THE INFLUENCE OF SOCIAL MEDIA ON BODY IMAGE DISTURBANCE INDUCED BY APPEARANCE ANXIETY IN FEMALE COLLEGE STUDENTS

Yi Zhong

Department of Communication & Media, Sookmyung Women's University, Seoul 04310, Korea

SUMMARY

Background: *Currently, appearance anxiety has become a hot issue on the Internet. In reality, the interpretation and presentation of beauty standards for women's bodies, such as "palm-sized face", "chopstick legs", and "effective makeup and ineffective makeup" have become a topical phenomenon on social media platforms. Xiaohongshu is a popular UGC social media platform with nearly 400 million users, many young women will look for related topics of their preferences on the platform and are more easily influenced by these aesthetic concepts. Under the social media environment that emphasizes the role of appearance, many young women feel less confident about their appearance, and often feel anxious, troubled, and nervous. These are psychologically interpreted as body image disturbance.*

Subjects and methods: *In this paper, based on the social comparison theory, the effects of the degree of internalization of "ideal beauty" and the degree of social comparison of "ideal beauty" on women's body image were discussed respectively. Based on the revision of the classical scale, a questionnaire survey was used to measure the young women's exposure to Xiaohongshu, the internalization of "ideal beauty", appearance comparison and body image.*

Results: *The results show that: 1. The degree of use of Xiaohongshu will affect the appearance anxiety of female college students; 2. The internalization of "ideal beauty" will create body image disturbance; 3. Social comparison tendency will affect the degree to which female college students compare their "ideal beauty" with Xiaohongshu.*

Conclusions: *Combined with sociocultural theory, the following research conclusions are drawn: social media such as Xiaohongshu are shaping social aesthetic concepts and the concept of "ideal beauty" promoted by Xiaohongshu internet celebrity is influencing young women's cognition and feelings about appearance.*

Key words: *appearance anxiety - body image disturbance - sociocultural theory - female college students - Xiaohongshu*

*   *   *   *   *

INTRODUCTION

Nowadays, appearance anxiety has become one of the sub-health mental problems common among young women in China. Appearance anxiety refers to that individuals worry that they cannot reach the aesthetic standards of the society and that they will be negatively evaluated by others on their appearance, thus producing anxiety emotions such as annoyed, worried, nervous and other anxiety emotions (Harper &Tiggemann, 2008). The slogan "Appearance is power" has been greatly recognized in the current social media environment, and it has also brought more troubles about appearance anxiety to young women. Take the current Chinese social media UGC (User Generated Content) platform Xiaohongshu as an example, content about women's appearance, trend interpretation, beauty makeup, weight loss experience sharing and other content has attracted a lot of attention once it has spread (Qian 2021).

According to the "2019 Chinese Women's Confidence Report", one in six Chinese women feel anxious when looking in the mirror or taking pictures, and "makeup" has become the first way to improve self-confidence. In Xiaohongshu, such as "palm-sized face", "A4 waist", "chopstick legs" and other standard aesthetic trends of female body "ideal beauty", It often becomes a hot topic and a group carnival as soon as it is released, which leads to the imitation and follow-up of

young women in reality. Xiaohongshu is a popular UGC social media platform with nearly 400 million users which not only unleashes the potential of user information dissemination but also becomes a stage for young people to express themselves, express themselves and shape themselves. Then, in the new communication environment, how the social media's "ideal beauty" body image presentation has on young women's appearance anxiety and body intention is a question worth exploring.

Meanwhile, new technologies may exacerbate the appearance anxiety of female groups. Just as in the UGC content published by most of the Internet celebrities in Xiaohongshu, women who are highly praised by the technical blessing of retouching software often show the image of "beautiful face, slender body, and exquisite makeup". Coupled with the personalized algorithm recommendation mechanism of Xiaohongshu, it is easier to wrap women who pay attention to "face value/fashion" into the "information cocoons", attracting women's immersive attention to the content, and has long cultivated women's awareness of beauty standards. If the image of women in traditional media is the image of female stars out of reach, then the Internet celebrities in Xiaohongshu are the objects that ordinary women can easily contact, imitate and compare.

Therefore, whether women's use of Xiaohongshu will affect their cognition of beauty standards, and then

through the comparison with the exquisite images presented in the UGC released by Internet celebrities, they will generate a sense of anxiety in appearance and body. Psychology will this state of appearance anxiety is attributed to body image disturbance. Combined with previous research, it was found that women are more likely to have negative body image than men (Thompson et al. 2003), and when it comes to college students, the proportion of college women's appearance anxiety is higher than that of men (Chen 2003). As we all know that the college period is important for a person to develop values, to know oneself and the society, and also an important transition period for the development and maturity of self-body image. The mass media is an important and core factor affecting the body image of college students. Tiggemann (2005) believe that it is precise because the mass media is a powerful communicator of ideal body characteristics, and this ideal body is a physical state that is difficult for the public to achieve, such as the body of models and actors, so the gap between the ideal body image of college students and the actual body is so huge. Thus, this paper took female college students as the research object to explore the relationship between the use of Xiaohongshu and body image in young women.

LITERATURE REVIEW AND RESEARCH HYPOTHESES

Social media and appearance anxiety

At present, research on the use of social media and appearance anxiety has attracted the attention of many scholars. Marengo et al. (2018) believe that people who frequently use social media will be significantly more worried about their appearance and body image than people who do not use social media. Especially for some people who usually pay special attention to appearance issues, social media is a perfect platform to help them build a "virtual self-image" (Tras et al. 2019). Hawes et al. (2020) found that excessive dissemination and attention to appearance-related content on social media may bring risks to personal emotions, such as depression and appearance anxiety. But Bell (2016) believes that whether social media can lead to users' dissatisfaction with their appearance and image mainly comes from whether users' attention to information and images will lead to other negative thoughts. The more time and energy a woman invest in social media, the more she will examine herself with a strict set of aesthetic standards promoted on social media, and thus the more likely she is to have negative emotions such as dissatisfaction with her appearance (Tiggemann, 2010).

Some scholars have pointed out that people with sensitive psychological characteristics are more inclined to pay attention to content related to appearance through platforms. They use this to seek comfort and recognition to enhance their sense of self-satisfaction. After obtaining short-term satisfaction, they spend more time on social media, which forms a cycle and generates anxiety over time (Bue 2020). Fardouly et al. (2015) found that the duration and frequency of using the social networking site Facebook were significantly positively correlated with the level of appearance anxiety in women. In the process of using social media, people may internalize the external evaluation of "beauty" and generate more appearance anxiety.

Accordingly, the hypothesis can be H1: The degree of use Xiaohongshu has a positive correlation on the appearance anxiety of female college students.

Ideal beauty and body image disturbance

Thompson et al. (1999) further proposed the sociocultural theory of body image, also known as the tripartite influence model, based on the sociocultural theory, in an attempt to reveal the development of female body dissatisfaction and eating disorders. The tripartite influence model assumes that there are three sociocultural factors - family, peers, and media - that influence body image through appearance comparisons and the internalization of "body ideals". This model comprehensively expounds on the influence mechanism of social and cultural factors on body image. It illustrates the ways of social and cultural factors lead to body dissatisfaction, which has been confirmed by numerous studies (Jasmine et al. 2016; Schaefer et al 2020; Wu et al. 2021).

Among these three main sources, many studies have confirmed that the media is considered to be the largest source of influence (Groesz et al. 2002; Rodgers et al. 2015; Danthinne et al. 2021). Therefore, this study takes media as the main factor of sociocultural influence to research on the influence of the social media platform of Xiaohongshu on the body image of female college students.

According to sociocultural theory, the standard of "ideal beauty" has been widely disseminated under the propaganda of the mass media. The standard of "ideal beauty" repeatedly prompted by the media is gradually internalized as her standard by women (Oe et al. 2021). When women make social comparisons with others, they will be based on the "ideal beauty" standard of the media. During the comparison process, the "ideal beauty" will be activated. When the gap between the "ideal beauty" and reality is too large, women will have a negative body. imagery, and body satisfaction decreases. This means the internalization of "ideal beauty" affects women's body satisfaction through appearance comparison. Without comparison, there will be no sense of disparity or even anxiety (Slater et al. 2019).

Engeln (2005) found that the "ideal beauty" promoted by social media can further internalize women's cognition of appearance, and the higher the degree of internalization, the lower the satisfaction with their appearance. Internalization is a long-term and subtle process, which is the long-term cultivation of people's thoughts by the information transmitted by media. Therefore, in the process of exploring the influence of media "ideal beauty" on female body image, this paper will further combine social comparison theory

to explore the nature of appearance anxiety and the impact of social comparison on female college students' body image.

Accordingly, the hypothesis can be:

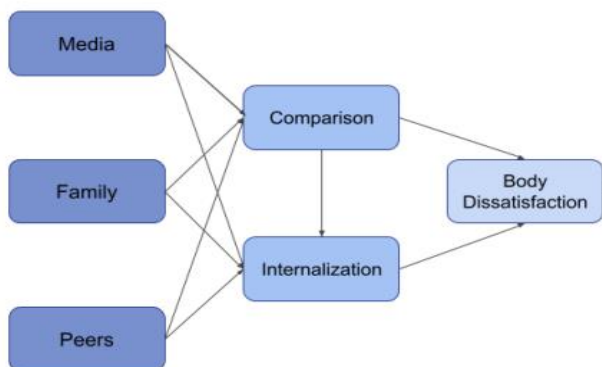H2: The more "ideal beauty" is internalized, the more likely it is to produce body image disturbance.

Figure 1. Tripartite Influence Model. Thompson et al. (1999)

Social comparison and body image disturbance

Social comparison theory believes that human beings have a driving force to evaluate their views and abilities. When individuals lack objectiveness, they use others as the scale of comparison and subjectively take others as the object of comparison to conduct self-evaluation. This process of comparing one's views and abilities with others is called social comparison (Friedkin & Johnsen 2011). Manago et al. (2008) believe that the content presented by the media is often idealized. Similarly, in the process of self-disclosure on social media, people tend to choose the idealized part and beautify their own image to a certain extent.

Secondly, according to social comparison theory, people tend to choose individuals with similar conditions to compare themselves, such as the same social class, similar family and educational background. On social media platforms, people are most exposed to those people who are prone to social comparisons. Combining these two theories, while using social media platforms, people often browse other people's beautified body information, which will unconsciously generate social comparisons, and then generate negative emotions such as dissatisfaction with their appearance (Holland & Tiggemann 2008).

In reality, ideal images in the media are often compared to women, and women are often unaware that this process is taking place. However, the images of women presented in the media are more perfect than those in reality. Therefore, comparing women with the images of women in the media is upward comparison. An upward comparison refers to comparing with people who are better than themselves in a certain aspect. This upward comparison is more likely to produce body image disturbance, resulting in feelings of inferiority, anxiety, etc. (Betz et al. 2019).

Multiple studies have shown that whether the media

effects on an individual's body image depends on whether the individual makes a social comparison with the image presented in the media, because in the comparison, the internalized body image of "ideal beauty" is activated, and in the gap between "ideal beauty" and oneself deepens body image disturbance (Lewallen et al. 2016; Afana et al. 2021). According to the above related-theories, it can be seen that women appearing in the mass media generally have the characteristics of "ideal beauty", and these characteristics form women's understanding of the standard and definition of "beauty". The longer women have been exposed to the mass media, the higher the degree of recognition of the "ideal beauty" displayed by the media which is a prerequisite for the emergence of body image disturbance.

Accordingly, the hypothesis can be

H3: The social comparison of female college students with the "ideal beauty" in Xiaohongshu will produce body image disturbance.

RESEARCH DESIGN

Research tools

Self-made questionnaires

In the first part of the self-made questionnaire, the frequency and duration of the use of Xiaohongshu by female college students were measured, and the users of Xiaohongshu and non-users of Xiaohongshu could be distinguished through the questions. Secondly, the questionnaire investigated the categories of information that female college students pay attention to in Xiaohongshu and the degree of attention to appearance information such as makeup, skincare, and outfits.

Appearance Anxiety Scale

Referring to the Appearance Anxiety Scale-Brief Version compiled by Dion et al. (1990), replace the words indicating the research background. The revised scale contains 6 items in total, such as "I am very concerned about what people say about my looks on social media", "Weighing makes me feel depressed and anxious", "I want to change my appearance" etc., using Likert-5 point scale (1=completely disagree, 5=completely agree), the higher score means the higher degree of coincidence.

In this part, the Cronbach's α coefficient was 0.805, and the confirmatory factor analysis of the scale was good (X^2/df = 3.634, CFI = 0.958, TLI = 0.923, RMSEA = 0.091, IFI = 0.959, GFI = 0.96), the scales meet the requirements of reliability test.

Ideal beauty internalization scale

Using the "Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3)" scale compiled by Thompson et al (2004) and revised by Liu Daqing (2009), the scale is divided into two dimensions:

media internalization and media attention. The test items are in line with the needs of this research, and the words "magazine" and "television" in the original scale items that indicate the background are replaced by "Xiaohongshu". The revised scale contains a total of 5 items, which mainly evaluates female college students' cognition and acceptance of the evaluation standard of female appearance (for example: "I will focus on the information about fashion and makeup in Xiaohongshu" "After comparing with those in Xiaohongshu who have perfect looks, I will feel insecure"). Using the Likert-5 point scale (1 = completely disagree, 5 = completely agree), the higher score means a higher degree of coincidence.

In this part, the Cronbach's α coefficient was 0.803, and the confirmatory factor analysis of the scale was good (X^2/df = 2.012, CFI = 0.982, TLI = 0.969, RMSEA = 0.058, IFI = 0.982, GFI = 0.99), the scales meet the requirements of reliability and reliability test.

Physical Appearance Comparison Scale (PACS)

PACS is used to measure the level of social comparison of appearance (Thompson et al, 1999). The scale consists of 5 self-reported items designed to assess the extent to which individuals participate in physical comparisons. The items are centered on an overall assessment of appearance. Foe each item participants had to use Likert-5-point scale to choose a level of agreement with them. The total score ranges from 5 to 25, with high scores indicating a person's tendency to compare their appearance to others.

However, this scale has some limitations. Firstly, there is no information about who is the target of the comparison (with whom it is being compared) or the context in which it is being compared. This paper will clarify the scale comparison target of the scale is the female image of the Internet celebrity category presented by Xiaohongshu. Due to the clear comparison target and comparison background, many aspects of comparison in the PACS are difficult to measure, such as the upper arm, back, thigh, muscle, etc. so this study will focus on the comparison of the body and face. This study mainly focuses on the female college students of Xiaohongshu in terms of "eyes, nose, face shape, skin condition, figure, make-up, hair style". The higher the score in this part, the higher the degree of the research subjects compare themselves with the women in Xiaohongshu.

In this part, the Cronbach's α coefficient was 0.778,

and the confirmatory factor analysis of the scale was good (X^2/df = 3.624, CFI = 0.942, TLI = 0.888, RMSEA = 0.093, IFI = 0.943, GFI = 0.969), the scales meet the requirements of reliability and reliability test.

RESULTS

This study takes female college students as the object of investigation. First, 30 subjects are pre-tested, and the statements of some questions are revised based on the analysis results and feedback. Formal research was powered by www.wjx.cn and a total of 400 questionnaires were distributed. Invalid questionnaires that did not meet the conditions were deleted, and 367 valid questionnaires were obtained, with a valid questionnaire rate of 91.75%. This study uses IBM SPSS Statistics 26 to define and input variables, and performs reliability and validity analysis, descriptive statistics, correlation analysis, and regression analysis on the survey results.

The degree of use Xiaohongshu of female college students

As shown in Table 1, among female college students' use frequency of Xiaohongshu, the proportions of "almost every day" and "4-5 times a week" samples are larger, 38.5% and 30.9% respectively, while"3-4 times a week" and "1-2 times a week" accounted for only 14.9% and 7.5% respectively.

In terms of the time spent by female college students on Xiaohongshu, the total daily usage time of "20-30 minutes" and "31-60 minutes" accounted for the majority, accounting for 25.3% and 31.8% respectively, and the users who used "within 20 minutes" every day accounted for 8.5%, "1-2 hours" accounted for 22.9%, and "more than two hours" accounted for the least, accounting for 3.2%.

In terms of concerns about UGC on Xiaohongshu, fashion/beauty are highly concerned among female college students Xiaohongshu users, accounting for 52.34% and 68.93% respectively.

In terms of concerns about internet celebrity in Xiaohongshu, three types of internet celebrities, including skincare/makeup/outfits is highly concerned among female college students of Xiaohongshu, accounting for 32.67%, 62.14%, and 41.79% respectively.

Table 1. The degree of use Xiaohongshu of female college students

Xiaohongshu	Use frequency	Time length	Concerns UGC	Concerns internet celebrity
Highest proportion	Almost every day (38.5%)	20-30 minutes (31.8%)	Beauty (68.93%)	Makeup (62.14%)

The use of Xiaohongshu causes female college students' appearance anxiety

As shown in Table 2, the analysis results showed that the degree of use Xiaohongshu was significantly

correlated with appearance anxiety ($P < 0.001$). It shows that the higher the degree of use Xiaohongshu, the more likely to produce appearance anxiety.

Research hypothesis 1 is to explore the degree of use

Xiaohongshu on female college students.

The regression analysis results, as shown in Table 3, showed that the degree of use Xiaohongshu (β =0.326, P < 0.01) had a statistically significant positive effect on appearance anxiety. In other words, female college students who have been immersed in Xiaohongshu for a long time will be subtly affected by the image of Internet celebrities in Xiaohongshu, and they will treat themselves to the appearance standards of internet celebrities, which will lead to a lack of confidence in their appearance and produce appearance anxiety.

Table 2. Correlation analysis between the degree of use Xiaohongshu and appearance anxiety

	The degree of use Xiaohongshu	Appearance anxiety
The degree of use xiaohongshu	1	0.428[**]
Appearance anxiety	0.428[**]	1

Note: [**] Correlation is significant at the 0.01 level (2-tailed).

Table 3. Regression analysis between the degree of use Xiaohongshu and variables

	β	SE	P
(Constant)	15.023	1.333	0.000
The degree of use Xiaohongshu	0.326	0.253	0.000

Note: F = 42.936, P = 0.000, R^2 = 0.179, Adjusted R^2 = 0.175.

The degree of internalization of "ideal beauty" creates body image disturbance

As shown in Table 4, the analysis results showed that the degree of "ideal beauty" internalization correlated with body image disturbance (P < 0.001). It shows that the higher the degree of "ideal beauty" internalization, the more likely to produce body image disturbance.

Research hypothesis 2 is to explore to what extent "ideal beauty" internalization effect body image disturbance. The regression analysis results, as shown in Table 5, showed that the degree of use Xiaohongshu (β = 0.323, P < 0.01) had a statistically significant positive effect on body image disturbance. In other words, the degree of internalization of "ideal beauty" indicates the degree to which female college students take the "ideal beauty" standard promoted by Xiaohongshu as a goal of self-transformation and pursuit. Individuals with a high degree of internalization will regard the image of "ideal beauty" in Xiaohongshu if they do not meet such image standards as their own goals, they will have body image disturbance.

Table 4. Correlation Analysis between the degree of "ideal beauty" internalization and body image disturbance

	The degree of "ideal beauty" internalization	Body image disturbance
The degree of "ideal beauty" internalization	1	0.503[**]
Body image disturbance	0.503[**]	1

Note: [**] Correlation is significant at the 0.01 level (2-tailed).

Table 5. Regression Analysis between the degree of "ideal beauty" internalization and variables

	β	SE	P
(Constant)	14.055	1.660	0.000
The degree of "ideal beauty" internalization	0.323	0.039	0.000

Note: F =65.836, P = 0.000, R^2= 0.250, Adjusted R^2= 0.247.

Social comparison creates body image disturbance

As shown in Table 6, the analysis results showed that social comparison correlated with body image disturbance (P < 0.001). It shows that the higher social comparison, the more likely to produce body image disturbance.

Research hypothesis 3 is to explore to what extent the social comparison effect body image disturbance. The regression analysis results, as shown in Table 7, showed that the social comparison (β = 0.299, P <0.01) had a statistically significant positive effect on body image disturbance. In other words, the aesthetic trend of "ideal beauty" publicized by Xiaohongshu internet celebrities does not completely match the actual appearance of most women. When female college students compare with the "ideal beauty" publicized by Xiaohongshu, they will have a negative relationship with society. The sense of gap and self-blame that does not conform to the general aesthetic concept leads to body image disturbance.

Table 6. Correlation analysis between social comparison and body image disturbance

	Social comparison	Body image disturbance
Social comparison	1	0.336[**]
Body image disturbance	0.336[**]	1

Note: [**] Correlation is significant at the 0.01 level (2-tailed).

Table 7. Regression analysis between social comparison and variables

	β	SE	P
(Constant)	18.059	1.986	0.000
Social Comparison	0.229	0.048	0.000

Note: $F = 22.055$, $P = 0.000$, $R^2 = 0.101$, Adjusted $R^2 = 0.097$.

SUMMARY

Implications of the findings

The results show that the more intense the use of social media such as Xiaohongshu, the more likely it is to produce appearance anxiety, which is consistent with previous research. Furthermore, we find that using social media such as Xiaohongshu can lead to body image disturbance through both the internalization of ideal beauty and social comparison.

The research on the use frequency of Xiaohongshu by female college students shows that the proportion of "used almost every day" and "4-5 times a week" is higher, while the concerns of UGC "fashion/beauty" is higher. Getting fashion news from red books has become a pastime for female college students. In this process, the aesthetic concept presented by the "ideal beauty" in Xiaohongshu has been widely spread.

Previous studies have pointed out that the core of the sociocultural theory is the internalization of women's "thin ideal" body culture standards, and internalization will accelerate the generation of body image disturbance for women (Yamamiya et al 2005). This study found that female college students also internalized and recognized the aesthetic standards about appearance conveyed by Xiaohongshu. The more experienced xiaohongshu users are, the higher their acceptance and recognition of the "ideal beauty" standard，the more likely they will have body image disturbance. It shows that female college students are also affected by the aesthetic concept of appearance conveyed hectic concept.

In the age of traditional media, there is a lot of information about appearance, body and other external aspects of the body on TV, magazines and newspapers. In today's new media era, social media platforms such as Xiaohongshu use internet celebrities to subtly promote an unreasonable standard of beauty in more intuitively. Laws and regulations in this field should be further regulated and improved by relevant state departments to limit the excessive promotion of women's health status in social media and commercial advertisements, and jointly create a healthy and harmonious social media environment.

Meanwhile, the internalization of ideal beauty and social comparison are also important factors affecting body image disturbance. In this regard, women should be helped to cultivate rational thinking, improve the ability to distinguish and interpret all kinds of information on social media, and not take appearance as the only standard to measure oneself. Establish a good psychological quality, a positive view of self and then improve self-recognition, avoid unreasonable internalized behavior and negative comparative psychology.

Limited

Firstly, the subjects selected in this study are only female college students in China. The span of demographic factors such as age and education background of this group is not large. In future research, we can try to expand the research object to office ladies, housewives, etc., to verify whether the conclusions obtained in this study are consistent with applicable to other groups, the conclusions of the study are more widely applicable.

Secondly, the research method used in this paper is the questionnaire survey method, and the subjects make choices after self-evaluation, which will lead to potential academic risks that are not real and rigorous. Therefore, in future research, it is recommended to consider combining qualitative research methods such as in-depth interviews to ensure the scientific and rigor of the research.

References

1. *Afana NH, Astuti NW & Sari MP: The relationship between instagram usage & body image of social media influencer followers: social comparison as a mediator. International Conference on Economics, Business, Social, and Humanities 2021*
2. *Bell K: Social media and female body image. Bridgewater, Massachusetts: Bridgewater State University 2016*

3. *Betz DE. Sabik NJ & Ramsey LR: Ideal comparisons: body ideals harm women's body image through social comparison. Body Image 2019; 29:100-109*

4. *Bue A: The looking glass selfie: instagram use frequency predicts visual attention to high-anxiety body regions in young women. Computers in Human Behavior 2020; 106329*

5. *Chen H: Theoretical and empirical research on adolescent physical self. Southwest China Normal University 2003*

6. *Danthinne ES, Giorgianni FE, Ando K & Rodgers RF: Real beauty: effects of a body、ositive video on body image and capacity to mitigate exposure to social media images. British Journal of Health Psychology 2021; 11*

7. *Dion KL, Dion KK & Keelan JP: Appearance anxiety as a dimension of social-evaluative anxiety: exploring the ugly duckling syndrome. Journal of Personality & Social 1990*

8. *Engeln RS: Cognitive responses to idealized media images of women: the relationship of social comparison and critical processing to body image disturbance in college women. Journal of Social & Clinical Psychology 2005; 24:1036-1060*

9. *Fardouly J & Vartanian LR: Social media and body image concerns: current research and future directions. Current Opinion in Psychology 2016; 9:1-5*

10. *Fardouly J, Diedrichs PC, Vartanian LR & Halliwell E: Social comparisons on social media: the impact of facebook on young women's body image concerns and mood. Body Image 2015; 13:38-45*

11. *Friedkin NE & Johnsen EC: Social influence network theory: social comparison theory 2011; 7:160-184*

12. *Groesz LM, Levine MP & Murnen SK: The effect of experimental presentation of thin media images on body satisfaction: a meta-analytic review. Int J Eat Disord 2002; 31:1-16*

13. *Harper B & Tiggemann M: The effect of thin ideal media images on women's self-objectification, mood, and body image. Sex Roles 2008; 58:649-657*

14. *Hawes T, Zimmer-Gembeck MJ & Campbell SM: Unique associations of social media use and online appearance preoccupation with depression, anxiety, and appearance rejection sensitivity. Body Image 2020; 33:66-76*

15. *Lewallen J & Behm-Morawitz E: Pinterest or thinterest? social comparison and body image on social media. Social Media + Society 2016*

16. *Liu DQ: Research on the influence of mass media and peers on college students' body image. Xiamen University 2009*

17. *Manago AM, Graham MB, Greenfield PM & Salimkhan G: Self-presentation and gender on myspace. Journal of Applied Developmental Psychology 2008; 29:446-458*

18. *Marengo D, Longobardi C, Fabris MA & Settanni M: Highly-visual social media and internalizing symptoms in adolescence: the mediating role of body image concerns. Computers in Human Behavior 2018; 82:63-69*

19. *Oe A, Ses B & Jma A: Protective filtering: a qualitative study on the cognitive strategies young women use to promote positive body image in the face of beauty-ideal imagery on instagram. Body Image 2021; 39:40-52*

20. *Qian G: Xiaohongshu Active user portrait trend report. 2021*

21. *Rodgers RF, Mclean SA & Paxton SJ: Longitudinal relationships among internalization of the media ideal, peer social comparison, and body dissatisfaction: implications for the tripartite influence model. Dev Psychol 2015; 51:706-713*

22. *Schaefer LM, Rodgers RF, Thompson JK & Griffiths S: A test of the tripartite influence model of disordered eating among men. Body Image 2020; 36*

23. *Slater A, Cole N & Fardouly J: The effect of exposure to parodies of thin-ideal images on young women's body image and mood. Body Image, 2019; 29: 82-89*

24. *Thompson JK, Berg P, Roehrig M, Guarda, AS & Heinberg LJ: The sociocultural attitudes towards appearance scale-3 (sataq-3): development and validation. International Journal of Eating Disorders 2004*

25. *Thompson JK, Heinberg LJ, Altabe M & Tantleff-Dunn S: Exacting beauty: Theory, assessment, and treatment of body image disturbance. American Psychological Association 1999*

26. *Thompson T, Dinnel DL & Dill NJ: Development and validation of a body image guilt and shame scale. Personality and Individual Differences 2003; 34:59-75*

27. *Tiggemann M: Media exposure, body dissatisfaction and disordered eating: television and magazines are not the same. European Eating Disorders Review 2010; 11:418-430*

28. *Tiggemann M: Television and adolescent body image: the role of program content and viewing motivation. Journal of Social & Clinical Psychology 2005; 24:361-381*

29. *Tras Z, Ztemel K, & Baltac UB: Role of problematic internet use, sense of belonging and social appearance anxiety in facebook use intensity of university students. International Education Studies 2019; 12:1-10*

30. *Wu HX, Ching HH, He CC & Li Y: "Thinness is beauty": predictors of anti-fat attitudes among young Chinese women. Current Psychology 2021; 1-12*

31. *Yamamiya Y, Cash TF, Melnyk SE, Posavac HD & Posavac SS: Women's exposure to thin-and-beautiful media images: body image effects of media-ideal internalization and impact-reduction interventions. Body Image 2005; 2:74-80*

Correspondence:
Yi Zhong,
Department of Communication & Media, Sookmyung Women's University, Seoul 04310, Korea
E-mail: 576720305@qq.com

ENVIRONMENTAL COMPENSATION MECHANISM OF NIMBY FACILITIES CONSIDERING EMOTIONAL INFLUENCE

Ying Sun[1, 2], Zhiqiang Ma[1] & Fan Yang[2*]

[1]School of Management, Jiangsu University, Zhenjiang 212013, China
[2]Faculty of Civil Engineering and Mechanics, Jiangsu University, Zhenjiang 212013, China

SUMMARY

Background: Considering the influence of emotion on participants' behavior decision-making, an evolutionary game model of environmental compensation for adjacent avoidance facilities is constructed based on the hierarchical dependence expected utility theory.

Subjects and methods: By discussing the Nash equilibrium solution under different emotional states, the influence of emotional factors on the strategic choice of surrounding people and local government is analyzed.

Results: the results show that: environmental compensation is an effective method to resolve the adjacent avoidance conflict, and emotional factors have a significant impact on the game equilibrium strategy of environmental compensation. With the increase of emotion index, the probability of local government choosing compensation strategy is higher and higher. However, when the surrounding people are too pessimistic or too optimistic, the outline of choosing cooperation strategy will be reduced.

Conclusions: This paper puts forward countermeasures and suggestions on environmental compensation of adjacent avoidance facilities from the aspects of emotion monitoring and counseling, in order to promote the effective resolution of adjacent avoidance conflict.

Key words: NIMBY facilities - environmental compensation - emotion function - REDU evolutionary game

* * * * *

INTRODUCTION

As a kind of public facilities necessary for the promotion of urbanization, NIMBY facilities usually have significant negative externalities. Their social benefits are shared by the public, but the negative externalities are borne by the people around the facilities (O'Hare 1997). The asymmetry between social benefits and environmental costs borne by the region can easily lead to non-cooperation or even boycott of the surrounding people, which will eventually evolve into highly emotional group conflict events (Zhang & Liu 2017), bringing serious risks to social stability.

The contradiction between the increasing demand for NIMBY facilities brought by the expansion of urban scale and the proposition of ecological environment fair rights of people around the facilities is becoming more and more prominent. the incident of Wuxi Xidong waste incineration plant, the "Changfu Street substation incident" in Nanjing and the PX crisis in Ningbo and Dalian all show that the NIMBY conflict has become a common phenomenon (Gao et al. 2016). How to reduce the negative externalities of NIMBY facilities through economic, political, ecological and other measures, promote the cost-benefit equal development of surrounding people, and finally realize the "welcoming effect" of people around NIMBY facilities, so as to fundamentally resolve NIMBY conflicts is an important issue to realize social sustainable development.

Most scholars believe that environmental compensation can effectively alleviate the NIMBY conflict (Liu 2013), and the effective implementation of environmental compensation policies in Taiwan, China,

Guangzhou and other places (Hsu 2006) also provides a typical example of solving NIMBY conflict in practice. Groothuis et al. (Groothuis & Miller 1994) explained the NIMBY phenomenon from endurance belief and avoidance belief, and proposed that economic compensation can significantly affect endurance belief. Kikuchi (Kikuchi & Gerardo 2009) and others proposed that the environmental compensation of NIMBY facilities includes health and safety protection, economic subsidies and necessary transportation and education services. Ferreia et al. (Ferreia & Gallagher 2012) investigated the public's preference for environmental compensation of NIMBY facilities by using the conditional valuation method, and found that the environmental compensation willingness of surrounding people increased with the phased promotion of NIMBY projects. Tang et al. (2011) pointed out that the appropriate compensation of the government is the key to solve NIMBY conflict, but the difficulty of measuring environmental loss and the lack of trust of the people often lead to a large deviation between the compensation amount and the expectations of surrounding people. Although environmental compensation is a potential method to solve NIMBY conflict, the complexity of NIMBY conflict determines the complexity of its environmental compensation mechanism. the public decision-making mode of NIMBY facilities, the government credibility, the way and amount of environmental compensation, the risk perception and value system of surrounding people all have an impact on the production and evolution of NIMBY conflict. The evolution process can be regarded as the decision-making and correction process of stakeholders based on bounded rationality under the condition of incomplete information.