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The Influence of Social Media on Adolescent Body Image Ideals: A Study of Middle School Students in Guangzhou-Foshan, China

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Abstract

This research is aiming to fill the data gap between Eastern and male data on adolescents' body image and examined the relationship between social media usage and body image concerns among 132 middle school students aged 14 and 19 in the Guangzhou-Foshan area, China, using partial subscales of the Negative Physical Self Scale (NNPS) and quantified media exposure questionnaire to conduct Pearson coefficient analysis. Modern social media is not only a tool for leisure but also a key marker of popular trends. Previous research has highlighted the main difference between traditional media and social media, with the latter putting more emphasis on comparison combined with the "high-visual" nature. Researchers have identified this as one of the major factors contributing to negative feelings about body image, and existing studies have proved that upward social comparison among people on social media has aroused widespread body image concern. Given that women tend to express greater concerns about body image than men do, many studies on body image often focus exclusively on female samples, with existing data mostly concentrated in western countries. The results revealed a negative correlation between body image satisfaction and the degree of media exposure in adolescents. These findings suggest that exposure to the ideal body image in the social media environment make a detrimental effect on adolescents expressing dissatisfaction with their adolescents' body image and pursuing a more perfect body. Dissatisfaction will increase with heavier involvement of specific content views and browsing time. Future research could focus on whether interventions aimed at enhancing media literacy could effectively mitigate negative body image among adolescents.

Keywords

Body Image, Social Media, Social Comparison Theory

1. Introduction

Social media has exerted a significant influence on our daily life, especially on the young generation who has little memory of the past when the internet wasn't yet around. Meanwhile, a predominant problem is the negative body image incurred by social media emphasizes comparing one's appearance to others (Fardouly & Vartanian, 2016; Fardouly, Willburger & Vartanian, 2018). Researchers contend that media pressure is a major factor in the emergence of negative feelings about the body (Dakanalis & Riva, 2013).

Modern social media are very different from traditional media, such as publications or television. Social networking sites have more social and cultural pressures than conventional mass media since they include not just celebrities but also family members, intimate friends and peers. As a result, people may receive negative social feedback or be subjected to social comparisons (Wang et al., 2017). According to the social comparison theory, evaluating oneself mostly involves comparing it to similar people, and self-evaluations are primarily based on comparisons with people who are similar to us.

Additionally, most contemporary social media platforms use images and high-visual social media (HVMS), which are described as information sources that use high-visual representations (Marengo et al., 2018). The likelihood of comparison with user-posted photographs on HVSM increases with increased usage and interaction; these images frequently feature socially acceptable "idealized" body image models (Marengo et al., 2018). It has been demonstrated that the internet encourages images that reflect the skinny ideal (Burnette, Kwitowski, & Mazzeo, 2017). Women who consume a lot of thin-ideal media may come to believe that being thin is socially desirable, feel more self-conscious about their bodies, and resort to weight loss and cosmetic surgery to meet the standard they see (Vonderen & Kinally, 2012).

Since women are more prone than males to upload idealized photographs and watch them as well, many studies exclusively included female volunteers and did not include any males (Hogue & Mills, 2019). This paper is mainly devoted to filling up the gap between the ideal body image illustrated by eastern social media platforms influencing Chinese adolescents (aged 13 to 19 years old) and adding male samples into the research. To investigate the degree of body satisfaction of contemporary Chinese teenagers and whether they pursue ideal body image.

2. Literature Review

Schilder (1936) was the first to define body image as a person's thoughts, feelings, and impressions of the aesthetics or sexual appeal of their own body. The psychologically significant difference between a person's perceived physique and their ideal body is known as negative body image (Bell & Dittmar, 2011). Hendirks and Burgoon, 2003 developed the term "thin ideal", which refers to a notion of beauty in contemporary social culture. "Slim-ideal media" is a term used to describe media that features prominently thin female protagonists, such as

fitness (Vonderen & Kinally, 2012).

2.1. Social Comparison Theory

Festinger's social comparison theory was put forth in 1954, people evaluate themselves and create their sense of self by contrasting themselves with other people who share similar, important characteristics. The upward comparison refers to comparing oneself to someone who is superior to oneself in some way. In the lack of objective criteria, people are said to compare themselves to others to determine where they stand. From the perspective of social comparison theory, the impact of mass media on body image is seen as a body on the audience and mass media's comparison process: in the medium of the masses of "perfect body", the audience has made upward comparisons, lowered their self-esteem and leading to unhappiness with their bodies, which has affected their body image (O'Brien et al., 2009; Liu & Ni, 2021).

Users routinely post the most enticing photos to social networking sites, which are subsequently modified and exaggerated (Wang et al., 2017). As the pictures become more available, they may get internalized, leading to upward comparisons and increased body dissatisfaction (Vonderen & Kinally, 2012). Hogue and Mills contend that body image worries in young adult women may be exacerbated by upward appearance comparisons on social media (Hogue & Mills, 2019). Women who compare their bodies to the unrealistically thin beauty ideal that society has set for them experience body shame and are more prone to engage in disordered eating in an effort to shed weight and conform to this thin-ideal norm (Dakanalis & Riva, 2013; Bell, Lawton, & Dittmar, 2007).

Women assess their personal beauty while comparing themselves to media icons who are slim (Vonderen & Kinally, 2012). Young women's values of thinness and self-esteem were more probable when thinness was viewed favourably by their peers (Vonderen & Kinally, 2012). According to the 2019 hypothesis of Hough and Mills, young adult women who actively engaged in image-based social media of attractive peers (upward social comparison targets) would have a more negative body image than before, but young adult women who actively engaged in image-based social media of their families (unlikely social comparison targets) would not. The results show that while interacting with the families of attractive peers had no effect on state body image, interaction with their appearance-based social media did.

2.2. Objectification and Internalization

According to (Wang et al., 2017), objectification is the act of viewing one's own body, body parts, or organs from the viewpoint of a third party, and it is positively correlated to social media browsing. People who have absorbed media standards have the practice of checking their outside look to see if it conforms to the internalized ideal. The act of "self-objectification" refers to the reduction of a woman's value in her assessment of her body's resemblance to conventional

norms of appearance (Dakanalis & Riva, 2013; Jackson & Chen, 2015). Women are more likely to access "thin ideal" photos the more of them they see (Vonderen & Kinally, 2012; Dahl, 2014).

Internalization of the social media ideal, the muscular ideal, and comparisons to others' appearances was all positively connected with feelings of body dissatisfaction, restriction, and muscular activity (Rodgers et al., 2020). People may internalize the thin ideal and think that this is the widely accepted societal meaning of beauty after being exposed to these thin female models for a prolonged period (Paterna et al., 2021). When one discovers that the internalized ideal is unattainable, comparing oneself to it and internalizing media-promoted ideals may ultimately have negative effects (Rousseau & Eggermont, 2018). Because of the increased contact, people may become more emotionally attached to the figures, which raises the possibility that they will aspire to be like them (Bell & Dittmar, 2011).

2.3. Ideal Body Image in Present-Day Media

The two primary categories of today's ideal body photos that are shared on social media are muscularity and thinness (Rousseau & Eggermont, 2018). The media consistently promotes an idealized, disproportionately slender but impossibly toned and curvy perception of feminine attractiveness (Bell & Dittmar, 2011). In contrast to earlier research, (Zhou & Li, 2019) emphasize the distinction between modern social media and conventional media, expanding the study's analysis of media interaction frequency to include contact content. One in every two early teenage females feels self-conscious about their bodies and wants to be slimmer. Early teenage boys are more likely than girls to have body concerns, with about 30% to 50% of boys wanting a slimmer and/or more muscular body type, demonstrating the differences in ideal body images between men and women.

The allocentric lock theory contends that people are trapped in an allocentric (observer view) negative representation of their bodies, in which their sensory inputs are no longer able to update even after a strenuous diet and significant weight loss, trapping them in a cycle of dissatisfaction with their bodies and increasingly drastic efforts to change them (Dakanalis & Riva, 2013). Jackson, Cai, and Chen's 2020 study imply that Western beauty norms are adopted because of exposure to Western media, replacing earlier favoured body ideals like Chinese plumpness. In addition, a "thin" body shape still brings people a sense of superiority and has psychological advantages (Zhou & Li, 2019).

2.4. Relationships between Social Media and Body Image

Social networking and "chat" were the final media genres employed for Internet usage (Bell & Dittmar, 2011). Social media includes user-generated content (as opposed to just models and celebrities), and people frequently publish just the most appealing pictures of themselves on social media, presenting an idealized vision of themselves (Fardouly & Vartanian, 2016). Communications theories

state that people who are exposed to media information frequently start to believe the depictions to be true (Dakanalis & Riva, 2013). There has previously been evidence to support the efficacy of biopsychosocial models for explaining the connections between conventional media, body image issues, and eating disorders (Rodgers et al., 2020).

Viewing more fitness-related photographs on Instagram was linked to increased body image issues in women, internalization of the beauty standard, and an overall inclination toward appearance comparison (Fardouly, Willburger, & Vartanian, 2018). Ninety-four percent of users on The Little Red Book, one of the most prominent social media sites in China, are female, and social media sites have started to label women's bodies as "thin". It worsens audience members' uneasiness, leading the female group that initially had an attitude of enjoyment to begin to question themselves after looking over the notes (Yin, 2022).

2.5. Media Literacy and Education Help Reduce Body Dissatisfaction

Participants were chosen in different research by Burnette et al. because they demonstrated good media literacy. The results of this study suggest that parental participation and the school setting have a substantial impact on the association between social media exposure and concerns about appearance. Future preventative research will be significantly impacted by the perspectives gathered from this investigation. This showed how effectively media literacy and education may be used to help people reduce body dissatisfaction and poor body image (Burnette, Kwitowski, & Mazzeo, 2017; Potter, 2010). Early adolescents who have body dissatisfaction and high levels of peer acceptability based on appearance may refrain from internalizing media-promoted standards to lessen the negative effects of their bodies and remove dangers to their social selves (Rousseau & Eggermont, 2018). The current study's findings clearly imply that the school's culture helped to mitigate the negative effects of social comparisons and promote appearance satisfaction (Burnette, Kwitowski, & Mazzeo, 2017).

In addition to being connected to the internalization of the slender ideal, parental opinions regarding body type and weight are in line with those of the media (Vonderen & Kinally, 2012). Parental remarks regarding their children's looks impart body image standards that may cause them to associate their body shape negatively (Vonderen & Kinally, 2012). It would increase the effectiveness of interventions like those meant to increase media literacy or support dissonance related to accepting appearance ideals for Chinese women if program material is designed to reflect and evaluate appearance images from Asian media (Jackson, Cai, & Chen, 2020; Xie, 2020). It has been demonstrated that media informs kids and teenagers about the effects that comparisons to such content might have on their anxieties about their looks (Fardouly & Vartanian, 2016).

2.6. Research Gap

There are still gaps in this specific study subject, particularly in two areas: the

dearth of Eastern data and male participation (Rodgers et al., 2020). Most of the data from previous studies were gathered in the West, with the Western population serving as the study subjects (Jackson, Jiang, & Chen, 2016). It was also heavily based on globally prominent social media platforms like Facebook and Instagram. This research primarily fills a research gap by including data from the Eastern globe because there are few supporting studies and sample data from the East. Expanding our knowledge of how teenage guys use social media can help us better comprehend these distinctions in the future (Rodgers et al., 2020).

Since adolescents and young adults have the biggest percentage of social media users, most studies on the effects of social media on body image have concentrated on this demographic group (Burnette, Kwitowski, & Mazzeo, 2017). Moreover, it is necessary to do more studies based on various media platforms to understand how and when media internalization results in body dissatisfaction as well as the reasons why early adolescents selectively internalize or refrain from internalizing media ideals (Rousseau & Eggermont, 2018).

In summary, following an "excessive" number of accounts, posting too frequently, making repetitive posts, making critical remarks, seeking praise, acting artificially, and sharing selfies are some examples of inappropriate social media activities (Burnette, Kwitowski, & Mazzeo, 2017). Images of selfies, body figures, fashion, fitness, and weight loss were reportedly among the most popular postings. While some of these images were reportedly inspirational, many were viewed as showboating with the intention of making friends feel inferior to them (Rounsefell et al., 2019). This finding indicates that further research is required to determine whether posts that are motivated by emotional displays are made by users. It is also necessary to determine whether perceived body-improvement attainability causes people to avoid making comparisons to idealized media pictures and internalize them (Rousseau & Eggermont, 2018), and further proves education and media literacy are helpful to decrease the negative body image and body dissatisfaction that is raised by objectification and internalization. It's critical to conduct an additional study on how these new social media platforms affect adolescents' health given the paucity of literature on them (Marengo et al., 2018).

3. Methodology

3.1. Sample

A sample of 132 adolescents from ages 14 to 18 were recruited to take the questionnaire by sending the online survey, which covered Grade 7 to Grade 9 and Grade10 to Grade 12, who are mainly from the Guangdong region. 46.58% of participants are males and 53.42% are females, mean age = 15.87 years, provided complete data at baseline and were included in this study. The majority (86.36%) were born in cities or towns rather than rural areas.

3.2. Procedure

The core method used in this research is a questionnaire which has two parts:

the first part is focused on media usage (details in 3.3.1) and the second part is a self-evaluating scale on specific parts of the body (details in 3.3.2). Because the original Negative Physical Self Scale (NNPS) was in English, the questionnaire was translated into Chinese individually. Before the formal release of the questionnaire, three students were recruited to take part in a preliminary survey to ensure that all questions were comprehensible and accurate without misunderstanding. The questionnaire was anonymous, and all data used has been obtained with a consent form from every participant. Participants could choose to provide their detailed contact information (mobile phone number) for further study. The questionnaires were collected online through sharing on social platforms and forwarding, using the website wjx.com. To ensure the validity of the response, there is one valid question ("*Please choose* 3 *for this question*") randomly asserted in a total of 36 NNPS questions. Who answered wrong for this question and choose the same choice for all NNPS questions are considered invalid responses and have been deleted in later analysis.

3.3. Measures

3.3.1. Social Media Use

There are five questions in this section, which aims to understand teenagers' media use. The first question asked participants what media they were using to get their information. They were given five options to choose from. Notably, all participants checked "Internet". In the second question, participants were asked to rank seven different types of applications according to the number of clicks per day, to understand the frequency of application use of different categories. 58% of participants ranked social apps as the first, while 25.64% ranked short video or live broadcast apps as the first. The next two questions have a logical jump relationship. If the "Internet" option is selected in the second question (which is checked by all participants), participants will select the three types of short videos or live broadcasts they watch most frequently among the 24 different types given and check the total time (hours) they spend browsing these contents every day in the fourth question. Since this study focuses on the influence of media on teenagers' body image, the last question asks about the "physical characteristics of the characters (both real and virtual)" in the content, and gives the most representative three options, namely "attractive facial appearance", "slim body" and "obvious muscular shape"; it also provides the option to add more answers.

3.3.2. Negative Physical Self Scale (NNPS)

This scale is quoted from (Chen, Jackson, & Huang, 2006). There are five subscales in total, namely General (α = 0.80), Facial (α = 0.85), Thinness (α = 0.84), Fatness (α = 0.88) and Shortness (α = 0.88), the reliability of this scale was tested by (Chen, Jackson, & Huang, 2006). As shortness is not the focus of this study, this subscale was deleted from the questionnaire of this study. The other four subscales were retained, resulting in a total of 46 questions that were scored on a

5-point Likert scale, ranging from 0 (*Never*), 1(*Occasionally*), 2(*Sometimes*), 3(*Often*) *and* 4 (*Always*). An example item is, "Generally, I am satisfied with my body". The Negative Physical Self Scale (NPSS) was used in the Chinese version of this research, which was translated from the original English version, see Appendix B for the complete Chinese version.

Table 1 displays reliability statistics (Cronbach's α), which are used to determine if the NPSS is still reliable following the removal of the Shortness subscale. The Cronbach's α coefficient, which measures the internal consistency of the scale's items and the reliability of the research data, was used to assess the reliability of the new scale. The total scale's Cronbach's α coefficient was discovered to be 0.883, which denotes a good degree of internal consistency. The CITC values varied from −0.170 to 0.650, showing that most of the items had a favourable correlation with the scale score overall. Certain items, including items 1 and 27, with lower Adjusted Item-Total Correlation values, were left in the scale because removing them did not significantly improve the dependability coefficient. Overall, the scale demonstrated good internal consistency and can be considered a reliable tool for assessing body image concerns and weight management behaviours in the participants.

3.3.3. Calculation of Exposure Frequency

Exposure Frequency, *Body Exposure Frequency* and *Facial Exposure Frequency* were quantified using the Media Use Survey (see the complete survey in Appendix A) originally designed. There are five questions in total, while the first three questions are criteria to filtrate the target component of exposure calculation. The formula of *Exposure Frequency* is shown below:

Exposure Frequency = Body Exposure Frequency + Facial Exposure Frequency

Question 3, which is asking whether the participants have frequently viewed target media content. I categorized the media content with reference to the Little Red book (https://www.xiaohongshu.com/) 2022, see in Appendix A. If the participant selects the target contents, each content chosen will be counted as 1 point (options containing both *Body Exposure Frequency* and *Facial Exposure Frequency* will be calculated separately). Dressing style, Special dressing, Cartoons, Movies and Soap Operas, Fitness and Yoga, Extreme Sports, and Low-Fat food/Light food are identified as *Body Exposure Frequency* because these content types are thought to encourage people to have a perfect body image (extreme thinness or muscle) or lose weight (e.g. low-fat food/light food and fitness and yoga); Dressing style, Special dressing, Makeup/Skincare, Cartoon, and Movie/Soap Opera are identified as *Facial Exposure Frequency* target contents because the characters shown in these media contents are likely to show an ideal facial countenance. Question 4 asked for the viewing time of chosen contents in the previous question, browsing time is converted into 1 to 6 points for 0 - 0.5 hrs to 5 hrs or more. Question 5 is aimed to find whether the participants have noticed those characteristics of characters that appeared in media content. Characteristic choices A, B and C will count as 1 point if the participant is chosen,

Table 1. Reliability statistics (Cronbach's *α*) of Negative Physical Self Scale (NPSS) after removed shortness subscale (n = 132).

Items	Corrected Item-Total Correlation (CITC)	Cronbach's *α* if Item Deleted	Cronbach's *α*
1. Generally, I am satisfied with my body (CA)a	−0.055	0.882	
2. I am worried about my facial appearance (CA)	0.458	0.873	
3. I think I am fat in others' eyes (P)	0.567	0.871	
4. I exercise to become heavier (B)	0.267	0.877	
5. I am proud of my body (CA)a	−0.031	0.882	
6. People, whom I like, think I am fat (P)	0.594	0.871	
7. If there is some way I can improve my face, I will keep trying to do it (B)	0.516	0.872	
8. I am careful to eat foods that help me gain weight (B)	0.325	0.876	
9. The people I like most do not like the way my face looks (P)	0.644	0.870	
10. I am very distressed when I think about my weight (CA)	0.598	0.870	
11. My parents think I am fat (P)	0.614	0.870	
12. I am depressed about how my face looks (CA)	0.589	0.871	
13. I am ashamed about my facial appearance (CA)	0.642	0.870	
14. I have tried many ways to lose weight (B)	0.498	0.872	
15. People who I like think I am too thin (P)	0.258	0.877	
16. I exercise to lose weight (B)	0.475	0.873	
17. My peers think I am very fat (P)	0.562	0.871	
18. I diet to lose weight (B)	0.554	0.871	0.878
19. If there is a way to make myself bigger, I will persevere at it (B)	0.271	0.877	
20. There is not anything I need change about my body (CA)a	−0.036	0.883	
21. If it is possible, I will change the way my face looks (B)	0.564	0.871	
22. My parents think that I am too thin (P)	0.128	0.881	
23. If possible, I will have cosmetic surgery (B)	0.525	0.873	
24. People around me do not like the way my face looks (P)	0.636	0.871	
25. I have been depressed with my thin body (CA)	0.401	0.874	
26. I feel that I am too thin in others' eyes (P)	0.223	0.878	
27. I like my body very much (CA)a	−0.170	0.885	
28. I sometimes try ways to get a bigger body, but I cannot persevere (B)	0.481	0.873	
29. I do not like what I see when I look in the mirror (CA)	0.650	0.870	
30. I do not like that I am so thin (CA)	0.080	0.881	
31. There is nothing for me to be sorry about regarding my body (CA)a	0.027	0.882	
32. When I weigh myself, I feel depressed (CA)	0.467	0.873	
33. My peer group does not like my looks (P)	0.637	0.871	
34. I pay attention to my weight very much (CA)	0.452	0.873	
35. I feel bad about having a thin body (CA)	0.431	0.874	
36. I often break my plans to lose weight (B)	0.292	0.877	

Cronbach's *α* (Standardized): 0.883. CA, cognition-affect; B, behaviour; P, projection; a, Reverse-scored.

and the last choice (D. others) will not be counted if chosen, this choice is added to reduce induce of choosing other choices and allow self-report, the answer that participant self-reported are all expressed that they feel "there are no significant characteristics of characters in the content I frequently view". The total point of these three questions is identified as *Exposure Frequency*.

3.4. Data Analysis

Independent T-test and one-way ANOVA were run on SPSS to examine the relationships between teenagers' social media use and their body dissatisfaction with gender and age group. Descriptive statistics, including Max, Min, Mean and standard deviation of NPSS scores collected, and inferential statistics, including Pearson correlation coefficient. The score of NPSS is the dependent variable.

4. Results

4.1. Demographic Information

Table 2 provided frequency distribution table presents data on the age, grade, gender, and place of origin of 132 respondents. According to the age breakdown, 39 and 36 respondents, or 29.55% and 27.27%, respectively, of the total respondents,

Table 2. The age, grade, gender, and origin distribution of the participant (n = 132).

Items	Categories	N	Percent (%)
Age	13	2	1.52
	14	13	9.85
	15	14	10.61
	16	39	29.55
	17	36	27.27
	18	25	18.94
	19	3	2.27
Grade	Grade 7	3	2.27
	Grade 8	10	7.58
	Grade 9	9	6.82
	Grade 10	23	17.42
	Grade 11	50	37.88
	Grade 12	37	28.03
Gender	Female	72	54.55
	Male	60	45.45
Origin	Rural Area	50	37.88
	City/Town	82	62.12
Total		132	100.0

are between the ages of 16 and 17. According to the breakdown of respondents by grade, 50 respondents in the 11th grade (or 37.88%) make up the biggest group, followed by 37 respondents in the 12th grade. In terms of gender, there are 72 individuals who identify as female and 60 who identify as male. Finally, the distribution of respondents by place of birth reveals that 50 respondents are from rural regions, while the majority (n = 82, 62.12%) are from metropolitan places.

4.2. Descriptive Data Analysis

The Negative Physical Self Scale's scores are counted from four different subscales. The subscale scores were standardized on a 4-point scale, higher scores represent higher negative feelings (Chen, Jackson, & Huang, 2006). As shown in Table 3, the General subscale mean is 3.048, the standard deviation is 0.906 and the median is 3.000. The mean and median of the General subscale are much higher than other subscales, which means the negative feeling about the general body image is stronger than other parts of the body. The Facial subscale has a mean of 2.142, a standard deviation of 0.789, and a median of 2.000, which means the participants shows the least dissatisfaction about their countenances. The Fatness subscale is testing whether the participants thought they are too fat, and the Thinness subscale is testing whether the participants thought they are too thin. The Fatness subscale (μ = 2.453, std = 0.973, median = 2.409) shows a higher dissatisfaction than the Thinness subscale (μ = 2.189, std = 0.789, median = 2.100).

Table 4 shows the inter-related mode of the participants, which means the negative feeling will affect them at which internal level. Cognitive-affect (μ = 2.558, std = 0.486, median = 2.476) has the highest statistics in all functioning

Table 3. Min, Max, Mean, Standard deviation, and median of Negative Physical Self Scale (NPSS) subscales (n = 132).

Items	N of samples	Min	Max	Mean	Std. Deviation	Median
General subscale	132	1.000	4.800	3.048	0.906	3.000
Fatness subscale	132	1.000	4.636	2.453	0.973	2.409
Thinness subscale	132	1.000	4.400	2.178	0.789	2.100
Facial subscale	132	1.000	4.500	2.142	0.789	2.000

Table 4. Min, Max, Mean, Standard deviation, and median of Negative Physical Self Scale (NPSS) inter-related modes of functioning (cognition, affect, behaviour) (n = 132).

Items	N of samples	Min	Max	Mean	Std. Deviation	Median
Cognition-affect (CA)	124	1.400	3.933	2.558	0.486	2.467
Behaviour (B)	124	1.091	4.091	2.398	0.681	2.273
Projection (P)	124	0.700	4.000	2.062	0.681	2.000

level, which mean in the current state, even the sample shows a significant dissatisfaction about their body, the negative feeling mainly remains in the cognitive level, and have not taken that many actions(Behaviour, μ = 2.398, std = 0.681, median = 2.273) to actually change their body image toward their ideal body image. The Projection sub-dimension (μ = 2.062, std = 0.681, median = 2.000) shows the lowest statistics, which means the participants are not likely to attribute their own feelings, or attitudes to other people or to objects.

Because the sample size of age 13 (n = 2) and age 19 (n = 3) are not enough to represent the population of these age group, these two age group is merged into age 14 (n = 13) and age 18 (n = 25) in ANOVA, respectively. Table 5 shows analysis of variance (single-factor analysis of variance) is used to study the differences between age and General, Facial, Fatness and Thinness subscales. It can be seen from the above table that: The General, Facial, Fatness and Thinness subscale scores of participants of different ages did not show any significance ($p > 0.05$), which means that participants of different ages show consistency in General, Facial, Fatness and Thinness without a difference. In conclusion, participant of different ages do not show significant differences in body image. It is worth noting that Figure 1 shows that although the scores of the Facial, Fatness and Thinness subscales fluctuate with age, the scores of the General subscale have been steadily increasing. Therefore, it can be inferred that although teenagers' dissatisfaction with their body image increases with age, they do not know which aspect of their body they are most dissatisfied with, which may also be caused by scale wording bias.

The independent sample t-test is employed to investigate the gender differences in the General, Facial, Fatness, and Thinness subscale scores. As shown in Table 6, apart from the General subscale, there appeared to be not statistically significant ($p > 0.05$) gender difference between teenagers' use of media and their perceived body image, which means that there is no difference in scores of Facial, Fatness, and Thinness subscales between different genders. In addition, gender was significant for General subscale ($p > 4$). The significance of gender for General was 0.05 (t = −2.252, $p = 0.026$), indicating that the average value of females ($M = 2.89$) was significantly lower than that of males ($M = 3.24$).

Table 5. One-way analysis of variance analysis of Negative Physical Self Scale (NPSS) subscales based on Grade (n = 132).

	Age (Mean ± Std. Deviation)					*F*	*p*
	13.0 and 14.0 (n = 15)	15.0 (n = 14)	16.0 (n = 39)	17.0 (n = 36)	18.0 and 19.0 (n = 28)		
General	2.88 ± 1.04	2.94 ± 1.21	3.03 ± 0.83	3.11 ± 0.82	3.14 ± 0.91	0.296	0.880
Facial	2.03 ± 0.72	1.89 ± 0.94	2.22 ± 0.73	2.29 ± 0.83	2.03 ± 0.77	1.028	0.395
Fatness	2.50 ± 1.04	2.30 ± 0.97	2.52 ± 1.05	2.35 ± 0.90	2.55 ± 0.97	0.289	0.885
Thinness	2.02 ± 0.65	2.00 ± 0.94	2.27 ± 0.90	2.21 ± 0.66	2.18 ± 0.80	0.467	0.760

*$p < 0.05$; **$p < 0.01$.

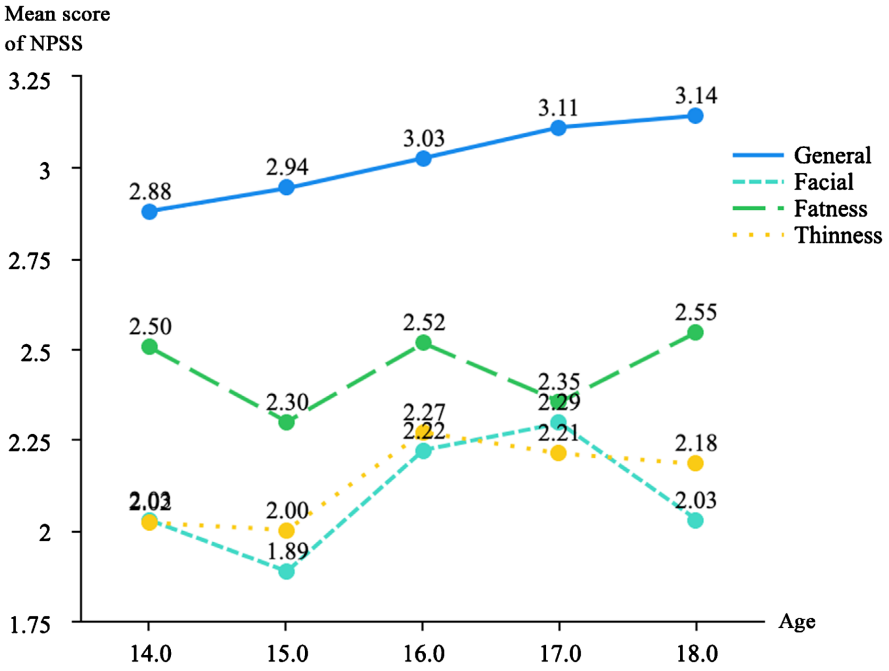

Figure 1. Four subscales' scores of NPSS changed with the age of the participant (n = 132).

Table 6. General, Facial, Fatness, Thinness subscales' score independent t-test based on Gender difference (n = 132).

	Gender (Mean ± Std. Deviation)		*t*	*p*
	Female (*n* = 72)	Male (*n* = 60)		
General	2.89 ± 0.96	3.24 ± 0.81	−2.252	0.026*
Facial	2.16 ± 0.79	2.12 ± 0.79	0.253	0.801
Fatness	2.53 ± 0.86	2.37 ± 1.09	0.929	0.355
Thinness	2.11 ± 0.84	2.26 ± 0.73	−1.068	0.288

*$p < 0.05$; **$p < 0.01$.

4.3. Correlation

The correlation values are −0.652, −0.392, and −0.593, respectively shown in Table 7, and they are all less than 0. The General subscale and *Exposure Frequency*, *Body Exposure Frequency*, and Facial Exposure Frequency are all significant, which indicates a negative correlation between the General subscale and *Exposure Frequency*, *Body Exposure Frequency*, and *Facial Exposure Frequency*. According to this data, the score of the General subscale of the participants' body image will steadily decline the more media information about the ideal body image is viewed. Overall, it will result in a poor perception of one's body.

The scores of the Facial subscale, *Exposure Frequency*, and *Body Exposure Frequency* are all significant. The *Exposure Frequency* and Facial subcale correlation coefficient are 0.213. A number greater than 0 denotes a positive connec-

tion between the teenagers' cognition of their countenances and exposure to ideal facial characteristics in media content, which means that viewing more relative content about viewing more perfect socially preferred countenance photos will make the participants' discontent with their facial features worse.

Figure 2 visualized the result of the Pearson Correlation. The correlation coefficients for the significant components of the *Exposure Frequency* and the Fatness subscale are both 0.180, all of which are higher than 0, showing a positive association between the two. The Thinness Subscale, *Exposure Frequency*, *Body Exposure Frequency*, and *Facial Exposure Frequency* do not significantly correlate with one another. The correlation coefficients are, respectively, −0.006, 0.103, and −0.115. All of them have p-values greater than 0.05 and are very close to zero, which means *Exposure Frequency* does not correlate with thinness as a result. These findings suggest that seeing more media that features idealized body images will increase the participants' awareness of obesity and that few

Table 7. Correlation between exposure frequency, facial exposure frequency, body exposure frequency and four subscales (General, Facial, Fatness and Thinness) of NPSS (n = 132).

	General	Facial	Fatness	Thinness
Exposure Frequency	−0.652**	0.213*	0.180*	−0.006
Facial Exposure Frequency	−0.593**	0.155	0.144	−0.115
Body Exposure Frequency	−0.392**	0.195*	0.099	0.103

*$p < 0.05$; **$p < 0.01$.

Figure 2. Correlation between exposure frequency, facial exposure frequency, body exposure frequency and four subscales (General, Facial, Fatness and Thinness) of NPSS (n = 132).

people will feel overly thin as a result of viewing.

In summary, it is surprising that even the score of the General scale is higher than other subscales, which means participants have more negative feelings about the general body, but the General subscale is negatively correlated to media usage. In contrast, even though the Facial and Fatness subscale does not show severe negative feelings, these two body parts still show a slight correlation with media usage according to the statistics collected in this research.

5. Discussion

5.1. Discussion of the Results

The study counted the current body satisfaction of Chinese adolescents, the frequency of media use and the content they frequently read, and analyzed whether there was a correlation between the two. The conclusion is, the NPSS scores of male and female participants show the same trend, indicating that gender does not affect Chinese adolescents' evaluation of their body image, which results are the same as in previous studies, correlations between the NPSS and *Exposure Frequency* were examined by Pearson correlation and reported a relatively strong correlation. This research may be considered a further validation of while media content makes individuals uneasy, it only affects attitudes and has little influence on actual behaviour (Zhou & Li, 2019). Moreover, it is interesting to note that although with the increase of age, the negative feeling of the participant on the face, fat and thin decreased, the negative feeling on the general body image increased.

5.2. Limitations of the Study

Due to the time limit and the restricted resource and ability, the major limitation of the present study is the participants were recruited from only a few schools in the same area, and the sample size was also not enough to generalize to a larger population. In addition, the quantization method of the *Exposure Frequency* may lead to a deviation in results. However, the accuracy of descriptive data could be guaranteed and the status of Chinese teenagers in this specific geographical area is not affected by existing limitations.

5.3. Future Research Direction

Early intervention is essential because negative parental, peer, and other important influences on early childhood mental health outcomes may have long-lasting effects on children (Gilliland et al., 2007). Future research could focus on whether interventions aimed at enhancing media literacy could effectively mitigate negative body image among adolescents. In addition, considering integrating peer influences and aspects of boys' celebrity contact on social media (Rodgers et al., 2020) also remains to resolve. Comparisons to peers and models might result in various outcomes when it comes to problems with body image. Peers usually share the same resources and lifestyle, which may explain why peers' looks are

viewed as being more physically accessible than those of models or superstars (Fardouly et al., 2015). It is remarkable for future research to further explore whether body dissatisfaction will be affected by celebrities in social media or the familiar people around, which largely determines how to reduce the negative impact of body dissatisfaction.

6. Conclusion

This research concludes by arguing that viewing media content with ideal body images is positively correlated to adolescents' negative body image. There is no significant statistical difference between different genders while the negative feelings about different body parts change with age increase. This may be considered as further validation of the conclusion that has been made before by using the eastern sample.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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