

The Relationship between Social Media Use and Rumination among Female College Students

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Abstract: Objective: This study explored the relationship between social media use and rumination among female college students, further distinguishing between active social media use and passive social media use. **Methods:** A questionnaire survey was conducted among 206 female college students. The Active Social Media Use Scale, the Passive Social Media Use Scale, and the Ruminative Responses Scale were used for measurement, and Pearson correlation analysis and regression analysis were conducted to examine the relationships among the variables. **Results:** Passive social media use was significantly and positively correlated with rumination ($r = 0.421$, $p < 0.01$), and active social media use was also significantly and positively correlated with rumination ($r = 0.476$, $p < 0.01$). Regression analyses showed that passive social media use positively predicted rumination ($\beta = 0.421$, $t = 9.371$, $p < 0.001$), and active social media use also positively predicted rumination ($\beta = 0.476$, $t = 10.958$, $p < 0.001$). **Conclusion:** The more frequently female college students use social media, the more likely they are to show a tendency to repeatedly think about personal emotions, appearance evaluation, and social feedback. These findings suggest that college mental health education should pay attention to cognitive response patterns in social media contexts and guide students to develop healthier media-use habits and emotion-regulation strategies.

Keywords: Social Media Use; Active Social Media Use; Passive Social Media Use; Rumination

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1. Introduction

Social media has become deeply embedded in the everyday lives of college students. For female college students, social media is not only a tool for obtaining information, maintaining relationships, and expressing the self, but also an important space in which they perceive peers' lives, respond to social evaluation, and process emotional experiences. Compared with traditional media, social media is characterized by immediacy, interactivity, and continuous visibility. Individuals can not only browse others' updates but also actively post photos, videos, comments, and personal statuses. Recent research emphasizes that discussions of the influence of social media should not focus only on use duration; instead, different patterns, purposes, and contexts of use should be distinguished, because active posting, direct interaction, passive browsing, and emotion-related use may correspond to different psychological outcomes^[1]. This means that the relationship between social media use and psychological processes is not simply linear, but may change with users' modes of participation and cognitive responses. During the college years, individuals are in an important period of identity exploration, interpersonal adjustment, and self-worth construction. Female college students not only need to adapt to academic, interpersonal, and future-development

pressures, but may also be more vulnerable to peer evaluation, appearance standards, and online social comparison. Social media feeds continuously present others' academic achievements, social lives, appearance images, and emotional expressions, all of which may become reference points for self-evaluation. Previous studies have found complex associations between social media use and depression, anxiety, psychological distress, and life satisfaction among young people ^[2,3]. Excessive social media use has also been associated with loneliness and anxiety in some contexts ^[10]. Therefore, how users interpret and repeatedly think about online information is an important link for understanding the psychological influence of social media.

Rumination refers to a thinking tendency in which individuals repeatedly focus on their own feelings, the causes of problems, and their possible consequences when facing negative emotions or stressful events. Rumination is not equivalent to ordinary thinking; it is usually repetitive, passive, and difficult to stop. Nolen-Hoeksema, Wisco, and Lyubomirsky ^[4] pointed out that rumination keeps individuals trapped in negative emotions and problem explanations, thereby weakening effective problem solving and emotion regulation. Treynor, Gonzalez, and Nolen-Hoeksema ^[5] further divided rumination into components such as brooding and reflection, suggesting that rumination may involve a certain degree of self-reflection but may also manifest as a persistent negative cycle. For female college students, rumination may revolve around academic pressure, interpersonal relationships, appearance evaluation, emotional fluctuations, and future uncertainty.

Social media use may serve as an important context that triggers rumination. On the one hand, when passively browsing others' updates, individuals are exposed to a large amount of selected and modified information, such as peers' outstanding performance, rich social lives, refined lifestyles, and idealized images. Such information can easily trigger upward social comparison, leading individuals to repeatedly ask themselves questions such as "Am I not good enough?" "Are others more popular than I am?" and "Is my life falling behind others?" Jiao et al. ^[6] also found that passive social networking site use among college students may increase fear of missing out and negative emotions and may be related to depression risk. Although such research does not directly examine rumination, it suggests that passively receiving social information may activate continuous negative cognitive processing. Related experimental and longitudinal evidence also indicates that passive Facebook use can undermine affective well-being ^[11].

On the other hand, active social media use may also be related to rumination. Activities such as posting content, uploading photos, commenting, interacting with others, and updating statuses appear to reflect self-expression and relationship maintenance, but they may also bring continuous expectations for feedback. Before posting content, individuals may repeatedly consider how to present themselves; after posting, they may pay attention to the number of likes, comments, and others' responses. If the feedback does not meet expectations, individuals may repeatedly recall whether the posted content was inappropriate, whether others are evaluating them, or why they did not receive enough responses. Yang, Carter, Webb, and Holden ^[7] found a connection between rumination and compulsive social media use during the transition to college, indicating that repetitive thinking and social media behavior may mutually reinforce each other.

It should be noted that social media use does not necessarily lead to negative outcomes. Social media can also help college students obtain social support, regulate emotions, and maintain relationships. Michikyan et al. ^[3] found that college students use social media for social connectedness and negative emotion modulation, suggesting that social media has a certain positive function in coping with stress. However, when individuals continue to compare themselves with others, worry about feedback, or become caught in repetitive thinking during social media use, social media may become a trigger for rumination. In other words, the issue is not merely whether individuals use social media, but whether they enter a cognitive cycle of continuous comparison, sustained attention, and repeated recall during use.

Based on this background, the present study focused on female college students and examined the relationship between social media use and rumination. Social media use was further divided into active social media use and passive social media use. This study aimed to answer two questions: first, whether social media use among female college students is significantly associated with rumination; and second, whether active and passive social media use can both positively predict female college students' level of rumination. Examining this issue can deepen understanding of the formation of negative cognitive processing among female college students in social media contexts and provide implications for college mental health education and media literacy education.

2. Methods

2.1 Participants

This study adopted a questionnaire survey method and recruited female college students as participants. Questionnaires were distributed in university classrooms and through online social networking platforms. After participants were informed of the purpose of the study and agreed to participate voluntarily, they completed the questionnaire anonymously. A total of 219 questionnaires were distributed. After excluding invalid questionnaires with excessively short response times, missing responses, repetitive answers, failure to pass reverse-item checks, or obvious logical inconsistencies, 206 valid questionnaires were obtained, with an effective response rate of 94.064%.

All participants were female. Among them, 20 were junior college students, accounting for 9.709%, and 186 were undergraduate students, accounting for 90.291%. In terms of grade distribution, 10 participants were freshmen (4.854%), 58 were sophomores (28.155%), 70 were juniors (33.981%), and 68 were seniors (33.010%). Overall, the sample covered female college students from different grades and was suitable for examining the relationship between social media use and rumination.

2.2 Measures

2.2.1 Social Media Use

In this study, social media use included two subscales: active social media use and passive social media use.

Active social media use was measured using the Active Social Media Use Scale developed by Frison and Eggermont^[8]. The scale contains 5 items and uses a 5-point scoring method ranging from 1 (never) to 5 (always). It measures individuals' active behaviors on social media platforms, such as updating personal profiles, posting photos, posting comments, liking content, and actively interacting with others. Higher scores indicate a greater tendency to actively participate in social media interaction. In this study, Cronbach's α for this scale was 0.875, indicating good internal consistency.

Passive social media use was measured using the Passive Social Media Use Scale revised by Liu et al.^[9]. The scale contains 4 items and uses a 7-point scoring method ranging from 1 (never) to 7 (several times a day). It measures passive use behaviors such as browsing others' updates, viewing posts, and reading comments. Higher scores indicate more frequent use of social media through browsing and information reception. In this study, Cronbach's α for this scale was 0.875, indicating good applicability.

2.2.2 Ruminative Responses Scale

The Ruminative Responses Scale (RRS) was used to measure the level of rumination among female college students^[5]. The questionnaire contains 10 items and is scored from 1 (almost never) to 4 (almost always). It is mainly used to assess the tendency of individuals to repeatedly think about their own feelings, causes, and consequences when facing negative emotions or problems. Higher scores indicate a greater tendency toward persistent and repetitive negative thinking. In this study, Cronbach's α for the questionnaire was 0.84, showing good internal consistency.

2.3 Data Processing

SPSS 27.0 was used for data processing. First, questionnaire data were screened and invalid questionnaires were excluded. Second, reliability tests were conducted for the scales. Third, Pearson correlation analysis was used to examine the correlations among active social media use, passive social media use, and rumination. Finally, regression analysis was used to further examine the predictive effects of the two types of social media use on rumination among female college students.

3. Results

3.1 Correlations between Social Media Use and Rumination

Pearson correlation analysis showed a significant positive correlation between social media use and rumination among female college students. Specifically, the correlation coefficient between passive social media use and rumination was 0.421, reaching significance at the 0.01 level. The correlation coefficient between active social media use and rumination was 0.476, also reaching significance at the 0.01 level. These results indicate that both passive use, mainly characterized by browsing others' updates, and active use, mainly characterized by posting content and interacting with others, are associated with higher levels

of rumination.

In terms of correlation strength, the correlation between active social media use and rumination was slightly higher than that between passive social media use and rumination. This result suggests that active posting, image management, and waiting for feedback may make female college students more likely to repeatedly think about their online performance, others' responses, and interaction outcomes. Nevertheless, passive use also showed a moderate positive correlation with rumination, indicating that simply browsing others' information may also trigger continuous comparison and negative thinking.

Table1: Correlation results for social media use and rumination

Variables	1	2	3
1 Passive social media use	1		
2 Active social media use	0.525**	1	
3 Rumination	0.421**	0.476**	1

Note: ** $p < 0.01$.

3.2 Predictive Effects of Social Media Use on Rumination

To further examine the predictive effect of social media use on rumination among female college students, separate regression analyses were conducted with passive social media use and active social media use as predictors and rumination as the outcome variable. The results showed that passive social media use significantly and positively predicted rumination, with a standardized regression coefficient of $\beta = 0.421$, $t = 9.372$, $p < 0.001$, and $R^2 = 0.176$. This indicates that the higher the level of passive social media use, the more likely female college students are to repeatedly think about their emotions, interpersonal evaluations, and online information.

Active social media use also significantly and positively predicted rumination, with a standardized regression coefficient of $\beta = 0.476$, $t = 10.958$, $p < 0.001$, and $R^2 = 0.227$. This suggests that the more frequently female college students post content, upload photos, engage in comments, and wait for feedback, the more likely they are to generate repetitive thinking about self-presentation, interpersonal responses, and social evaluation. Overall, both types of social media use had significant predictive effects on rumination.

Table2: Regression results of social media use predicting rumination

Predictor	Outcome variable	β	t	p	R^2
Passive social media use	Rumination	0.421	9.372	<0.001	0.176
Active social media use	Rumination	0.476	10.958	<0.001	0.227

4. Discussion

4.1 Relationship between Social Media Use and Rumination among Female College Students

The results of this study showed that social media use was significantly and positively correlated with rumination among female college students. In other words, the more frequently female college students used social media, the more likely they were to repeatedly think about their own feelings, social evaluation, and the outcomes of online interactions. This finding is consistent with the theory of rumination. Rumination usually occurs when individuals face stress, negative emotions, or uncertain information. Individuals repeatedly focus on the problem itself and its possible consequences, but they may not necessarily develop effective solutions^[4]. Social media provides a large amount of continuously updated, comparable, and feedback-oriented information, allowing individuals to continuously encounter others' life states and evaluative signals during browsing and interaction.

For female college students, information on social media is not only entertaining but also closely related to self-worth, interpersonal relationships, and social identity. Whether a post receives likes, whether a comment receives replies, and whether a photo gains recognition may all carry considerable psychological meaning. When individuals link online feedback with self-evaluation, social media use may become a form of sustained cognitive attention. After using social media, individuals may repeatedly recall whether they expressed themselves appropriately, whether others misunderstood them, or

whether others' lives are better than their own. Thus, social media use and rumination may become closely connected.

4.2 Passive Social Media Use and Rumination

Passive social media use was significantly and positively correlated with rumination. Passive use is mainly manifested in browsing others' updates, viewing photos and videos, and reading comments. In this process, although individuals do not directly participate in interaction, they continuously receive information about others' lives. Because social media content is often selected, modified, and packaged, female college students may easily see the more positive, successful, or refined side of others while browsing. Such information may trigger upward social comparison, leading individuals to repeatedly think about the gap between themselves and others.

Passive browsing is also characterized by low awareness and high frequency. Many users do not clearly realize that they are comparing or evaluating themselves, but as they continuously browse peers' lives, academic achievements, appearance displays, and emotional expressions, they may gradually develop repeated scrutiny of their own situation. Especially when they see others receiving attention, participating in social activities, or displaying achievements, individuals may generate thoughts such as "Am I being left behind?" "Is my life not good enough?" and "Are others more popular than I am?" If these thoughts are repeated continuously, they may develop into rumination.

In addition, social media feeds and algorithmic recommendation may strengthen the persistence of passive browsing. When individuals pay attention to certain types of content, platforms may continuously recommend similar information, repeatedly exposing them to the same themes. For female college students, if the browsed content centers on interpersonal comparison, appearance display, romantic relationships, or academic achievement, it may further increase opportunities for repeated thinking. Jiao et al.^[6] also suggested that passive social networking site use may influence negative emotions among college students through psychological mechanisms such as fear of missing out. Therefore, passive social media use is not simply "watching"; rather, it may become an important context that induces persistent cognitive processing.

4.3 Active Social Media Use and Rumination

Active social media use was also significantly and positively correlated with rumination, and the correlation was slightly stronger than that for passive use. Active use includes behaviors such as posting updates, updating profiles, uploading photos, commenting, interacting, and liking content. These behaviors function as self-expression and relationship maintenance, but they also place individuals under others' evaluation. When female college students actively post content, they often need to consider how to present themselves, whether the content is appropriate, whether others will like it, and whether they can obtain positive feedback.

Self-selection before active posting and waiting for feedback after posting may be important reasons why active social media use triggers rumination. Before posting photos or text, individuals may repeatedly revise their expression, choose angles, and consider tone. After posting, they may repeatedly check likes, comments, and views. If feedback is insufficient or does not meet expectations, individuals may easily think repeatedly about the reasons, such as whether they are not popular enough, whether the content was not good, or whether others formed negative evaluations. Even when individuals receive abundant feedback, they may further focus on how to maintain this positive image and thus fall into a new cycle of repetitive thinking.

This finding indicates that active social media use is not always positive. The meta-analysis by Godard and Holtzman^[1] found that both active and passive social media use may be related to mental health indicators, and that the specific influence depends on the context of use and psychological processes. For female college students, active use of social media may involve both self-expression and evaluation pressure. When self-expression depends excessively on others' feedback, social media interaction may become a source of rumination.

4.4 Educational Implications

First, college mental health education should pay attention to ruminative tendencies in social media use. Colleges can guide students to understand the characteristics of rumination through mental health courses and themed lectures, helping them distinguish effective reflection from ineffective repetitive thinking. When students realize that they are repeatedly thinking about likes, comments, or others' updates, they can try to shift attention toward concrete problem solving and real-life actions. Second, media literacy among female college students should be improved. Social media content is selective and display-

oriented and cannot fully represent others' real lives. Colleges can guide students to understand information feeds, algorithmic recommendation, and self-presentation mechanisms, thereby reducing overinterpretation of online content. Especially during passive browsing, students need to recognize that they may be engaging in unconscious comparison and learn to stop or adjust their use appropriately.

Third, more positive emotion-regulation strategies should be cultivated. Rumination often reinforces negative emotions, and female college students therefore need to learn more effective regulation methods, such as exercise, expressive writing, mindfulness practice, real-life social interaction, and seeking support. For students who tend to think repeatedly because of social media feedback, group counseling can help them establish more stable sources of self-evaluation.

5. Limitations and Future Directions

This study was based on questionnaire data and can indicate correlational and predictive relationships between social media use and rumination among female college students, but it still has several limitations. First, this study used a cross-sectional design and therefore cannot strictly infer causal relationships. Although the results showed that social media use predicted rumination, it is also possible that individuals with higher levels of rumination are more inclined to frequently check social media, repeatedly inspect feedback, or continuously browse others' updates. Future studies may adopt longitudinal tracking designs or experimental methods to further examine the directional relationship between the two variables.

Second, this study distinguished social media use into active and passive dimensions, but different platforms vary in content ecology and interaction modes. For example, short-video platforms, graphic-and-text communities, WeChat Moments, and Weibo differ in content presentation, feedback mechanisms, and algorithmic recommendation. Future research can further compare the relationships between the use of different platforms and rumination, and examine whether appearance-related content, emotional content, academic content, and interpersonal interaction content have different effects.

6. Conclusion

This study examined the relationship between social media use and rumination among female college students. The results showed that both active social media use and passive social media use were significantly and positively correlated with rumination among female college students, and both positively predicted the level of rumination. In other words, the more frequently female college students used social media, the more likely they were to repeatedly think about their own emotions, online interactions, others' evaluations, and social comparison content.

Passive browsing may trigger repeated scrutiny of one's own situation through continuous exposure to others' idealized lives and social comparison information. Active posting may strengthen repetitive thinking through self-presentation, waiting for feedback, and attention to evaluation. Social media can provide connection and support, but it may also become a context that triggers rumination. Therefore, colleges should strengthen media literacy education and emotion-regulation training, guiding female college students to develop more rational, moderate, and actively controllable ways of using social media.

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Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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