

Understanding the Impact of Social Media Behaviours on Self-Esteem: The Roles of Social Comparison, Emotion, and Engagement among Chinese Media Users

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Abstract. There is a lack of investigation into the factors associated with Chinese media users' self-esteem. This study examined how social comparison tendency and the emotional valence of online content jointly predict self-esteem among Chinese social media users. Using survey data from 63 participants, we conducted a multiple linear regression that was statistically significant ($F(2, 60) = 4.77, p = .005$), explaining 19.53% of the variance in self-esteem. Stronger social comparison tendency negatively predicted self-esteem ($\beta = -1.03, p = .042$), whereas positive emotional responses to online content predicted higher self-esteem ($\beta = 0.56, p = .024$). These findings suggest that Chinese media users who frequently compare themselves with others and respond negatively to media content report lower self-esteem. By highlighting culturally salient psychological mechanisms, this study extends Western-centric social comparison theory to the Chinese digital context and contributes to a better understanding of psychological factors among Chinese social media users.

Keywords: Self-esteem, Social Comparison Tendency, Content valence, Chinese Social Media Users

1. Introduction

Social media has changed how people interact, consume information, and develop their self-concept in the digital age. Platforms such as WeChat and QQ offer unprecedented opportunities for connection and self-expression, but also raise concerns about their effects on self-esteem. Prior studies suggest that both the emotional valence of content and individuals' social comparison tendencies may influence self-esteem [1, 2].

Social media content's emotional valence is commonly dichotomised into positive and negative streams. Positive content includes uplifting or idealised posts such as success stories, vacation pictures, and celebratory updates. Negative content encompasses stress-inducing or comparison-provoking stimuli such as political rants, public complaints, body-focused photos, and achievement highlights that invite invidious social comparisons [3]. Previous studies show that positive feeds can protect self-worth, while negative feeds undermine it [1]. However, whether these patterns apply to Chinese media users remains largely unexplored.

Social comparison tendency refers to the habitual propensity to compare oneself with others. This construct originated from Festinger's social comparison theory, which posited that individuals evaluate their self-worth through systematic comparisons with others [4]. When exposed to upward comparisons (viewing others as superior), individuals typically experience self-evaluation threats that reduce self-esteem [2]. Crucially, the differential susceptibility to media effects model [5] explains why these effects vary substantially across users: individuals with high comparison tendency possess heightened sensitivity to social cues [6], amplifying the impact of routine social media exposure on self-esteem. This study investigated whether social comparison tendency would predict self-esteem of Chinese media users.

Cultural context is particularly important because social comparisons may have distinct effects in collectivist societies like China, where social harmony and group evaluation are valued [7]. For example, upward comparisons may increase conformity pressures, thereby exerting a more negative effect on self-esteem [8]. However, little research has examined the joint effect of social comparison and content valence on self-esteem among Chinese social media users. To address this gap, the present study employed a multiple linear regression to test whether greater positivity of online content and lower social comparison tendency predict higher levels of self-esteem.

2. Method

2.1. Participants and procedure

Participants were recruited through convenience sampling on WeChat and invited to complete an online questionnaire. The sample consisted of 63 Chinese social media users, of whom 60% were female and 40% male. The average age of the participants was 24.3 years, and the standard deviation was 3.1 years. All participants were daily social media users and reported using social media for at least one hour per day.

2.2. Measures

All measures used Chinese-validated versions with established reliability.

- Self-Esteem. Self-esteem was measured with Rosenberg Self-Esteem Scale, which contains 10 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Five of the items are reverse-coded to control for response bias. An example item was "I certainly feel useless at times". The Cronbach alpha was .88, indicating good reliability.

- Social Comparison Tendency. The Iowa-Netherlands Comparison Orientation Measure (11 items, $\alpha = .85$) assessed social comparison tendency using a 5-point Likert scale (1 = never to 5 = always), where higher scores reflected stronger comparison tendencies. The scale demonstrated good reliability, with Cronbach's $\alpha = .85$.

- Emotional Response. Emotional response was measured dichotomously (0 = negative, 1 = positive). Together with items measuring demographic information, all items were presented in a randomised order to minimise order effects.

2.3. Ethical considerations

At the beginning of the questionnaire, participants were presented with information outlining their ethical rights. For example, data confidentiality was assured, and participants were also informed they could withdraw at any time before the survey ended, at which point, their responses would be anonymised and could not be traced or extracted. Additionally, participants could skip any question

or terminate their participation at any stage. After data collection, they were provided with the contact information of the researcher for follow-up questions. Informed consent was obtained before participation.

3. Result

We first conducted descriptive analysis on the key variables. About 82% of participants gave positive emotional responses to social media content, suggesting possible bias. Initial examination of variable distributions revealed that social comparison scores were not normally distributed (Shapiro-Wilk $W = 0.92$, $p < .01$), which violated the assumption of the multiple linear regression model, whereas self-esteem scores followed a normal distribution (Shapiro-Wilk $W = 0.98$, $p = .34$). A natural log transformation successfully normalised the distribution of social comparison ($W = 0.97$, $p = .08$ post-transformation).

Descriptive statistics indicated moderate self-esteem ($M = 3.6$, $SD = 0.7$, range = 2.6 - 4.8) and moderately high social comparison tendencies ($M = 3.4$, $SD = 0.6$), suggesting participants had average levels of self-esteem but tended to compare themselves with others slightly more frequently.

A multiple linear regression was then conducted with self-esteem as the dependent variable, and social comparison tendency and emotional valence as the independent variables. The overall effect of the regression model was significant ($F(2, 60) = 4.77$, $p = .005$), explaining 19.53 % of the variance in self-esteem. Model diagnostics (residual plot and QQ plot) also indicated a good fit. Results showed that social comparison tendency significantly and negatively predicted self-esteem ($\beta = -1.03$, $p = .042$), and emotional response was also a significant predictor ($\beta = 0.56$, $p = .024$), as shown in Table 1. These findings indicate that frequent social comparison and negative emotional responses to social media content are associated with lower levels of self-esteem.

Table 1. Results of the multiple linear regression model

Variables	Beta	Standard Error	t value	P value
Constant	4.20	0.66	6.34	<.001 ***
Emotional valence	0.56	0.24	2.32	.02 *
Social Comparison Tendency	-1.03	0.50	-2.08	.04 *

Note: *** indicating $p < .001$, ** indicating $p < .01$, * indicating $p < .05$.

4. Conclusion

Our study revealed that higher social comparison tendency and negative valence of social media content predict lower self-esteem among Chinese users. Our findings align with earlier research conducted in Western contexts [1, 2]. This study offers insights into how online contents' emotional tone and individuals' comparison tendencies jointly shape self-esteem within the Chinese cultural setting.

However, the current study has some limitations. The observational data of the study preclude causal inference because it lacks environmental control in online data collection. This may have introduced extraneous noise to our data that may distort responses. Without laboratory control, participants could be multitasking, distracted, or influenced by concurrent offline events, thereby inflating error variance. Additionally, the overwhelming prevalence of positive emotional reports (82

%) signals possible self-selection and social-desirability bias, suggesting that users who felt good about themselves were more willing to complete the survey. This skew limits the external validity of our findings and reduces the representability of our sample for the whole population of Chinese social media users.

Future research could employ experimental designs to test causal relationships and replicate the study in other non-Western populations (e.g., Japanese or Korean), examining whether emotional valence and social comparison tendency similarly predict self-esteem.

Practical implications include developing "comparison awareness" features on social platforms and developing emotion-regulation interventions tailored for high-comparison users. By highlighting culturally salient psychological mechanisms, the study extended Western-centric social comparison theory to the Chinese digital context and contributed to a better understanding of psychological factors of Chinese social media users. By integrating cultural considerations with established theory, this study advances a nuanced understanding of social media's psychological impact while offering actionable insights for digital well-being in specific populations of Chinese media users.

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