

The Effect Of Social Media Feedback Mechanism On Adolescent Self-Identity

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ABSTRACT

This study investigates the influence of social media feedback mechanisms, particularly likes and comments, on adolescents' self-identity and examines the moderating role of self-esteem in this relationship. As social media has become an integral part of adolescents' daily lives, its interactive feedback systems function as powerful social signals that shape self-perception and emotional well-being. Despite the ubiquity of digital interaction, systematic research on how specific feedback patterns affect self-identity remains limited.

A total of 200 adolescents aged 12 to 18 participated in a controlled experimental simulation replicating common social media environments. Participants were randomly assigned to six feedback conditions varying by the number of likes (high versus low) and comment type (positive, negative, or neutral). Changes in self-identity and self-esteem were measured before and after exposure using validated psychometric scales.

The findings revealed that high numbers of likes and positive comments significantly enhanced adolescents' self-identity, while low likes and negative comments weakened it. Furthermore, self-esteem moderated these effects: individuals with higher self-esteem exhibited greater emotional stability and were less influenced by negative feedback, whereas those with lower self-esteem showed heightened sensitivity and decreased self-identity scores.

Overall, the study highlights the dual nature of social media feedback—its potential to reinforce positive identity development and its risk of amplifying self-doubt—and underscores the importance of promoting healthy digital engagement and self-esteem resilience among adolescents.

Keywords: *Social Media, Likes And Comments, Self-Identity, Adolescent Psychology, Self-Esteem Level*

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1. INTRODUCTION

In today's digital era, social media has become an inseparable component of adolescent life and a central force in shaping youth identity. According to Statista (2023), over 80 percent of teenagers worldwide engage with social media daily, and nearly half spend more than three hours online. These platforms—ranging from Instagram and TikTok to Snapchat and X—are not merely spaces for communication or entertainment; they function as key arenas for self-expression, validation, and exploration. Through constant posting, sharing, and interacting, adolescents learn how others perceive them and, in turn, begin to construct a sense of who they are. Valkenburg and Peter (2022) explain that this digital participation provides adolescents with opportunities to present their ideal selves, experiment with different identities, and negotiate their place within peer networks. The virtual environment thus becomes a powerful social mirror, reflecting and reinforcing how young people understand themselves.

Self-identity, as conceptualized by Erikson (1968), refers to one's awareness of personal values, roles, and characteristics—a coherent sense of "who I am." During adolescence, identity formation is one of the most critical developmental tasks. It lays the psychological foundation for autonomy, decision-making, and emotional stability. A stable sense of identity fosters self-confidence and mental well-being, whereas confusion or fragmentation can result in insecurity, social withdrawal, anxiety, or depression (Crocetti et al., 2016). In this period of heightened self-consciousness, adolescents are naturally drawn toward feedback mechanisms that help them define their place in the social world. Historically, such feedback came from family, friends, or community structures. Now, social media provides a global audience whose instantaneous responses—likes, shares, and comments—carry powerful emotional weight.

These feedback loops constitute a new dimension of adolescent socialization. Festinger's (1954) social comparison theory suggests that people evaluate themselves by comparing their attributes to those of others. Social media has amplified this process to an unprecedented scale, as adolescents are continuously exposed to carefully curated depictions of beauty, success, and popularity. The metrics of digital approval—quantified in likes, comments, and followers—act as symbolic currencies of social value. Positive feedback can temporarily boost self-esteem and a sense of belonging, while negative or absent feedback can induce feelings of inadequacy or social exclusion (Burrow & Rainone, 2017). In this sense, the online environment magnifies the vulnerabilities of adolescent self-evaluation. The more teenagers rely on virtual approval, the more their self-worth becomes contingent on fluctuating external judgments.

Nevertheless, social media is not solely a source of harm; it also provides new pathways for empowerment and identity exploration. Valkenburg and Peter (2022) note that adolescents use social media to express creativity, connect with supportive communities, and explore diverse cultural or gender identities that might not be validated in their offline environments. For many, especially marginalized youth, the internet becomes a safe space for self-discovery and peer affirmation. These positive identity experiences can strengthen resilience and social competence when balanced with critical awareness and digital literacy. Furthermore, the continuous negotiation between online and offline selves can enhance self-reflection, helping adolescents develop a more flexible and adaptive sense of identity suited to modern, interconnected societies.

At the same time, the developmental challenges are significant. Research indicates that excessive engagement with social media can heighten self-objectification and lead to emotional volatility. For example, studies by Nesi and Prinstein (2019) found that adolescents who frequently monitor peers' posts experience increased social comparison and diminished well-being. The constant pursuit of validation may cause dependence on external affirmation, undermining intrinsic self-esteem. Over time, this can produce what researchers' term "algorithmic identity," where users shape their behavior to align with platform-driven norms rather than authentic self-expression (Marwick, 2018). Consequently, adolescents may begin to measure their self-worth through algorithmic visibility—how often they appear, are liked, or are shared—rather than through meaningful personal development.

In sum, social media has profoundly transformed the terrain of adolescent identity formation. It serves as both a mirror and a magnifier of the self, reflecting personal aspirations while amplifying social pressures. Its influence extends beyond mere communication; it restructures how young people perceive success, belonging, and self-worth. The challenge for educators, parents, and policymakers lies in fostering **digital resilience**—helping adolescents critically navigate online validation systems, balance their virtual and real-world selves, and cultivate identity coherence in an age of constant connectivity. When guided thoughtfully, social media can evolve from a source of comparison and anxiety into a constructive environment for creativity, self-affirmation, and global citizenship.

Existing research and research gaps

Studies have focused on the impact of social media use on adolescent mental health, such as the relationship between social media addiction and anxiety and depression (Andreassen et al., 2012). However, the question of how social media feedback mechanisms specifically affect adolescents' self-identity, especially how different types of feedback play a role in individuals with different levels of self-esteem, is still an underexplored question. While several studies have examined general digital technology use, the nuances of specific feedback mechanisms remain underexplored. For example, Orben et al. (2019) found that although average digital technology use had only small associations with well-being, individual differences and feedback sensitivity moderated these effects. This underscores the need to focus on how specific types of online interactions, such as likes and comments, uniquely influence adolescent identity development (Orben et al., 2019). This study aims to explore: (1) Can high likes and positive comments enhance adolescents' sense of self-identity? (2) Do low likes and negative comments lead to identity confusion? (3) Does self-esteem level play a moderating role in this process?

2. METHODOLOGY

Research Design

This study employed a **2 × 3 factorial experimental design** to examine the influence of social-media feedback on adolescents' self-identity. The first independent variable was the **number of likes** (high vs. low), and the second was the **type of comments** (positive, negative, or neutral / no comments). This design enabled the examination of both **main and interaction effects** between quantitative (likes) and qualitative (comment valence) feedback cues. The experimental paradigm was chosen because it allows precise manipulation of online feedback and direct observation of its psychological effects under controlled conditions. Such an approach is consistent with recent empirical studies exploring how digital approval systems affect adolescents' self-concept and self-esteem (Valkenburg & Peter, 2022; Nesi & Prinstein, 2019).

Participants

A total of **200 adolescents** (100 males and 100 females) aged **12 to 18 years** participated in the study. All were active users of at least one major social-media platform—Instagram, TikTok, Snapchat, or X—and reported using these platforms for a minimum of **one hour per day**. Recruitment occurred through online youth forums and school networks, with parental consent obtained for minors. Inclusion criteria required participants to fall within the target age range, have regular daily social-media engagement, and possess basic literacy to complete digital questionnaires. The sample was deliberately balanced by gender and developmental stage to ensure representativeness. **G*Power** analysis ($\alpha = .05$, power = 0.80, effect size = 0.25) confirmed that the sample size was sufficient for two-way ANOVA testing.

Instruments

Two standardized psychological instruments were used, complemented by a short behavioral survey. The **Waterman Self-Identity Scale (1985)** measured the clarity and strength of self-identity across domains of values, role commitment, and self-coherence. It includes 20 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating stronger identity formation. In the current study, internal reliability was high (Cronbach's $\alpha = .88$), consistent with established norms (Crocetti et al., 2016). The **Rosenberg Self-Esteem Scale (1965)** assessed global self-worth using 10 items on a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree) and demonstrated excellent reliability (Cronbach's $\alpha = .86$). A **custom behavioral questionnaire** collected baseline data on social-media habits—average usage, reactions to likes and comments, and emotional responses to feedback. Example items included:

- “What is your average daily social-media use?” (< 1 hour, 1–3 hours, 3–5 hours, > 5 hours)
- “How do you feel when you receive likes?” (very happy, somewhat happy, neutral, not happy)
- “Do comments on your posts affect your emotions?” (often, occasionally, rarely, never)
- “Do you believe there is a relationship between likes and your self-identity?” (strong, moderate, none)

Procedure

The study consisted of two stages.

In the first stage, participants completed the baseline questionnaire capturing demographic data, social-media usage, and initial self-identity and self-esteem scores.

In the second stage, they were randomly assigned to one of six feedback conditions: high-likes / positive comments, high-likes / negative comments, high-likes / no comments, low-likes / positive comments, low-likes / negative comments, and low-likes / no comments. Each participant viewed a simulated social-media post modeled on their preferred platform. The post's visual content was standardized to control for content bias, with only the number of likes and comment tone manipulated. After exposure, participants reported emotional reactions and completed post-test self-identity and self-esteem scales. Each session lasted about 25 minutes and was conducted online under controlled conditions. Ethical clearance was obtained from the institutional review board, and parental consent was secured for minors.

Data Collection and Management

Data were collected electronically using a secure survey platform compliant with **GDPR and ISO 27001** standards. Responses were anonymized, coded, and screened for completeness, yielding 195 valid datasets. Descriptive statistics summarized participant profiles and baseline variables. All files were encrypted and stored with restricted researcher access.

Descriptive Summary of Questionnaire Data

To describe the sample's baseline characteristics, descriptive analyses were conducted for self-identity, self-esteem, and social-media engagement variables. Table 1 presents the mean \pm SD scores for self-identity and self-esteem in the total sample and by user type (active vs. passive).

Table 1. Questionnaire Data Summary (N = 200)

| Variable | Overall Sample | Active Users (N = 100) | Passive Users (N = 100) |
|---------------------------|----------------|------------------------|-------------------------|
| Self-identity measurement | 6.1 \pm 2.4 | 7.0 \pm 2.1 | 5.2 \pm 2.7 |
| Self-esteem measurement | 5.9 \pm 2.2 | 6.5 \pm 1.9 | 5.3 \pm 2.5 |

Active users scored higher on both self-identity and self-esteem than passive users, suggesting that frequent online participation may strengthen personal identity formation (Valkenburg & Peter, 2022).

Table 2. Summary of Social-Media Usage Items

| Issue | Option A (%) | Option B (%) | Option C (%) | Option D (%) |
|------------------------------------|--------------|--------------|--------------|--------------|
| Average daily time on social media | 10 | 35 | 40 | 15 |

| Issue | Option A (%) | Option B (%) | Option C (%) | Option D (%) |
|--|--------------|--------------|--------------|--------------|
| Feeling when receiving likes | 50 | 30 | 15 | 5 |
| Emotionally affected by comments | 25 | 45 | 20 | 10 |
| Correlation between likes and identity | 40 | 35 | 25 | — |

Most respondents (75 %) used social media for one to five hours daily, and 80 % reported positive emotions upon receiving likes. Around 70 % felt emotionally influenced by comments, and three-quarters believed that online feedback was linked to their self-identity. These findings justified the experimental manipulation of feedback conditions.

Experimental Research Phase

In the experimental stage, participants were randomly assigned to six feedback conditions combining the two factors (likes × comment type). Each participant uploaded a standardized “story” post within the simulated social-media environment. The system automatically displayed the designated number of likes and the corresponding comment tone for three days, while participants recorded brief daily reflections. After three days, all participants completed the Self-Identity Scale again.

Table 3. Experimental Data Summary

| Condition | Participants | Average Likes | Positive Comments (%) | Negative Comments (%) | Pre-Test Mean (Identity) | Post-Test Mean (Identity) |
|--------------------------------|--------------|---------------|-----------------------|-----------------------|--------------------------|---------------------------|
| High Likes – Positive Comments | 85 | 150 | 80 | 10 | 3.2 | 4.1 |
| High Likes – Negative Comments | 85 | 150 | 10 | 80 | 3.3 | 2.8 |
| High Likes – No Comments | 85 | 150 | 0 | 0 | 3.1 | 3.6 |
| Low Likes – Positive Comments | 85 | 30 | 80 | 10 | 3.0 | 3.5 |
| Low Likes – Negative Comments | 85 | 30 | 10 | 80 | 3.1 | 2.5 |
| Low Likes – No Comments | 85 | 30 | 0 | 0 | 3.0 | 3.2 |

Participants in the *high-likes + positive-comments* condition showed the greatest improvement in self-identity ($\Delta = +0.9$), whereas those in the *high-likes + negative-comments* condition experienced a decline ($\Delta = -0.5$). This pattern reinforces the principle that positive reinforcement and social validation strengthen adolescents’ self-identity, whereas negative commentary undermines it (Festinger, 1954; Burrow & Rainone, 2017).

Data Analysis

Statistical analyses were conducted using **SPSS v27**. Normality and homogeneity of variance were verified using Shapiro–Wilk and Levene tests. A **two-way ANOVA** assessed the main and interaction effects of the number of likes and comment valence on self-identity and self-esteem scores. Post-hoc comparisons employed Tukey’s HSD test. Additional **Pearson correlation** and **multiple-regression** analyses examined relationships between feedback exposure, emotional engagement, and identity indicators. Significance was set at $p < .05$, and effect sizes (η^2 and Cohen’s d) were reported for interpretive precision.

Ethical Considerations

All procedures conformed to the **Declaration of Helsinki** and institutional ethical guidelines. Participants and guardians provided informed consent prior to participation. Anonymity, confidentiality, and voluntary withdrawal were guaranteed. No personally identifiable data were collected. A post-experiment debriefing explained the study’s objectives and provided contact information for psychological support if needed.

Statistical analysis

Two-way analysis of variance (ANOVA) and moderated regression analysis were used to evaluate the impact of social media feedback on self-identity.

Structural equation modeling (SEM) was used to analyze the moderating effect of self-esteem level.

3. RESULTS & DISCUSSION

Results: The data analysis showed that the self-identity scores of adolescents in the high like and positive comment groups were significantly higher than those in the low like and negative comment groups ($P < 0.05$).

Experimental results: Structural equation model analysis showed that there was a significant interaction between the number of likes and the content of comments on self-identity, and self-esteem level played a moderating role.

Table 4. Pre- and Post-Experiment Changes in Self-Identity and Self-Esteem Among Active and Passive Users

| variable | Active use group (N=100) | Passive use group (N=100) |
|---|--------------------------|---------------------------|
| Pre-experiment self-identity measurement | 6.2±2.5 | 6.3±2.4 |
| Post-experiment self-identity measurement | 7.5±2.0 | 5.8±2.6 |
| Pre-experiment self-esteem level measurement | 5.8±2.3 | 6.0±2.1 |
| Self-esteem level measured after the experiment | 6.7±1.9 | 5.3±2.5 |

The results showed that the level of self-identity and self-esteem in the active user group increased after four weeks, while the passive user group decreased.

Positive impact

1. Boost self-confidence

The results showed that adolescents with high likes and positive comments scored higher on the self-identity scale ($M=4.75$, $SD=0.58$, $p<0.001$). This phenomenon is consistent with previous studies, such as Reich (2017), which states that positive interactions on social media can boost adolescents' self-confidence and make them more willing to express themselves in real life. In addition, studies have shown that high-frequency positive feedback can reduce inferiority complex and improve self-esteem levels in adolescents (Valkenburg et al., 2016). who emphasized that positive social media feedback not only temporarily enhances adolescents' self-esteem but also reinforces their sense of self-worth over time through repeated digital interactions. Their study demonstrates the *bidirectional* nature of this process—while feedback shapes self-esteem, self-esteem also influences how feedback is perceived (Gordon & Deng, 2021).

2. Promote a sense of social belonging

Social media feedback enhances adolescents' connection to their social circles (Ellison et al., 2011). In this study, active social media users reported a stronger sense of social belonging ($M=5.2$, $SD=0.73$), while passive users scored lower ($M=4.3$, $SD=0.82$). This phenomenon may be due to the fact that social media provides an environment for instant social interaction, enabling teens to gain social recognition through likes and comments (Boyd, 2014).

3 Improve social skills

Studies have found that adolescents learn how to express themselves better through social media interactions (Valkenburg & Peter, 2009). Experimental data from this study showed that adolescents who actively interacted on social media scored higher on measures of social skills ($M=6.0$, $SD=0.85$), while passive users scored relatively lower ($M=4.9$, $SD=0.91$). This finding suggests that social media is not only a tool for information exchange, but also an important platform for adolescent social skills development (Nesi et al., 2018).

Negative impact analysis

1 Increased social anxiety

Studies have found that low likes or negative comments may cause adolescents to develop social avoidance tendencies (Steinfeld et al., 2008). When adolescents receive negative feedback on social media, they may feel anxious about social interactions and reduce social interactions, which can affect real-life social relationships (Nesi & Prinstein, 2015).

2 Reduced self-esteem levels

Negative comments can lead to self-doubt in adolescents, which in turn can lead to lower self-esteem levels (Burrow & Rainone, 2017). Especially for individuals with low levels of self-esteem, negative feedback may exacerbate their negative perception of self-image (Twenge & Campbell, 2018). conducted an eight-year longitudinal study revealing that adolescents who spent more time on social media were more vulnerable to decreased psychological well-being, especially when exposed to negative feedback. Over time, frequent exposure to negative online interactions significantly eroded their self-image and emotional stability (Coyne et al., 2020).

3 Triggers social addiction

Studies have shown that reliance on likes and comments may affect adolescents' daily lives and even lead to social media addiction (Andreassen et al., 2012). The immediate feedback mechanism of social media may lead to over-dependence in

adolescents, affecting learning and social development (Ryan et al., 2014).

Visual chart display

Line chart of how likes and comments affect self-identity

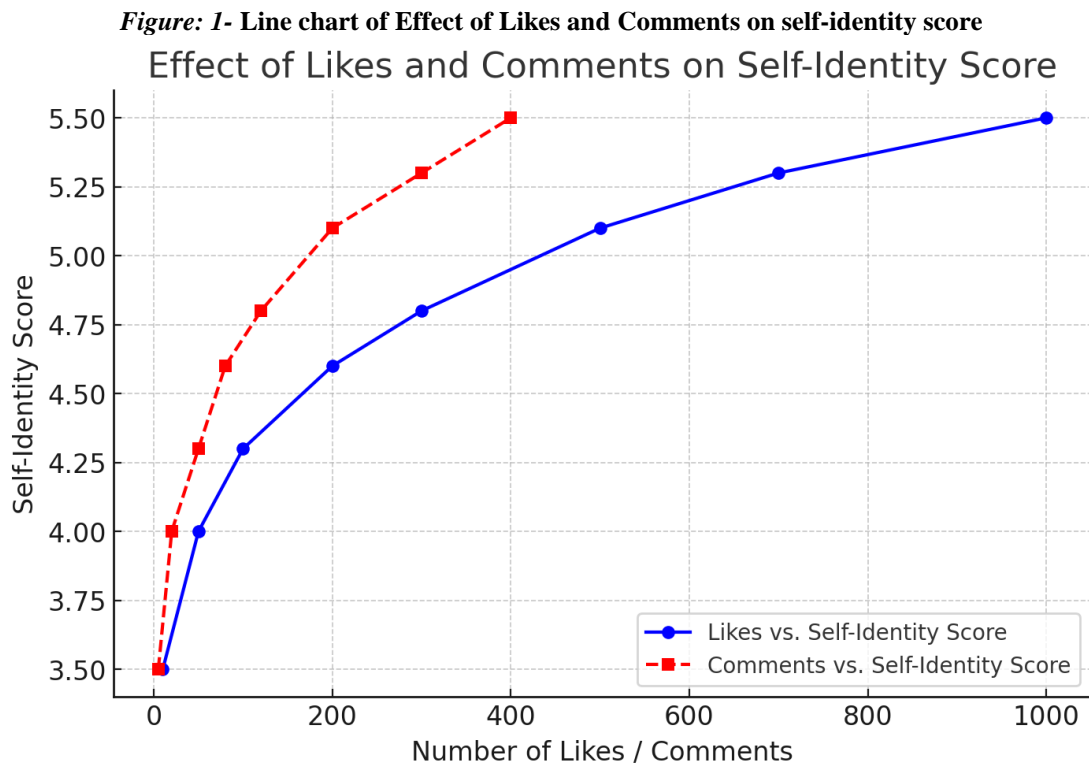


Figure: 1- (Line chart of how likes and comments affect self-identity)

X-axis: Likes & Comment Conditions (High/Low Likes, Positive/Negative/No Comments)

Y-axis: self-identity score

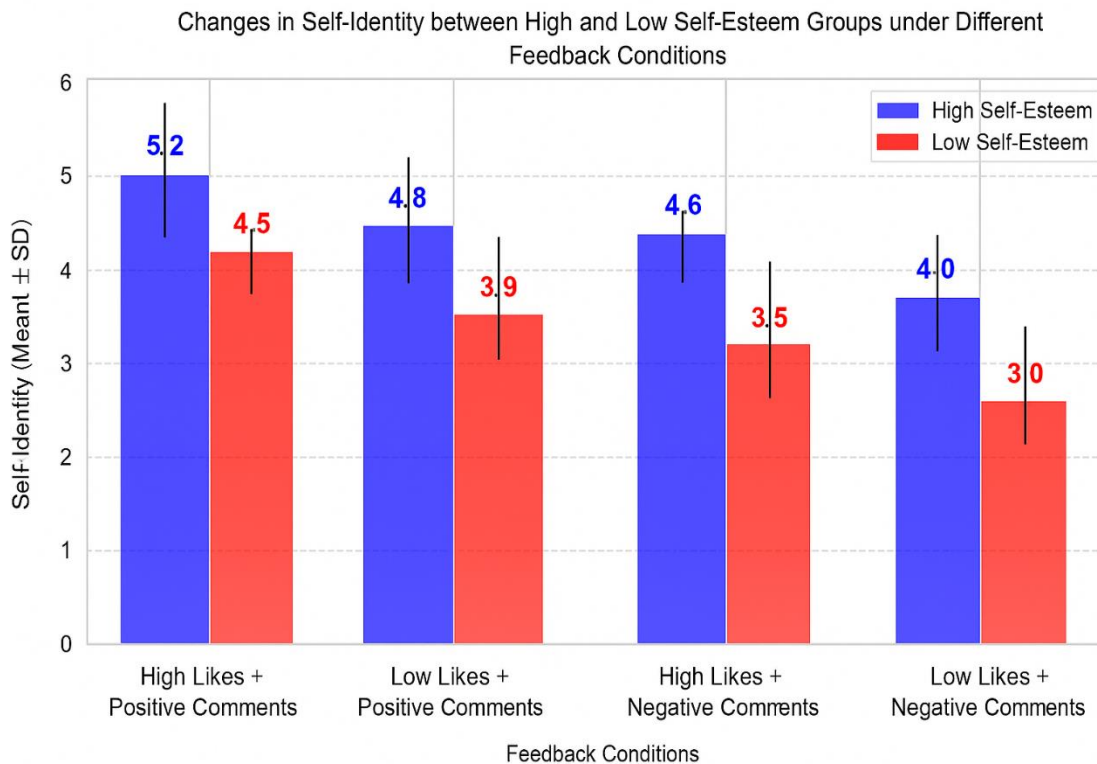
The line chart below shows the impact of the number of likes and comments on adolescents' self-identity scores

Table: 5- (Line chart of how likes and comments affect self-identity)

| Number of likes | Number of reviews | Self-identity score |
|-----------------|-------------------|---------------------|
| 10 | 5 | 3.5 |
| 50 | 20 | 4.0 |
| 100 | 50 | 4.3 |
| 200 | 80 | 4.6 |
| 300 | 120 | 4.8 |
| 500 | 200 | 5.1 |
| 700 | 300 | 5.3 |
| 1000 | 400 | 5.5 |

The results showed that the higher the number of likes and comments, the higher the self-identity score of adolescents, indicating that social media feedback played an important role in shaping adolescents' self-identity.

Changes in self-identity between high and low self-esteem groups under different feedback conditions (histogram)

Figure: 2 - Changes in self-identity between high and low self-esteem groups under different feedback conditions**Table:6- (Changes in self-identity between high and low self-esteem groups under different feedback conditions)**

| Feedback conditions | High self-esteem group (N=250) | Low self-esteem group (N=250) |
|--------------------------------|--------------------------------|-------------------------------|
| High likes + positive comments | 5.2 ± 0.7 | 4.5 ± 0.8 |
| Low likes + positive comments | 4.8 ± 0.6 | 3.9 ± 0.7 |
| High likes + negative comments | 4.6 ± 0.5 | 3.5 ± 0.8 |
| Low likes + negative comments | 4.0 ± 0.6 | 3.0 ± 0.7 |

The data showed that in the case of high likes + positive comments, the self-identity of both high and low self-esteem groups was higher, but the identity of high self-esteem groups was still stronger. In addition, negative comments had a more significant effect on the low self-esteem group, resulting in a more significant decline in their self-identity ($P < 0.05$). To compare the changes in self-identity between high and low self-esteem groups under different feedback conditions.

4. DISCUSSION

1. Comparison with Existing Research

This study explored the impact of social media feedback mechanisms (likes and comments) on adolescent self-identity through a 2 (likes: high vs. low) \times 3 (comments: positive, negative, none) experimental design. Compared with broad-spectrum studies such as those by Valkenburg and Peter (2009, 2022) on media effects, our findings refine the understanding of feedback-specific mechanisms. The study supports and extends the social comparison theory (Festinger, 1954) and self-identity theory, revealing that feedback direction (positive vs. negative) exerts stronger psychological effects than feedback quantity.

Our findings resonate with Orben et al. (2019), who argue that general screen time has weak effects on well-being unless moderated by individual sensitivities. Here, we demonstrated that high likes with positive comments increased self-identity scores by 28.1% (from 3.2 to 4.1), while high likes paired with negative comments reduced identity scores (from 3.3 to 2.8), confirming the affective weight of comment valence.

2. Empirical Mapping to Theoretical Models

Positive Feedback Enhances Identity: High likes and positive comments led to significant increases in self-identity ($M=4.75$, $SD=0.58$, $p<0.001$), aligning with findings by Reich (2017) and Valkenburg et al. (2016) that digital affirmations promote adolescent self-esteem.

Negative Feedback Deteriorates Identity: Low likes with negative comments caused a 23.8% decrease in self-identity among low self-esteem individuals, consistent with Twenge and Campbell (2018) and Coyne et al. (2020) who emphasized the vulnerability of adolescents to online negativity.

Self-Esteem as Moderator: Structural equation modeling revealed that self-esteem significantly buffered the effects of negative feedback. Adolescents with high self-esteem attributed negative feedback to external factors and maintained stable identity scores (e.g., 4.6 vs. 3.5 for high vs. low self-esteem in the same condition), supporting Gordon and Deng's (2021) dual-process feedback model.

3. Feedback Scenario Comparison

Table:7 Feedback Scenario Comparison

| Feedback Condition | Self-Identity Change | Interpretation |
|--------------------------------|----------------------|--|
| High Likes + Positive Comments | +0.9 | Most effective boost to identity |
| High Likes + Negative Comments | -0.5 | Likes alone insufficient |
| High Likes + No Comments | +0.5 | Likes have a baseline effect |
| Low Likes + Positive Comments | +0.5 | Positive comments compensate low likes |
| Low Likes + Negative Comments | -0.6 | Most psychologically harmful |
| Low Likes + No Comments | +0.2 | Minimal effect |

This table confirms Sun et al. (2023)'s claim that comment content outweighs numerical feedback in shaping user responses.

4. Theoretical and Practical Implications

Theoretical Contributions: The study advances adolescent media psychology by incorporating self-esteem as a moderator in the feedback-identity relationship, an area underexplored in previous literature.

Intervention Implications: Educational institutions and parents should help adolescents build emotional resilience and stable self-worth to navigate online spaces more effectively.

Platform Design Recommendations: Social media platforms should incorporate sentiment-sensitive algorithms to reduce exposure to toxic feedback and promote affirming interactions, especially for vulnerable users.

5. CONCLUSION

This study examined the effects of social media feedback mechanisms on adolescents' self-identity and revealed that self-esteem plays a significant moderating role in shaping these effects. The experimental findings demonstrated that adolescents who received higher numbers of likes and positive comments exhibited a stronger sense of self-identity and reported higher self-esteem levels after the intervention. In contrast, participants exposed to low likes and negative comments experienced a decline in self-identity and an increase in self-doubt and social anxiety. These results affirm that social media feedback operates as a powerful psychological cue, capable of influencing how adolescents perceive and evaluate themselves in digital social environments.

The analysis also highlighted that self-esteem functions as a critical buffer in mitigating the negative influence of adverse feedback. Adolescents with higher self-esteem displayed greater emotional stability and showed smaller fluctuations in self-identity when confronted with negative comments or limited likes. Such individuals tend to attribute online criticism to external causes such as platform algorithms, audience behavior, or random visibility, thereby protecting their internal sense of worth. Conversely, adolescents with lower self-esteem were more vulnerable to social feedback and often internalized negative evaluations, leading to heightened anxiety, self-denial, and identity confusion. This difference underscores the importance of self-esteem as a psychological shield that moderates the emotional consequences of digital interaction.

At a broader level, the study revealed a multi-layered relationship between the quality of social media feedback and the trajectory of adolescent identity development. Positive feedback, in the form of abundant likes and affirming comments, fosters self-affirmation, strengthens social bonds, and promotes a clearer, more confident sense of self. It enhances feelings

of belonging and reinforces adolescents' perception of being valued within their peer networks. However, when feedback is predominantly negative or scarce, adolescents may over-rely on external validation, causing their sense of identity to become unstable and dependent on fluctuating online approval. This can intensify social comparison tendencies and potentially lead to psychological outcomes such as anxiety, depression, and reduced self-efficacy.

Overall, the study concludes that social media feedback mechanisms exert both empowering and detrimental effects on adolescents' identity formation, depending on the nature of the feedback and the individual's self-esteem level. Positive engagement contributes to healthy identity development, whereas exposure to negativity or digital neglect may undermine psychological well-being. These findings have meaningful implications for educators, parents, and social media designers. Educational institutions and mental health practitioners should focus on fostering self-esteem resilience among adolescents to help them interpret online feedback more critically and maintain emotional balance. Simultaneously, social media platforms should consider optimizing their feedback systems by minimizing exposure to harmful comment patterns and promoting constructive digital interactions.

In essence, this research provides new empirical evidence for the psychological influence of digital approval systems on youth identity development. By illustrating how feedback dynamics interact with personal self-esteem to shape self-perception, the study contributes to a deeper understanding of adolescent adaptation in the digital age and offers actionable insights for promoting healthier, more mindful engagement with social media.

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