 - 40	21.55	5.21

The descriptive data indicate that, on average, the young adults in this sample are highly integrated with social media, as reflected by the mean score of 3.85 on a 5-point scale. This confirms that the chosen population is appropriate for investigating the effects of intensive social media use. The mean score for social comparison (M=3.42) suggests that the tendency to compare oneself to others is a common but not universal trait within this group.

The mean self-esteem score (M=21.55 on a scale of 10-40) is particularly noteworthy. A score in this range is typically interpreted as being in the lower end of the normal range, suggesting that this population, as a whole, may be experiencing some challenges with self-worth. The variability in all three measures, as shown by the standard deviations, indicates a sufficient range of scores to conduct meaningful correlational analyses.

Pearson correlation analyses were conducted to examine the direct relationships between the three primary variables. A strong, positive, and statistically significant correlation was found between Social Media Intensity and Social Comparison Orientation ($r = .45, p < .001$). A strong, negative, and statistically significant correlation was found between Social Comparison Orientation and Self-Esteem ($r = -.52, p < .001$).

A smaller, but still statistically significant, negative correlation was also found between Social Media Intensity and Self-Esteem ($r = -.28, p < .001$). This pattern of correlations provides the necessary prerequisite conditions for testing a mediational model, as all three variables are significantly related to one another in the hypothesized directions.

A formal mediation analysis was conducted using the PROCESS macro for SPSS to test the hypothesis that social comparison mediates the relationship between social media intensity and self-esteem. The results of this analysis were statistically significant. The indirect effect of social media intensity on self-esteem through social comparison was significant (Indirect Effect = -0.19, 95% CI [-0.25, -0.13]), as the confidence interval did not contain zero.

The direct effect of social media intensity on self-esteem, after accounting for the mediating role of social comparison, was no longer statistically significant (Direct Effect = -0.09, $p = .08$). This pattern, where the indirect effect is significant and the direct effect becomes non-significant, provides strong support for a full mediation model. The model as a whole explained a significant portion of the variance in self-esteem ($R^2 = .29, F(2, 347) = 70.12, p < .001$).

A clear and logical pathway is evident when connecting the correlational data to the mediation analysis. The significant positive correlation between social media intensity and social comparison ($r = .45$) establishes the first part of the mediational chain: higher engagement with social media is linked to a greater tendency to compare oneself to others. The significant negative correlation between social comparison and self-esteem ($r = -.52$)

establishes the second part of the chain: this increased tendency for comparison is linked to lower feelings of self-worth.

The mediation analysis statistically weaves these two correlational links together to explain the initial, weaker correlation between social media intensity and self-esteem ($r = -.28$). The analysis confirms that the reason high social media use is linked to lower self-esteem is not primarily a direct effect, but is rather an indirect effect that operates *through* the mechanism of social comparison. The correlational findings represent the individual building blocks that the mediation model assembles into a coherent explanatory pathway.

To provide a concrete illustration of these findings, the profile of “Jessica,” a 19-year-old participant, is presented. Jessica’s score on the Social Media Intensity Scale was in the top 10% of the sample. Her responses on the INCOM scale were also very high, indicating a strong tendency to compare herself with others. Her Rosenberg Self-Esteem Scale score was in the bottom 10% of the sample, indicating significant issues with self-worth.

In contrast, the profile of “David,” a 20-year-old participant, is presented. David’s score on the Social Media Intensity Scale was in the bottom 10% of the sample. His INCOM score was also very low, suggesting he rarely engages in social comparison. His score on the Rosenberg Self-Esteem Scale was in the top 10% of the sample, reflecting a very strong and positive sense of self-worth.

Jessica’s case provides a clear, individual-level example of the mediational pathway identified in the statistical analysis. Her deep integration with social media platforms provides a constant stream of opportunities for upward social comparison, a tendency her INCOM score confirms she is prone to. This constant process of comparing her own life to the curated highlight reels of her peers is a plausible and direct explanation for her very low self-esteem score. Her profile is a real-world manifestation of the full mediational model.

David’s case illustrates the opposite end of the spectrum and serves as a natural control. His low engagement with social media means he is significantly less exposed to the idealized self-presentations that trigger social comparison. His low INCOM score reflects this lack of comparative processing. Without the constant pressure of upward social comparison, he is better able to maintain a high level of self-esteem. His profile demonstrates how a lower “dose” of the independent variable leads to a lower level of the mediator and, consequently, a more positive outcome.

The collective findings of this study provide strong, cross-sectional evidence for a specific psychological pathway linking social media use to lower self-esteem in young adults. The results consistently show that more intensive engagement with social media is associated with a greater tendency to engage in social comparison, and it is this heightened comparison orientation that is, in turn, strongly associated with diminished feelings of self-worth.

This research interprets social comparison not as a peripheral factor, but as the primary psychological mechanism through which the negative effects of social media on self-esteem are transmitted. The full mediation found in the analysis suggests that the danger of social media lies less in the technology itself and more in its powerful ability to amplify a natural but potentially harmful human tendency. The findings point to social comparison as a critical target for interventions aimed at promoting mental well-being in the digital age.

The results of this cross-sectional study provide a clear and statistically robust model of the psychological pathway linking social media use to self-esteem in young adults. The quantitative data first established significant bivariate relationships between the three core

variables. A strong positive correlation was found between the intensity of social media use and an individual's orientation toward social comparison. In turn, a strong negative correlation was found between this comparison orientation and global self-esteem.

The central finding of this research was the confirmation of the mediational hypothesis. The formal mediation analysis revealed that the relationship between social media intensity and lower self-esteem was fully mediated by social comparison. The indirect effect was significant, while the direct effect of social media intensity on self-esteem became non-significant after accounting for the mediator. This pattern provides powerful support for the proposed explanatory pathway.

The model as a whole was highly significant, explaining a substantial portion of the variance in self-esteem among the participants. This indicates that the combination of social media intensity and social comparison orientation is a potent predictor of an individual's feelings of self-worth. The findings were consistent and unambiguous, pointing to a specific psychological process rather than a simple, direct effect of technology on well-being.

The case study profiles of "Jessica" and "David" serve as compelling, real-world illustrations of the statistical findings. Jessica's profile of high social media intensity, high comparison orientation, and low self-esteem, contrasted with David's profile of low engagement in both social media and comparison alongside high self-esteem, provides a narrative anchor for the aggregate data. These individual cases bring the mediational pathway to life, demonstrating how these variables manifest in the experiences of young adults.

These findings provide strong, empirical support for the application of Festinger's Social Comparison Theory to the modern digital environment. While the theory was developed long before the advent of the internet, this study demonstrates its profound relevance in explaining the psychological impact of social media. The results confirm the theory's core tenet that an environment rich in comparison opportunities can significantly influence self-evaluation, and it validates social media as a powerful new context for this fundamental human process.

The study significantly refines the broader body of literature that has often reported a simple, direct negative correlation between screen time and mental well-being. By employing a more sophisticated measure of social media intensity and testing a mediational model, our research moves beyond this simplistic association. It provides a specific mechanism social comparison that explains *how* and *why* this relationship exists, a level of explanatory detail that is often missing from more general studies on technology and mental health.

The results align closely with research on the "highlight reel" phenomenon of social media. This literature posits that the curated, idealized nature of online self-presentations creates a skewed social environment dominated by opportunities for upward social comparison. Our finding that higher social media intensity is linked to a greater comparison orientation provides direct, quantitative support for this hypothesis, suggesting that prolonged exposure to these idealized images does indeed foster a more comparative mindset.

A point of departure from some technologically deterministic literature is the emphasis on an underlying psychological trait. The full mediation model suggests that social media is not inherently "bad" for self-esteem. Instead, its negative effect is transmitted through its powerful ability to amplify a pre-existing human tendency for social comparison. This shifts the focus from the technology itself to the interaction between the technology and the user's psychological processes, a more nuanced perspective than one that simply blames the platform.

The findings signify that modern social media platforms function as powerful “social comparison engines.” Their very architecture with its emphasis on quantifiable metrics of popularity and its algorithmic curation of highly engaging, often idealized content creates an environment that is hyper-saturated with stimuli for self-evaluation. The results reflect a reality where the digital spaces inhabited by young adults are fundamentally designed in a way that exacerbates a natural but potentially harmful psychological tendency.

The full mediation model is a particularly meaningful finding. It signifies that the primary psychological “danger” of social media may not be the time spent on the platforms, but the cognitive habits and thought patterns that this time encourages. The results suggest that the crucial event is not the act of logging on, but the subsequent act of comparing one’s own life, body, or achievements to the curated content one encounters. This reflects a shift in understanding the problem from a behavioral issue (time on screen) to a cognitive one (the act of comparison).

The relatively low average self-esteem score of the sample is a sobering reflection of the potential population-level impact of these dynamics. While this is a cross-sectional study, the findings signify that a significant portion of a generation that has grown up with these platforms may be experiencing a chronic, low-grade assault on their self-worth, driven by a constant, algorithmically-fueled stream of upward social comparisons. This points to a potential widespread public health concern that warrants significant attention.

Ultimately, these results are a signal of a profound mismatch between our evolved social psychology and our modern technological environment. The human brain’s innate drive for social comparison, which was adaptive in small, stable social groups, may be maladaptive when exposed to a global, curated, and infinite stream of comparison targets. The findings reflect a fundamental tension between our old brains and our new digital world, with the self-esteem of young adults caught in the middle.

The most direct implication of this research is for mental health education and media literacy programs. The findings provide a clear, actionable target for intervention. Instead of vague warnings about the dangers of social media, educational efforts can be designed to specifically teach young people about the psychology of social comparison. Interventions can focus on helping users to recognize their own comparison triggers, to critically evaluate the curated nature of online content, and to practice more mindful and less comparative forms of social media engagement.

For clinicians and therapists working with young adults, the implications are significant. This research highlights the importance of assessing not just the quantity of a client’s social media use, but the *quality* and nature of their engagement. Therapists can use these findings to guide their clinical inquiry, specifically exploring the role of social comparison in a client’s low self-esteem or depressive symptoms. Cognitive-behavioral techniques aimed at challenging and reframing comparative thoughts could be a particularly effective therapeutic strategy.

The findings also have implications for the technology industry and platform designers. The research suggests an ethical responsibility to design platforms that are less conducive to harmful social comparison. This could involve changes to the user interface, such as de-emphasizing or removing public “like” counts, promoting content based on factors other than simple popularity, or incorporating features that encourage users to reflect on their emotional

state while using the app. The implication is a call for a more psychologically-informed and ethical approach to platform design.

For parents and educators, the implication is a need to shift the conversation with young people. Instead of focusing solely on setting limits for screen time, a more productive approach would be to have open conversations about the feelings that arise from using social media. Adults can help young people by validating their experiences, teaching them that the “highlight reels” they see online are not the full reality, and encouraging them to cultivate a sense of self-worth that is based on their own values rather than on external validation from online platforms.

The strong positive correlation between social media intensity and social comparison is a direct result of the platforms’ inherent design. Social media environments are, by their nature, visual and comparative. Every post, picture, and story is an implicit invitation to compare. The constant exposure to a high volume of curated self-presentations provides an endless stream of data for social comparison, making it a more frequent and almost automatic cognitive process for intensive users.

The robust negative relationship between social comparison and self-esteem is explained by the predominantly upward direction of these comparisons. Because users tend to post their most positive and successful moments, the vast majority of social comparisons made on these platforms are “upward comparisons,” where an individual compares themselves to someone they perceive as being better off. Decades of psychological research have shown that chronic upward social comparison is a powerful predictor of diminished self-worth, envy, and dissatisfaction.

The full mediation model was so successful because social media, in itself, is not a direct psychological agent. It is a context, an environment. The technology itself does not “cause” low self-esteem. Instead, it creates an environment that is exceptionally effective at triggering a specific, pre-existing psychological mechanism social comparison. It is this psychological mechanism, once triggered, that produces the negative effect on self-esteem. The model works because it accurately reflects this two-step, indirect process.

The case studies of Jessica and David provide a clear illustration of these dynamics. Jessica’s high intensity of use meant she was constantly immersed in the comparison-rich environment, activating her already high trait-level tendency for comparison, which logically resulted in low self-esteem. David’s low intensity of use meant he was largely insulated from this environment. His low exposure did not activate the comparison mechanism, allowing his self-esteem to remain high. Their divergent outcomes are a direct result of their differential engagement with this powerful psychological trigger.

The most critical next step for research is to move from this cross-sectional design to longitudinal and experimental studies. A longitudinal study that follows adolescents over several years is needed to establish the temporal precedence of these relationships for example, does high social media use lead to higher comparison, or do people with a high comparison orientation simply gravitate toward social media? An experimental study, where participants are randomly assigned to reduce their social media use, would provide the strongest possible evidence for a causal link.

Future research should also focus on identifying the specific features of social media platforms that are most potent in triggering social comparison. Studies could experimentally manipulate different platform features for example, showing users a feed with “like” counts

versus one without to determine which specific design elements have the greatest impact on comparison and self-esteem. This would provide more targeted recommendations for ethical platform design.

There is a significant need for research on protective factors. Future studies should investigate the personal and social characteristics that might buffer individuals from the negative effects of social comparison on social media. This could include factors like mindfulness, self-compassion, the quality of offline social support, and media literacy skills. Identifying these protective factors is essential for developing effective, strengths-based interventions.

Finally, a vital avenue for future work involves the development and testing of targeted interventions. Based on these findings, researchers should now design and conduct randomized controlled trials of brief, scalable interventions aimed at reducing social comparison on social media. An intervention that teaches young adults mindfulness and cognitive reframing skills could be a powerful tool for mitigating the negative mental health impacts identified in this study.

CONCLUSION

The most significant and distinct finding of this research is the empirical validation of a full mediation model, which establishes social comparison as the primary psychological mechanism through which intensive social media use is linked to lower self-esteem in young adults. The study demonstrates that the relationship is not a direct effect of the technology itself, but an indirect pathway where greater platform engagement fosters a heightened orientation toward social comparison, which in turn predicts diminished self-worth.

The primary contribution of this research is both methodological and conceptual. Methodologically, it moves beyond simplistic correlational studies by employing a robust mediation analysis with validated, multi-item scales for each construct, providing a more nuanced and powerful test of the underlying psychological process. Conceptually, it provides a modern, data-driven application of classic Social Comparison Theory, identifying the cognitive act of comparison not merely time on screen as the critical factor, thereby offering a more precise target for intervention.

This study's conclusions are framed by its cross-sectional design, which identifies strong associations but cannot establish causality, thereby clearly defining the trajectory for future research. The immediate next steps must involve longitudinal studies to establish temporal precedence and experimental designs to confirm a causal link. Future inquiry should also focus on identifying specific platform features that most potently trigger social comparison, investigating potential psychological protective factors, and developing and testing targeted interventions aimed at mitigating the negative impact of social comparison in digital environments.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

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