

The Impact of Posting and Viewing Selfies on Social Media on Self-Identity: A Case Study of xiaohongshu

Xizhi Jiao

School of Literature and Journalism, Changsha University of Science & Technology, Changsha, China
Corresponding author: 1812010622@stu.hrbust.edu.cn

Abstract:

The emergence of new social media platforms has significantly influenced adolescent mental health through their engagement in selfie-related behaviours. This paper uses xiaohongshu as a research platform to explore the impact of users' selfie-related behaviour on their body satisfaction and self-identity on social media. This study employed a questionnaire-based survey to examine 60 xiaohongshu users, aged 19-59, utilizing the selfie-posting frequency scale, self-viewing scale, verbal commentary on physical appearance Scale, body Image states scale, and body surveillance subscale. The results show that selfie editing and posting, selfie viewing, and positive appearance-related commentary positively affect body satisfaction, while negative appearance-related commentary negatively affect body satisfaction. There is no statistically significant association identified between body satisfaction and self-objectification. Adolescents' psychological issues are influenced, in part, by their selfie-related activities within social networking environments. However, a mindful and rational engagement with these platforms can foster self-identity and contribute to the positive development of youth mental health.

Keywords: selfie behaviour, self-identity, body satisfaction, self-objectification, mental health of young people

1. Introduction

With the advancement of Internet technology, the number of Chinese Internet users continues to grow. According to data from the China Internet Network Information Center (CNNIC), the total number of Internet users in China had reached 1.092 billion by December 2023[1]. Within this group, 1.091 billion individuals accessed the Internet via mobile devices, comprising 99.9% of all Internet users[1]. The growth of mobile Internet users and the popularity of smartphones have made new social media the main platform for individuals to express themselves and seek social presence in the mobile Internet era.

xiaohongshu was founded in 2013 with the slogan "your life guide", which contains life-related content in many aspects such as food, fashion, and travel. With pictures and text as the main content form, the content is easy to produce and more efficient to watch. xiaohongshu advocates creating a platform for sharing life that allows users to independently produce and share content and encourages communication among users. This measure has prompted a large number of users to record and share their daily lives on xiaohongshu, engage in social interaction, and use it as a "wechat moment" community. As of February

2024, xiaohongshu has 300 million monthly active users, of which 79.13% are female users and 77.86% are users aged 18-34. Female adolescents have become the main user group.

According to a survey, 25.9% of Chinese college students are dissatisfied with life or find it difficult to judge whether they are satisfied[2]. 21.48% are at potential risk of depression[2]. 45.28% are at potential risk of anxiety[2]. The frequency with which young individuals update their social media profiles has a substantial impact on their subjective well-being[3]. Posting and viewing selfies is one of the main forms of posting updates. Furthermore, it also affects the mental health development of young people.

Self-identity is characterized by a stable and coherent understanding of one's own identity[4]. It is an important task for adolescents to understand and explore themselves[4]. The degree of self-identity is affected by a variety of environmental factors[5]. Social media has promoted adolescents' exploration of self-identity[5]. The privacy and anonymity of the Internet allow adolescents to hide their real identities and redefine their roles on social media[6]. However, it is also easy to mistakenly confuse virtual identities with real identities for young people[6]. This phenomenon will lead to virtual self-identification,

causing an identity crisis between virtual and real[6].

As a social platform focused on lifestyle sharing, xiaohongshu's visual content presentation may have unique impacts on adolescents' self-identity. At the same time, xiaohongshu has a content format which is mainly composed of pictures and text compared to other social platforms. This feature makes it the main platform for young people to conduct selfie-related activities today. Choosing xiaohongshu as a research platform is consistent with the research purpose of this paper on posting and viewing selfie activities.

Teenagers communicate with others about their physical appearance through selfies on social media. These external communications will continue to be internalized, extending external appearance comparisons to internal mental comparisons. This has a profound impact on adolescents' sense of self-identity and ultimately affects their mental health development.

2. Literature Review

2.1 Theoretical Basis

2.1.1 Social comparison theory

Social comparison is typically defined as the process by which individuals seek information and assess their own attributes in relation to those of others[7]. This can be categorized into upward, downward, and parallel comparisons[8]. Upward comparison involves assessing oneself against others perceived as superior[9]. Downward comparison entails evaluating oneself relative to those viewed as inferior[9]. Parallel comparison refers to comparing oneself with individuals considered similar[9].

People are eager to know their social status. Social comparison is a direct way to understand oneself. Individuals post and view selfies on social media. Appearance comparison runs through the entire selfie activity. By adjusting the type of social comparison, individuals can change the degree of recognition of appearance. When individuals are motivated by self-improvement, they will choose to make upward comparisons[10]. However, when individuals are motivated by maintaining self-esteem and improving mood, they are more inclined to compare downward [10]. The research content of this paper is mainly based on social comparison theory. Studies suggest that women are more inclined to compare their appearance on social media than with the perfected representations commonly found in traditional media[7]. Additionally, individuals frequently compare themselves to others who share attributes like age and gender[11]. On social media, individuals' comparison of physical appearance with people who have similar conditions to themselves is more common and intuitive. This phenomenon makes social comparison

behaviour more frequent in the field of social media.

2.1.2 Self-objectification theory

Self-objectification refers to individuals internalizing the evaluation of others and evaluating themselves through socially defined body standards[12]. Specific manifestations include frequently monitoring one's body and appearance[12]. As an important factor of objectification, mass media influences individuals' self-objectification through body presentation (active body display and body performance) and emphasizing the importance of the body[13]. As participants on social media, individuals influence others through self-presentation when posting and viewing selfies. Meanwhile, They are additionally impacted by how others present themselves.

2.2 Selfie-related Activities

According to the Oxford Dictionary, a selfie is characterized as a self-taken photograph, most commonly using a smartphone or webcam, which is then typically disseminated via social media.[14]. This shows that selfies have both attributes of self-expression and social communication. With the popularity of smartphones and social networks, communicating through selfies has become an important part of adolescent social activities. Individuals have both identities of publishers and receivers of information on social media[15]. Accordingly, selfie-related behaviours can be categorized into two dimensions: posting selfies and viewing selfies.

Selfie-editing and selfie-posting are inseparable. Goffman's dramaturgical theory believes that in the process of daily communication, everyone is a performer[16]. Onstage, individuals display a persona that conforms to societal expectations[16]. Conversely, backstage activities involve either preparing for the public presentation or managing aspects that are not intended for public exposure[16]. If selfie-posting is compared to a performance in front of people, then the related selfie-editing is the preparation before the performance. The degree of individuals' involvement in selfie-editing reflects the degree of their concern for their physical appearance.

Selfie-viewing refers to the activity of individuals browsing, liking, and commenting on other people's selfies on social media. The act of selfie viewing itself implies comparison behaviour. During the viewing process, individuals will consciously or unconsciously compare themselves with others in the selfie. This kind of comparison tends to be more upward. Upward comparison may trigger more negative emotions and significantly affect individuals' body satisfaction[7]. Furthermore, one study has shown that upward comparison not only brings negative emotions, but also promotes cognitive, psychological, and behavioural changes, thereby producing a motivational

effect[17].

In summary, selfie-related behaviour is a media communication behaviour with social attributes. This behaviour has a significant relationship with individuals' self-identity and their psychological cognition of appearance.

2.3 Appearance-related Commentary

Appearance-related commentary is defined as the evaluations others provide regarding a person's outward appearance. It is divided into positive and negative appearance comment. One study showed that appearance-related commentaries are related to social comparisons[18]. Positive appearance comments are often associated with downward comparisons, while negative appearance comments are often associated with upward comparisons[18].

Negative appearance-related commentaries from family members are negatively correlated with individual body satisfaction[19]. More negative comments lead to lower body satisfaction[19]. Positive appearance-related commentaries can help improve an individual's body satisfaction[20]. However, positive comments will also increase an individual's degree of monitoring of the body, thereby increasing their degree of self-objectification[20].

This paper expands the scope of the application of appearance comments from real social life to virtual social life on the Internet. Users' selfies on social platforms are also filled with various comments. These comments also affect individuals' body satisfaction and degree of self-objectification.

In summary, there are relatively mature studies on the relationship between selfie posting, viewing, commenting and body satisfaction. However, it is still necessary to further enrich the research on the integration of selfie-related behaviour. Starting from a relatively systematic and complete selfie behaviour, this paper studies the impact of selfie behaviour on xiaohongshu on individual body satisfaction. Meanwhile, body satisfaction is used as a mediator to explore its impact on individual self-objectification. Thereby, this study explores the impact of social media selfie activities on self-identity among adolescents.

3. Method

3.1 Participants

To examine the influence of selfie posting and viewing behaviour on self-identity, this study adopted the method of distributing questionnaires online to obtain 66 user samples who frequently used xiaohongshu to post selfies. After collection and sorting, 60 valid samples were obtained. The questionnaire achieved an effective response rate of 90.91%. Respondents were located across 22 provinces, autonomous regions, and municipalities within China.

The largest number of participants came from Shandong Province, with 11 participants (18.34%). The age range of participants was 19-59 years old, with 41 female users (68.33%) and 19 male users (31.67%). The participants' years of education ranged from 6 to 23 years, with the largest number of participants having received 16 years of education (bachelor's degree), with 37 participants (61.67%).

3.2 Measures

3.2.1 Selfie-editing and selfie-posting

Selfie editing and posting were the independent variables in this study. These variables were measured using the selfie-posting frequency scale developed by Dhir et al.[21]. This scale had 3 items. The first item examined the selfie-posting frequency. The last two items examined the selfie-editing frequency. The items were measured using a 5-point Likert scale, with response options from 1 representing 'never' and 5 representing 'very frequently'. The higher the score, the more frequently the individual edited and posted selfies on social media. In the present investigation, the scale exhibited a cronbach's alpha coefficient of 0.90.

3.2.2 Selfie-viewing

Selfie-viewing was the independent variable in this study. The variable was assessed using the self-viewing scale employed in the study by Wang et al.[22]. This scale had 3 items. The first item examined the frequency of an individual's selfie-viewing. The last two items examined the extent of selfie-viewing. These items were rated on a 5-point scale, where 1 indicated 'never' and 5 indicated 'very frequently'. Higher scores reflected a greater frequency of viewing others' selfies on social media. The scale in this research yielded a cronbach's alpha coefficient of 0.71.

3.2.3 Appearance-related commentary

Appearance-related commentary was the independent variable in this study. The verbal commentary on physical appearance scale (VCOPAS) compiled by Herbozo and Thompson et al. was used to measure this variable[23]. The scale comprised 21 items. It was organized into three dimensions: negative assessments of weight and appearance, positive assessments of weight and appearance, and positive assessments of overall appearance. Based on the content of the comments, it can be divided into positive and negative comment, which have 12 and 9 items respectively. Responses to these items were recorded on a 5-point scale, with 1 representing 'never' and 5 representing 'very frequently'. Higher scores corresponded to a greater frequency of receiving relevant comments during social

media activities. In this study, the cronbach’s alpha of positive and negative appearance-related commentary was 0.94 and 0.90.

3.2.4 Body satisfaction

Body satisfaction describes the level of contentment an individual feels toward their body shape and physical appearance. As a mediator in this study, body satisfaction is affected by individuals’ selfie-related activities on social media. Thereby, it will affect the degree of self-objectification of individuals. The body image states scale (BISS) compiled by Cash et al. was used to measure this variable[24]. This scale had 6 items. It measured three dimensions: satisfaction with appearance, satisfaction with body shape, and comparison with others. Responses to these items were rated on a 5-point scale, with 1 representing strong disagreement and 5 representing strong agreement. Higher scores corresponded to greater levels of body satisfaction. In the present research, the scale exhibited a cronbach’s alpha of 0.88.

3.2.5 Self-objectification

Self-objectification, indicated by the extent to which individuals monitor their own bodies, was the dependent variable in this study. To assess this variable, the body surveillance subscale from the objectified body consciousness scale, developed by McKinley and Hyde, was employed[25]. This subscale had 8 items. The items were evaluated using a 5-point Likert scale, with 1 denoting ‘strongly disagree’ and 5 denoting ‘strongly agree’. Elevated scores corresponded to more frequent body monitoring and a heightened level of self-objectification. In this research, the cronbach’s alpha for this subscale was 0.74, following the recoding of certain reverse-scored items.

Combining the above variables, narcissism and inadequacy were introduced as moderators that might affect body satisfaction and self-objectification. Furthermore, they would represent the individual’s objective psychological characteristics. Meanwhile, the body mass index (BMI) was also introduced as a moderator to represent the individual’s objective physical condition. This study integrates multiple variables to construct the research model depicted in Figure 1.

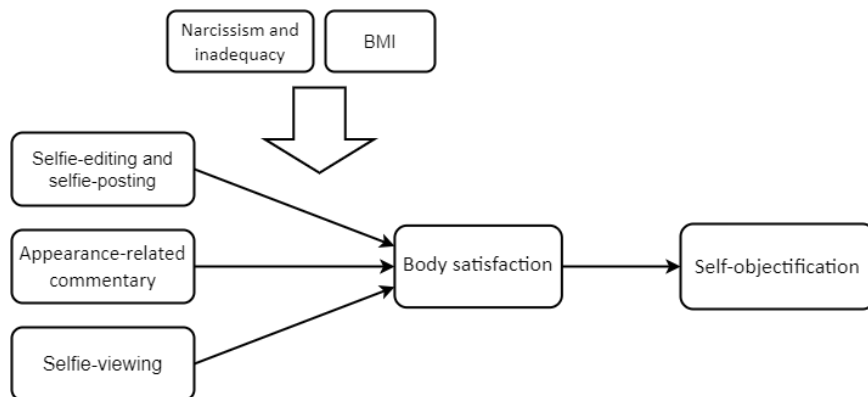


Fig. 1 The relationship model between selfie-related activities, body satisfaction and self-objectification

4. Analysis

4.1 Basic Information of the Samples

In order to grasp the overall characteristics of the samples, this paper conducted statistical analyses of the participants’ gender, age, physical objective conditions, and selfies posted on xiaohongshu in the past seven days. According to statistics, among the 60 valid questionnaires, there were 41 females and 19 males. The range of participant ages was between 19 and 59 years, with an average age of 29.87 years. Notably, 44 participants (73.3%) were aged between 18 and 34 years. The range of heights was between 150 and 188 cm, with the mean height recorded at 167.38 cm. The participants’ weights spanned from 45 to 86 kg, averaging at 60.23 kg. The frequency of posting

selfies on xiaohongshu in the past seven days ranged from 0 to 46 times, with an average of 4.17 times. There were obvious differences in the frequency of selfie-posting among different participants.

4.2 Descriptive Statistical Analysis

Descriptive statistical analysis showed that the mean and standard (std.) deviation statistics of selfie-editing and selfie-posting were respectively 9.73 and 3.19. This meant that most users posted selfies on social media at a moderate frequency, but some users still showed a high posting frequency. The mean and std. Deviation statistics of selfie-viewing were respectively 12.08 and 2.42. The mean and std. Deviation statistics of appearance-related commentary were respectively 62.25 and 13.23. In appearance-related commentary, the total count of positive

comments reached 2589, while negative comments totaled 1146. This meant that most users received positive comments much more often than negative comments. The mean and std. Deviation statistics of body satisfaction were respectively 23.02 and 4.84. The mean and std. Deviation statistics of self-objectification were respectively 23.78 and 5.38. Table 1 presents the results from the descriptive statistical analysis. Among the participants, the average frequency of viewing

selfies was higher than the frequency of posting selfies. Compared with posting selfies, participants were more inclined to watch others' selfies on xiaohongshu. After posting selfies, the content of selfie comments received by different participants was quite different. They received significantly more positive appearance comments than negative comments. All variables, except for appearance-related commentary and positive commentary, followed a normal distribution.

Table 1. Descriptive Statistics

	Minimum Statistic	Maximum Statistic	Sum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Selfie-editing and selfie-posting	3.00	14.00	584.00	9.73	3.19	-.627	309	-.402	608
Selfie-viewing	6.00	15.00	725.00	12.08	2.42	-.973	309	038	608
Appearance-related commentary	21.00	87.00	3735.00	62.25	13.23	-1.467	309	3.059	608
Positive commentary	12.00	57.00	2589.00	43.15	11.00	-1.578	309	2.342	608
Negative commentary	9.00	38.00	1146.00	19.10	7.72	.727	309	-.200	608
Body satisfaction	7.00	29.00	1381.00	23.02	4.84	-1.098	309	1.028	608
Self-objectification	12.00	33.00	1427.00	23.78	5.38	-.273	309	-.570	608

4.3 Correlation Analysis

This study employed both pearson and spearman correlation coefficients to measure the strength of relationships between variables. The outcomes of the correlation analysis are detailed in Table 2. The analysis led to the following conclusions. Selfie editing and posting, as well as sel-

fie viewing and positive commentary, were found to have a significant positive association with body satisfaction. A significant inverse relationship was observed between negative commentary and body satisfaction. Moreover, the association between body satisfaction and self-objectification was not statistically significant.

Table 2. Correlations

	1	2	3	4	5	6	7
1 Selfie-editing and selfie-posting	1						
2 Selfie-viewing	.249	1					
3 Appearance-related commentary	.470**	.286*	1				
4 Positive commentary	.589**	.321*	.668**	1			
5 Negative commentary	.168	.138	.611**	-.024	1		
6 Body satisfaction	.373**	.560**	.303*	.635**	-.266*	1	
7 Self-objectification	.009	-.040	.024	.017	.009	.011	1

4.4 Regression Analysis

To further assess the impact of selfie-editing and selfie-posting, selfie-viewing, and appearance-related commentary on body satisfaction, a regression analysis was performed on these four variables. The independent variables were defined as selfie editing and posting, selfie viewing and appearance-related commentary. The dependent variable was body satisfaction. Tables 3 and 4 provide a detailed summary of the results from the multiple linear regression analysis.

In the multiple linear regression model, the samples were independent (DW = 1.933) and there was no multicollinearity among the independent variables. The model demonstrated a relatively high explanatory power for the dependent variable ($R^2 = 0.623$). All independent variables, except for selfie editing and posting, showed signif-

icant effects. The regression coefficient for selfie-viewing was 0.469, indicating that for each unit increase in selfie-viewing frequency, body satisfaction increased by an average of 0.469 units. This effect demonstrated a high level of statistical significance ($P < 0.001$). The regression coefficient for positive commentary was 0.453, suggesting that each unit increase in the frequency of positive commentary was associated with an average increase of 0.453 units in body satisfaction. This effect also demonstrated a high level of statistical significance ($P < 0.001$). The regression coefficient for negative commentary was -0.303, indicating that each unit increase in the frequency of negative commentary resulted in an average decrease of 0.303 units in body satisfaction, with this effect being statistically significant ($P < 0.001$). Moreover, the enhancing effect of positive commentary outweighed the diminishing effect of negative commentary.

Table 3. Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	789a	623	596	3.07901	1.933
a. Predictors: (Constant), Negative commentary, Positive commentary, Selfie-viewing, Selfie-editing and selfie-posting					
b. Dependent Variable: Body satisfaction					

Table 4. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.351	2.424		2.620	.011		
	Selfie-editing and selfie-posting	.034	.168	.022	.202	.840	.560	1.787
	Selfie-viewing	.940	.176	.469	5.346	.000	.890	1.124
	Positive commentary	.199	.049	.453	4.077	.000	.555	1.802
	Negative commentary	-.190	.054	-.303	-3.498	.001	.914	1.094
a. Dependent Variable: Body satisfaction								

5. Results

This research explored how selfie-related activities within social media environments affect individuals' body satisfaction and self-objectification. The findings indicate that selfie editing and posting, selfie viewing and appearance-related commentary positively influence body satisfaction. Furthermore, negative commentary has a negative impact on body satisfaction. In other words, the more frequently individuals post or view selfies and receive positive comments on social media, the higher their satisfaction with their physical appearance. Conversely, an

increased frequency of negative comments is associated with a decreased level of satisfaction with one's body image.

It should be noted that social network metrics like the count of likes and shares are also integral to selfie-related behaviours on social media. However, this study focused only on the primary forms of these behaviours. Additionally, it is worth highlighting that the performative display of the body on social networks is no longer confined to images. With the rise of short video platforms, videos have increasingly become a dominant medium through

which adolescents express and present themselves. Further research is needed to explore these aspects in greater depth.

6. Conclusion

This study found that the impact of selfie-related behaviours on social media among adolescents is multifaceted, depending on the tendency and extent of the feedback they receive. These findings are valuable for exploring the effects of social media interactions on individual mental health. In the digital age, adolescent psychological anxiety, particularly appearance-related anxiety, is partially influenced by their selfie-related behaviours on social media, especially the receipt of negative comments. However, when used appropriately, social media can also enhance adolescents' self-awareness and self-identity. Furthermore, it can help them to explore and understand themselves positively, which supports their psychological well-being.

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