

Original Research Article

The influence of self-presentation in WeChat friends circle on the friendship quality of freshmen: The mediating role of online positive feedback

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Abstract: Objective: To examine the impact of self-presentation on WeChat Moments on friendship quality among first-year university students, and to explore the mediating role of online positive feedback. Method: A stratified random sample of 843 freshmen from a university in Shenzhen was selected. Data were collected using the College Friendship Quality Questionnaire, the Social Network Self-Presentation Strategies Scale, and a Positive Feedback Scale. Analyses—including descriptive statistics, correlation analyses, and mediation modeling—were conducted with SPSS 29.0 and JASP. Results: Except for negative self-presentation, positive self-presentation, authentic self-presentation, and online positive feedback each showed significant positive correlations with friendship quality. Self-presentation exerted a significant partial mediation effect on friendship quality through online positive feedback, with a mediation effect size of 0.55. Conclusion: Self-presentation on WeChat Moments influences friendship quality among university freshmen, with online positive feedback serving as a crucial mediating mechanism. These findings offer practical guidance for helping freshmen leverage social media to enhance friendship quality and provide empirical evidence for understanding how online social interaction affects psychological and social adaptation in college students.

Keywords: WeChat moments; self-presentation; university freshmen; friendship quality; online positive feedback

1. Introduction

In the digital age, social media is deeply embedded in daily life and is an important communication platform. The WeChat "friend circle" offers a space for self - display and interaction. In China, with the popularization of higher education, as per the 2024 Statistical Bulletin on National Education Development, the gross enrollment rate of higher education will reach 60.80% in 2024, indicating that China's higher education has entered a high - popularization stage, and over 60% of school - age youth can receive higher education. The university stage is crucial for social communication and psychological development. For freshmen, building new friendships is vital for adapting to university life. The quality of friendship reflects the depth and breadth of interpersonal relationships and impacts individual mental health and social adaptation.

In the new university environment, freshmen need to transition to a new social support system and establish a new friendship network for support and a sense of belonging (Chen Ximei et al., 2020). High - quality friendship helps freshmen adapt to college and promotes well - being. On campus, complex interpersonal relationships may pose challenges to freshmen in making friends, and ineffective communication skills can affect their adaptation.

Meanwhile, the wide use of social media, especially WeChat Moments, has changed social ways. In this virtual space, self - presentation can impact friendship quality. Positive self - display can attract friends, while excessive negative or false information can harm friendship.

Online positive feedback is crucial in social media communication. It not only recognizes and supports individuals but also affects self - cognition and social behavior. Positive feedback can enhance intimacy and promote relationships, yet the relationship between self - presentation, online positive feedback, and freshmen's friendship quality in WeChat Moments remains under - studied.

In conclusion, exploring the influence of self - presentation in WeChat Moments on freshmen's friendship quality and the mediating role of online positive feedback is of theoretical and practical significance. It helps understand the mechanism of interpersonal relationships in the online environment and guides freshmen to use WeChat Moments rationally for better adaptation.

According to Goffman's parody theory, self - presentation is about controlling others' impressions. In WeChat

Moments, individuals have more flexibility in presenting themselves. Self - presentation in social networking sites can be divided into positive, true, and negative types.

Katz's "Use and Satisfaction Theory" states that individuals use WeChat based on specific needs and present themselves to meet them, with different needs leading to different self - presentation strategies. Friendship quality, measured by six dimensions, reflects the strength of emotional connection in interpersonal communication. High - quality friendship can create a positive atmosphere, boost confidence and happiness, and reduce conflicts.

The social infiltration theory emphasizes that self - presentation - based information exchange affects friendship formation and development. Previous studies have shown that self - presentation in social networking sites can enhance interpersonal intimacy and maintain relationships. For example, positive and true self - presentation positively predict friendship quality, and selfies in social networks can also predict college students' friendship quality.

Based on this, the following assumptions are put forward:

Hypothesis 1: Positive self-presentation is positively correlated with the friendship quality of freshmen.

Hypothesis 2: There is a significant positive correlation between true self-presentation and friendship quality of freshmen.

Hypothesis 3: Negative self-presentation is negatively correlated with the friendship quality of freshmen.

Online positive feedback refers to the positive behaviors such as praise, comment and forwarding given by others when individuals update the published content in the circle of friends^[1]. In social network communication, due to the anonymity of the network, the editability of language and the lack of nonverbal clues, feedback has become the key factor to maintain and develop the relationship (Tong & Walther, 2011). Online positive feedback not only reflects the acceptance, care and recognition of individuals, but also enhances the intimacy between individuals, which is an important signal to maintain good friends (Tong & Walther, 2011; Burke & Kraut, 2014).

The intimate relationship process model points out that the establishment and maintenance of intimate relationship is a dynamic interactive process (Reis & Shaver, 1988). In this process, feedback is as important as presentation. Appropriate feedback can enhance intimacy and promote the interaction between individuals to develop closer relationships (Reis & Shaver, 1988). Previous studies have shown that the presentation of positive emotional information can get positive feedback from others and enhance interaction, and the presentation of real emotional information can get support and suggestions from friends (Lin, Tov, & Qiu, 2014).

Based on this, the following assumptions are put forward:

Hypothesis 4: Self-presentation affects the friendship quality of freshmen through online positive feedback, that is, online positive feedback plays an intermediary role between self-presentation and friendship quality of freshmen.

2. Objects and methods

2.1. Research object

This study selects freshmen from a university in Shenzhen as the research object. Stratified random sampling method is adopted to stratify according to professional categories (arts and science) and gender to ensure the representativeness of the samples. 850 questionnaires were distributed online and offline. After strict data cleaning, 843 valid data were obtained, and the questionnaire recovery rate was 99.17%. Among the valid samples, there are 346 boys, accounting for 41.0% of the total sample; There are 497 girls, accounting for 59.0% of the total sample. From the distribution of disciplines and majors, there are 231 liberal arts students, accounting for 27.4% of the total sample; There are 612 students majoring in science, accounting for 72.6% of the total sample.

2.2. Methods

2.2.1. Friendship quality

College students' friendship quality questionnaire compiled by Wen Yan (2014) was adopted. The questionnaire consists of 40 items, including 34 test items and 6 polygraph questions, covering six dimensions: intimacy, help and support, relationship resilience, appreciation and trust, relationship maintenance and common interest. The questionnaire uses Likert self-rating scale to score at 6 points, where 1 means "completely inconsistent" and 6 means "completely consistent". The higher the score, the

better the quality of friendship. The internal consistency (α) coefficient of each factor in this questionnaire is between 0.761 and 0.901, and the split-half coefficient is between 0.762 and 0.878. The α coefficient of the overall questionnaire is 0.959 and that of split-half reliability is 0.930, which has good content validity and structural validity (Wen Yan, 2014).

2.2.2. Self-presentation

The social network self-presentation strategy questionnaire refers to the self-presentation strategy questionnaire compiled by Kim and Lee in their research on Facebook (Kim & Lee, 2011), and is adapted according to the actual situation of this study. Among them, the positive self-presentation questionnaire contains five items, which are used to measure the degree to which individuals selectively present their positive aspects in the WeChat circle of friends; The true self-presentation questionnaire contains four items to measure the degree to which individuals truly reveal their thoughts and feelings in the circle of WeChat friends. The negative self-presentation questionnaire contains five items to measure the degree to which individuals choose to present their negative aspects in the WeChat circle of friends. This questionnaire uses Likert self-rating scale to score 7 points, where 1 means "completely disagree" and 7 means "completely agree".

2.2.3. Online positive feedback

The positive feedback scale compiled by Liu and Brown(2014) was adopted, which contained five items. Participants need to evaluate the frequency of "positive feedback" they get in the WeChat circle of friends, such as "I often receive praises from my friends after posting content in the WeChat circle of friends". The questionnaire uses Likert self-rating scale to score at 5 points, where 1 means "never" and 5 means "frequently". The total score of each item in the questionnaire represents the frequency of obtaining positive feedback.

2.3. Statistical methods

Using SPSS 29.0 software to make descriptive statistical analysis and correlation analysis of the data, in order to preliminarily understand the basic characteristics of each variable and the relationship between variables. Using JASP software to test the mediation model, Bootstrap method is used to estimate the mediation effect, and the sampling number is set at 1000 times to test the mediation effect between online positive feedback and friendship quality (Hayes, 2013). In the process of data analysis, we should strictly follow the statistical norms to ensure the accuracy and reliability of the results.

3. Results

3.1. Demographic variable results

Table 1. Use of WeChat by freshmen (n=843).

		frequency	percentage
the amount of time spent using WeChat	Within 1 year	17	2.0%
	1-3years	99	11.7%
	3-5years	299	35.5%
	More than 5 years	428	50.8%
Number of contacts	30 and below	46	5.5%
	31-60	73	8.7%
	61-90	83	9.8%
	91-120	98	11.6%
	121-150	95	11.3%
	151-180	106	12.6%
	201-250	90	10.7%
	250 or more	252	29.9%
Composition of friends circle (Answer "Yes")	schoolmate	834	98.9%
	Other friends	704	83.5%
	relatives	800	94.9%
	teacher	743	88.1%
	stranger	321	38.1%
	Other friends	219	26.0%

The use of WeChat and friends circle of the subjects is shown in **Table 1**. 86.2% of the subjects have used WeChat for more than 3 years, which shows that WeChat has a high popularity and usage time among college students. The number of contacts is more than 250, accounting for 29.9%. The composition of freshmen's circle

of friends is relatively concentrated, mainly including classmates (98.9%), other friends (83.5%), relatives (94.9%) and teachers (88.1%), and some strangers (38.1%). This shows that the social relationship of freshmen's circle of friends is based on the interpersonal relationship in real life, and also contains a certain proportion of virtual social relationships.

3.2. Common method deviation

Because the research data are all from the self-report scale of freshmen, there may be common method deviation. Harman single factor test was used to analyze all the variables, and the results showed that the explanation rate of the first common factor was 49.5%, which was less than the critical value of 50% (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003), indicating that the common method deviation of the data in this study was within the acceptable range and would not have a serious impact on the research results.

3.3. Correlation analysis between self-presentation of friends circle, online positive feedback and friendship quality of freshmen

The average scores of negative self-presentation, true self-presentation, positive self-presentation, positive online feedback and friendship quality of freshmen were analyzed, and the results are shown in **Table 2**. Except for negative self-presentation, there is a significant positive correlation between all variables. Positive self-presentation is positively correlated with friendship quality ($r = 0.284$, $p < 0.01$), true self-presentation and friendship quality ($r = 0.349$, $p < 0.01$), and online positive feedback and friendship quality ($r = 0.554$, $p < 0.01$), which supports hypotheses 1 and 2. There is no significant correlation between negative self-presentation and friendship quality ($r = 0.061$, $p > 0.05$), which does not support hypothesis 3.

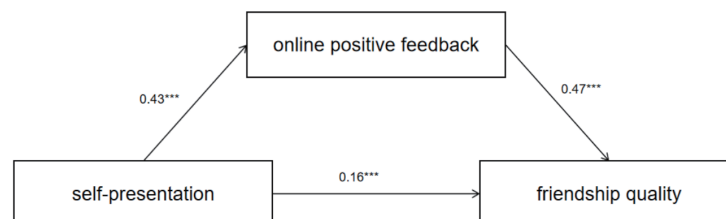
Table 2. Correlation analysis between descriptive statistical results and variables (n=843).

	M±SD	Negative self-presentation	Positive self-presentation	True self-presentation	Online positive feedback
Negative self-presentation	17.95±6.69		-0.127**	0.468**	0.110**
Positive self-presentation	24.85±6.99	-0.127**		0.216**	0.331**
True self-presentation	16.84±5.33	0.468**	0.216**		0.400**
Online positive feedback	17.78±4.91	0.110**	0.331**	0.400**	
Friendship quality	165.89±32.06	0.061	0.284**	0.349**	0.554**

Note ($p < 0.05$, ** $p < 0.01$, similarly hereinafter)

3.4. Intermediary effect results

Two demographic variables, gender and major, were controlled, and online positive feedback was used as an intermediary variable, and Bootstrap was used to estimate (1000 times). The results show that the indirect effect of self-presentation on friendship quality through online positive feedback is significant ($\beta = 0.20$, $P < 0.001$, 95% CI = [0.158, 0.250]), and the direct effect of self-presentation on friendship quality is significant ($\beta = 0.16$, $P < 0.001$, 95% CI = [0.083]). According to the mediation effect test process of Wen Zhonglin and Ye Baojuan (2014), the direct effect (c') of self-presentation on friendship quality is the same as the indirect effect (ab) of self-presentation on friendship quality through online positive feedback, so it is a partial mediation effect. In this study, the value of ab/c is $0.20/0.36 = 0.55$, that is, the amount of mediating effect is 0.55, which indicates that online positive feedback plays an important mediating role between self-presentation and friendship quality, and supports hypothesis 4.



4. Discussion

4.1. Correlation analysis

This study finds that the positive self-presentation of freshmen is positively correlated with the quality of

friendship, which can be explained by Walther's (1996) super-interpersonal interaction enhancement mechanism. The selective self-presentation of social media (such as Krasnova et al. 2010) enables freshmen to actively transmit "advantage signals", and then get praise and comments from peers, forming a positive interaction spiral. From the perspective of social penetration theory (Altman & Taylor, 1973), the breadth and depth of this information gradually penetrated, which enhanced the intimacy of the relationship. At the same time, the theory of use and satisfaction points out that users tend to use such platforms when meeting information, social and self-expression needs, thus further strengthening the motivation of positive presentation.

The positive effect of true self-presentation echoes the concept of "backstage authenticity exposure" in Goffman's parody theory (1959). After students disclose their true feelings and values, their partner's empathy and support (Reis & Shaver, 1988) are amplified by their perceived partner response, forming a dual-path model of trust construction. The threshold theory of impression management (Leary & Kowalski, 1990) explains that freshmen actively adjust the expression of negative emotions on strong relationship platforms such as WeChat to avoid social risks, which leads to no significant correlation between negative self-presentation and friendship quality.

To sum up, positive and true self-presentation promotes the development of intimate relationship among freshmen through the interaction of super-interpersonal interaction, selective signal transmission, social penetration and meeting needs; However, due to the dual inhibition of impression threshold adjustment and cultural level cognition, negative presentation failed to significantly affect the quality of friendship. This multi-theoretical integration framework provides systematic guidance for the intervention design of social media use in colleges and universities.

4.2. The mediating role of online positive feedback in the influence of self-presentation in WeChat circle of friends on the friendship quality of freshmen

This study shows that when freshmen make positive self-presentation on social media, they will trigger the upward social comparison-assimilation mechanism (Wood, 1996), and get positive feedback (Burke & Kraut, 2014) such as praise and comments by showing the advantages signals such as academic awards and community activities, forming a "positive interaction spiral". Under the framework of social infiltration theory, the breadth and depth of this kind of information penetrate synchronously, satisfying users' information, social and self-expression needs (use and satisfaction theory), thus improving the quality of friendship.

On the level of true self-presentation, according to Goffman's (1959) parody theory, students turn from "performing in the foreground" to "exposing the truth in the background", realizing a two-way cycle of self-disclosure and partner response (Reis & Shaver, 1988). Laurenceau et al. (1998) further pointed out that self-disclosure activates the partner's empathy response (perception, understanding, acceptance and care), which in turn promotes deeper disclosure and forms a dynamic strengthening process of intimacy (Laurenceau et al., 1998). This process enhances the sense of self-efficacy (Bandura, 1977) and strengthens the motivation to establish lasting friendship. In contrast, negative self-presentation does not significantly affect the quality of friendship, which is in line with the threshold theory of impression management (Leary & Kowalski, 1990): on strong relationship platforms such as WeChat, students tend to suppress negative emotional expression to avoid social risks; If negative information appears, it is often accompanied by emotional buffering (Burke et al., 2020), which weakens its direct effect.

In addition, Motivation Squeezing (Deci & Ryan, 1985) suggests that when external reward (praise) is over-dependent, internal motivation (true self-expression) may be suppressed, leading to the marginal diminishing effect of positive feedback. On the whole, positive and true self-presentation promotes the quality of friendship through multiple mechanisms, such as super-interpersonal interaction enhancement, social comparative assimilation, intimacy process model, social infiltration and use to meet needs, while negative self-presentation has no significant effect due to impression management and motivation extrusion.

4.3. In-depth analysis from the perspective of gender and specialty

This study reveals the significant differences of social media usage patterns in gender and discipline through group analysis, which provides a new theoretical breakthrough point for the construction of interpersonal relationships in the digital age.

In the gender dimension, women scored significantly higher on positive self-presentation ($M = 4.32$, $SD = 0.71$) and true self-presentation ($M = 3.89$, $SD = 0.63$) than men ($t(326) = 5.17$, $p < 0.001$). This result can be explained based on the co-existence orientation mechanism of social role theory (Eagly, 1987): women tend to adopt the relationship maintenance strategy with emotional labor advantage (Cross & Madson, 1997),

enhance social attraction by publishing positive content on social media platforms, and realize the authenticity authentication of relationships through true disclosure. According to the intimate relationship process model (Reis & Shaver, 1988), this dual-channel self-presentation model can stimulate the partner's empathy and emotional feedback, and then improve the friendship quality index. (FQ: female $M = 4.15$ vs male $M = 3.82$, $t = 4.33$, $p < 0.001$). From the perspective of social penetration theory, women's self-disclosure not only expands the breadth of information, but also deepens the depth of information and promotes the intimacy of relationship.

In the subject dimension, the scores of negative self-presentation of liberal arts students ($M = 2.98$, $SD = 0.81$) are significantly higher than those of science students ($M = 2.34$, $SD = 0.75$, $t = 4.02$, $p < 0.001$). The subject emotional socialization model (Linnenbrink-Garcia et al., 2011) points out that liberal arts education emphasizes emotional metacognition training, which improves the granularity of emotion and the willingness to disclose vulnerability, and makes liberal arts students tend to turn negative presentation into a probe tool for the depth of relationship. On the contrary, science students show the problem-centered coping style, and their friendship quality is more prominent in the tool support dimension ($M = 4.21$ vs liberal arts $M = 3.89$, $t = 3.17$, $p < 0.01$), which is in line with the externalization of analytical cognitive framework in social support supply (Cutrona & Russell, 1990).

Cross-effect shows that liberal arts women score the highest in the dimension of friendship intimacy ($M = 4.52$), which may be due to the synergistic amplification effect of emotions: the relationship-oriented cognition driven by gender schema and the emotional expression efficiency shaped by disciplines are superimposed on each other, resulting in multiplier effect. This discovery provides empirical support for the theory of cross-socialization (Cole, 2009) in the digital social context.

On the whole, the interaction between gender and discipline affects the formation and development of friendship quality through the multi-level interaction of self-presentation strategy, emotional disclosure and social feedback. Future research can further explore the universality of these mechanisms in different cultural backgrounds, and combine the use and satisfaction theory (Katz et al., 1974) to investigate the moderating effect of user motivation in different situations.

Fundings

Shenzhen Polytechnic University's 2025 School Quality Project (Research on Social Anxiety of Vocational College Students and Its Intervention Mechanism).

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