The Effect of Social Media Addiction on Appearance Anxiety among Generation Z in China: Psychological and Behavioral Aspects

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Abstract: Chinese Generation Z individuals who grew up with the internet may experience varying degrees of influence on their psychology and behavior due to addictive usage of social media. This influence can be attributed to factors such as precise targeting and the information bubble. They publicly share their own photos on social media platforms and, in turn, interact with and are influenced by content shared by others. Factors such as gender and income may also play significant roles in this influence. This study conducted a survey of 159 Chinese Generation Z participants (N = 159) and found that males tend to be more concerned about malicious comments on social media platforms. Additionally, participants may experience a sense of inferiority when viewing photos of influencers or other attractive individuals on social media. Among them, those with higher incomes are more likely to experience appearance anxiety and a sense of loss. Anxiety about appearance can lead to behaviors driven by this concern.

1. Introduction

Generation Z was born into a great socio-economic background, with flexible management of Internet usage and communication technology (ICT) [1]. They are likely to use social media for networking with friends, sharing opinions, watching news reports, and so on [2]. The use of social media may enhance several benefits not only in the physical field but also in the psychological field. Though it may have a brief positive impact by enlarging the bounds of family and friendship, it may have long-term negative impacts on people's psychology [1].

Generation Z social media users edit, select, and post their photos on social media to present themselves. These photos mainly focus on their looks and appearance, which might aggravate current sociocultural pressures and affect the social atmosphere [3].

This research will focus on social media's impacts on Chinese Generation Z's physical appearance and appearance anxiety, as well as their behavior after social media usage. It will also analyze the differences in anxiety levels between males and females.

2. Literature Review

2.1. The current status of social media usage among Chinese Generation Z

The China Internet Network Information Center (CNNIC) released the 52nd Statistical Report on China's Internet Development (referred to as the Report) in Beijing on August 28. According to the Report, by June 2023, China had reached 1.079 billion internet users[4]. The generation born between the mid-1990s and mid-2000s is known as Generation Z, or Gen Z. In China, this generation is perceived to be more environmentally conscious than previous ones, having grown up with the influence of social media platforms[5]. Teenagers growing up in the new media environment find it easier to access information and embrace new things online. Generation Z has integrated the internet into their lives, thus relying more frequently on online information[6]. The development of mobile internet makes sharing on social media more convenient, leading Generation Z to be more willing to share and seek information on these platforms. Male users tend to look for cognitive and functional information[7].

2.2. Social media addiction's effect on appearance anxiety

Intensive social media use and positive online experiences can lead to addictive tendencies. This addiction has increased during the pandemic and is marked by a strong emotional attachment to social media, constant preoccupation, and an uncontrollable need to stay online, causing unease when offline[8]. A previous Chinese research showed higher the intensity of social media use, the more likely it is to produce appearance anxiety. It was further found that social media use can affect appearance anxiety either directly through the separate mediating effects of ideal beauty internalization and upward social comparison, or through the chain mediating effects of both, indicating that the greater the intensity of social media use, the greater the ideal beauty internalization and the tendency to make upward social comparisons, leading to a deepening of appearance anxiety[9]. Adolescents are chiefly be sensitive to physical appearance appraisal especially for female gender[10]. A study demonstrates that selfie-posting takes the risk of female teenagers' self-objectification. Imaginary audience ideation is the bridge among selfie-posting and self-objectification[11] . A Korean study illustrates the Korean female teenagers' exorbitant usage of mobile phone lead to a high risk of mobile phone addiction and depressive symptoms[12]. People are able to build a different character from reality world and connect with others. According to the relationship between mental health and living quality, there might have standing negative effects. Those who share appearance and lifestyle may face amounts of prejudices, which chiefly happened among teenagers[13]. People have long been concerned about the impact of media on women's body image and self-concept[14]. Due to traditional gender role socialization, girls and women learn to self-objectify, prioritizing outward appearance over inner qualities[15]. They place more importance on physical appearance than boys and focus more on managing their looks to meet stereotypical attractiveness ideals[16]. Society now acknowledges the health risks associated with ultra-thin images of feminine beauty[17]. Thin, often photo-shopped images are common on social networking sites, sometimes including weight details and before-and-after photos. Pro-anorexia sites also promote thinness in various documented ways[18]. Advertisements on teen websites consistently promote stereotypical ideals of thin beauty. These ads often feature ultra-slim models, reinforcing unrealistic body standards and contributing to the pressure teens feel to conform to these narrow definitions of attractiveness[19].

3. Method

3.1. Participants

In order to analyze the effects of online social media and smartphone addiction on the psychological perceptions and behaviors of Generation Z in China, a quantitative data collection method was conducted.

The questionnaire was administered to better understand the current status of social media usage among Chinese Generation Z individuals, whether social media changes their aesthetic perceptions, triggers their appearance anxiety, and how they act as a result. We distributed a survey to 159 Generation Z participants born between 1995 and 2009 from various regions of China. The survey could be completed using any computing device, such as a mobile phone, tablet, personal computer (PC), or laptop.

In the questionnaire, there were 159 participants, including 78 male and 81 female participants: 11 participants aged 12-15, accounting for 6.92%; 49 participants aged 16-18, accounting for 30.82%; 55 participants aged 19-23, accounting for 34.59%; and 44 participants aged 24-27, accounting for 27.67%.

There may be some ethical risks associated with this study. The privacy of each participant and the confidentiality of the sample data will be maintained, and they will not be disclosed to the public. The effects of social media usage and cell phone addiction on Generation Z's psychology are correlational but not absolute, so any sample data is not typically representative. Inadequate sample size may also be a potential factor affecting the accuracy of the results.

3.2. Measures

Questions 1 to 5 of this questionnaire gather basic demographic information about the participants, including gender, age range (limited to Generation Z), occupation type, highest level of education, monthly income, and expenditure range on appearance-related changes. Questions 6 and 7 inquire about the participants' social media usage. Question 6 asks whether the participants have used social media, and Question 7 asks how many times, on average, they post photos of themselves on social media platforms per month.

Questions 8 to 19 are scaled questions. Questions 8 to 13 form a scale measuring psychological appearance anxiety potentially induced by social media usage. Questions 14 to 19 assess the impact of social media usage on participants' behaviors. Each question uses a 1-5 scale, where 1 indicates strong disagreement and 5 indicates strong agreement. The detailed questions are as follows:

Q8: When you see beautiful photos of influencers /bloggers or others on social media, do you compare yourself to them?

Q9: Do you feel anxious when you see beautiful photos of influencers /bloggers or others on social media?

Q10: Do you feel inferior when you see beautiful photos of influencers /bloggers or others on social media?

Q11: When you see beautiful photos of influencers /bloggers or others on social media, do you want to change yourself?

Q12: Do you feel disturbed or panic when posting your photos on social media?

Q13: Are you afraid of malicious comments when posting your photos on social media?

Q14: Do you purchase products (such as whitening products/makeup) to change your appearance after seeing photos of other bloggers on social media?

Q15: Do you consider cosmetic surgery to change your appearance after seeing photos of other bloggers on social media?

Q16: Do you repeatedly edit your photos before posting them on social media to present your best self to others?

Q17: Do you frequently check for likes or comments from others after posting your photos on social media?

Q18: Do you delete your photos if they do not receive likes or comments after being posted on social media?

Q19: Do you delete your photos if they receive malicious comments after being posted on social media?

This study will conduct reliability analysis on questions 9 to 13 and 14 to 19 separately. Regression analyses will be performed on questions 9-13 and 14-19 to explore the potential relationship between anxiety psychology and anxiety behaviors. Additionally, the study will analyze the influence of variables such as gender and income on the results.

4. Results

In the questionnaire-based comparison of Chinese Generation Z males and females, the study suggests that males may be more likely to fear malicious comments on social media.

The correlation between monthly income and experiencing feelings of low self-esteem when viewing attractive photos of celebrities and bloggers or others on social media suggests that higher income levels may be associated with an increased likelihood of developing a sense of inferiority. Moreover, the data showcase a connection between the frequency of posting photos on social media in a month and the fear of receiving malicious comments when sharing photos on social media.

4.1. Reliability Analysis

Table 1: Reliability Test Result

Project	Cronbach Alpha	Items
psychology	0.733	6
behavior	0.867	6

The Cronbach Alpha range for reliability testing is between 0 and 1, and the closer Cronbach Alpha is to 1, the higher its reliability and the higher the consistency of the results obtained during repeated measurements. We can see from Table 1 that the reliability test results for anxiety psychology and anxiety behavior in the questionnaire were 0.733 and 0.867, respectively. The consistency level of the results obtained from the questionnaire is relatively high, indicating that the scale in this questionnaire has good reliability for the analysis purpose.

4.2. Contingency table analysis

Table 2: Contingency Table

Project	Pearson c2		
	value	df	P-value
Problem 1 * Problem 14	8.982a	4	0.062
Problem 5 * Problem 11	25.892a	16	0.056
Problem 8 * Problem 14	29.103a	16	0.023

This study uses contingency table analysis and performs a correlation analysis between personal basic situation and anxiety-related issues to determine if there is a correlation between personal basic situation and anxiety.

Table 2 reveals correlations among various factors. Specifically, it demonstrates a connection

between gender (as indicated by Question 1) and the fear of malicious comments when posting photos on social media (Question 14). Men tend to exhibit greater apprehension regarding malicious comments on social media platforms.

Additionally, there exists a correlation between income and the response to Question 11, which addresses feelings of inferiority when viewing attractive photos of influencers or others on social media. Higher income levels are associated with a higher likelihood of developing such feelings of inadequacy.

Furthermore, the number of photos posted on social media in a given month (Question 8) is correlated with concerns about receiving malicious comments (Question 14) when sharing photos on social media.

4.3. Regression analysis

Regression analysis will be conducted on the two factors of appearance anxiety psychology and appearance anxiety behavior extracted from factor analysis.

Table 3: Model Fit Table

R	R Square	Adjusted R Square
0.862	0.743	0.742

Table 3 demonstrates the R-squared value for the regression equation is 0.743, indicating that the regression model can account for 74.3% of the variance in the deterioration of appearance-related anxiety behavior. This suggests that the regression equation exhibits a strong and effective fit.

Table 4: Analysis of Variance Table

	Sum of Squares	df	Mean Square	F	Significance
Regression	117.431	1	117.431	454.457	0.000
Residual	40.569	157	0.258		
Total	158.000	158			

The significance test results of the regression equation test are shown in Table 4. The F-value of the test is 454.457, corresponding to a P-value of 0, indicating that the regression equation has significance. The regression equation can indeed explain the dependent variable appearance anxiety behavior.

Table 5: Parameter Estimation Table

	B	Std.Error	t	Significance
(Constant)	0.000	0.040	0.000	1.000
F1	0.862	0.040	21.318	0.000

The results of the coefficient significance test for the regression equation are presented in Table 5. The t-value for the regression coefficient pertaining to appearance anxiety psychology is 21.318, with a corresponding p-value of 0, signifying the statistical significance of this coefficient. This implies that the independent variable, appearance anxiety psychology, does indeed have the ability to explain the variance in the dependent variable, appearance anxiety behavior. Specifically, for every one-point increase in the psychological score related to appearance anxiety, there is an average increase of 0.862 points in the score for appearance anxiety behavior.

5. Conclusion

In the current state of social media usage in China, over half of the people spend more than two

hours on social media, indicating a high likelihood of social media addiction. Their use of social media will have an impact on their psychology and behavior. The factors influencing this impact are related to the participants' gender or income level. Specifically, first, males in this study tend to pay more attention to and care about comments on their appearance and selfies posted online. Secondly, their level of appearance anxiety regarding selfies on social media is correlated with their income level in real life. Additionally, the more images participants post showcasing their appearance, the more likely they are to experience feelings of anxiety and fear. Finally, such anxiety is also likely to lead to certain behaviors.

6. Discussion

Numerous foreign studies in the past have shown that women typically report a higher number of individuals at risk of appearance anxiety compared to men [20]. Under societal norms, women tend to be more concerned about their appearance and are more likely to report experiencing body dissatisfaction [21]. There is a certain discrepancy between those and my research findings.

Therefore, this study has certain limitations. Firstly, the questionnaire had a smaller sample size, which means it may only reflect the situation within a subset of the population and may not be universally applicable. Furthermore, the research subject of this conclusion was not previously mentioned in prior literature, and the results were based on reasonable inferences rather than specific descriptions from previous papers. Finally, this study is based on the current situation of Generation Z in China, which may explain why its conclusions differ from those of foreign studies.

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