

The Effect of Social Appearance Anxiety on the Online Impulse Purchases of Fashionable Outfits Among Female College Students During Pandemic Periods: The Mediating Role of Self-Control and the Moderating Role of Subjective Socioeconomic Status

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Purpose: With the rise of social media, an increasing number of young females have focused more attention on their body image, leading to social appearance anxiety. Thus, the current study aimed to investigate a moderated mediation model of social appearance anxiety and online impulse purchases of fashionable outfits through self-control moderated by subjective socioeconomic status during the pandemic.

Methods: A total of 1651 female college students ($Age = 17-24$, $M_{age} = 19.30$, $SD = 1.14$) with more than one month of closed-off management experience completed self-report questionnaires concerning social appearance anxiety, self-control, online impulse purchases of fashionable outfits, and subjective socioeconomic status.

Results: After controlling for the potential influence of coronavirus stress, the results indicated that social appearance anxiety was positively related to online impulse purchases of fashionable outfits among female college students during the pandemic, mediated by self-control. Furthermore, subjective socioeconomic status moderated the indirect link between social appearance anxiety and the online impulse purchase of fashionable outfits. Specifically, subjective socioeconomic status buffers the negative effect of social appearance anxiety on self-control and the risk effect of low self-control on the online impulse purchases of fashionable outfits.

Implications: The current study deepens the research on the relationship between social appearance anxiety and online impulse purchases during pandemic periods; meanwhile, it provides evidence for preventing excessive online impulse purchases of fashionable outfits among young females.

Keywords: social appearance anxiety, self-control, online impulse purchases, fashionable outfits, subjective socioeconomic status, pandemic periods

Introduction

According to the National Health Commission of China,¹ a new round of epidemics swept across China in March 2022, which caused more than 50 thousand people to be contracted, resulting in closed-off management in schools and communities. Although two years have passed since the epidemic outbreak, the coronavirus continues to affect people's lifestyles significantly,² such that body concern and body anxiety have increased.^{3,4} The COVID-19 period served as a primary driver of increased body concern, limited exercise⁵ and unhealthy eating behaviour⁶ that negatively changed people's body shape and increased their body anxiety.⁴ Apart from that, the lockdown also caused lengthy screen time with broad access to idealized body images on networking sites, triggering young females' appearance-related anxiety.⁷

In addition to body image anxiety, people's buying behaviour also changed during the pandemic. First, limited access to brick-and-mortar stores causes consumers to rely more heavily on online purchasing.^{8,9} Additionally, the convenience of online shopping platforms (eg, considerable goods and live streaming marketing),¹⁰ as well as the extended "staying home" time during the lockdown,¹¹ stimulated more online impulse purchases. Among all online consumers, young females are the primary group contributing to impulse purchases,¹² and during the pandemic, young-aged female respondents are still the most engaged segments of online shoppers.¹³ Compared with males, young females are more likely to buy products that are related to emotional stylistic appearance, such as fashionable clothing.¹⁴ Based on the China National Garment Association (CNGA), the annual sales volume of fashionable outfits was four hundred billion in 2021 in China, reaching 4.5 trillion RMB.¹⁵ Apart from that, an obvious transition from offline to online clothing buying was found during the COVID-19 pandemic.¹⁶ Although fashionable outfits may improve self-image and alleviate body anxiety,¹⁷ impulse purchase behaviour can induce a series of negative consequences, such as regret, excess spending, and debt risks.¹⁸ Considering these negative consequences, it is important to identify which factors could promote or inhibit the impulse purchase behaviour of fashionable outfits among young females.

To date, numerous theories have been proposed to explain the reasons for online impulse purchase behaviour.¹⁹ Nonetheless, existing studies have mainly focused on the relationship between negative body evaluation and impulse buying behaviour in general situations^{20,21} rather than in the online fashionable outfits marketplace and pandemic environment. Therefore, we first tested whether social appearance anxiety is related to online impulse purchases of fashionable outfits for female college students during the pandemic period. Furthermore, we specifically formulated a moderated mediation model of this relationship with the mediating role of self-control and the moderating role of subjective socioeconomic status.

Social Appearance Anxiety and Online Impulse Purchase of Fashionable Outfits

Social appearance anxiety refers to the fear of one's overall appearance, including but not limited to the physique (ie, height, weight, and muscle tone) and appearance-related features (ie, hair, facial features, and complexion).²² Compared with social anxiety involving persistent dread of being humiliated in various situations (eg, social interaction and unfavourable judgement), social appearance anxiety focuses on a specific situation where individuals fear the negative evaluation of their appearance by others, which is also deemed a subset of social anxiety.^{22,23} Recently, the rise of appearance-focused social media has brought young females into greater contact with idealized images of appearance, exerting more pressure on their body image.²⁴ Compared with males, young females are more likely to make upwards physical appearance comparisons and are more dissatisfied with their bodies.²⁵ Especially during the lockdown period, longer exposure to idealized body image on networking forces young females to experience increased body anxiety.⁷

Furthermore, females engage in appearance management every day in their daily life and are more inclined than males to buy appearance-related products, such as fashion apparel.^{14,26,27} Specifically, Bhatia (2019) suggested that females are more involved in fashion than males, which results in more online compulsive purchases for apparel,²⁸ while Pentecost & Andrews (2018) explicated that females are more likely than males to engage in spending on fashion expenditures such as clothing when considering the favourable expectations of others.²⁹ Consistently, recent studies have also proposed that young females are prone to engage in impulse purchases to maintain a high level of self-perceived attractiveness.^{21,30} Additionally, Madan et al illustrated that females in Eastern cultures, in particular, may buy beauty-enhancing goods on impulse in an effort to comply with the standards of beauty set by their societies.³¹ Moreover, women's clothing purchases are also hormonally influenced, and women around their ovulatory period instinctively select sexy rather than conservative apparel to improve their attractiveness.³² Although social appearance anxiety has not yet been explored as a predictor of online impulse purchases of fashionable outfits for young females, this relation can be inferred from some preliminary support in the literature.

First, repairing negative emotions can be one motivation for individuals with social appearance anxiety to engage in online impulse purchase buying behaviour of fashionable outfits. As unplanned, sudden, and hedonic buying behaviour in cyberspace, online impulse purchases are mainly driven by emotion-related factors.¹⁹ For example, negative emotion was found to be a salient trigger for online impulse purchases of fashion apparel.³³ According to self-regulation theory, individuals tend to engage in impulse purchases to comfort themselves or improve their mood when confronting negative

emotions.^{34,35} For instance, impulsive purchases of beauty-related products can uplift the negative feelings of females caused by their poor body images.^{21,36} Furthermore, in contrast with males, females are more inclined to buy products impulsively to alleviate negative emotions,^{37,38} and clothing was found to be an effective product for mood enhancement.³⁹ While it is widely accepted that impulsive buying is a negative behaviour, in the context of appearance-related concerns, impulse buying behaviour could be an effective, if only temporary, prevention-focused approach to lifting appearance-related displeased emotions.²¹ Therefore, it is plausible to suggest that young females with social appearance anxiety tend to engage in online impulse purchases of fashionable outfits to alleviate the negative affect resulting from their social appearance anxiety.

Second, reducing self-discrepancy and achieving self-improvement may be another motivation for the online impulse purchase behaviour of fashionable outfits. According to the compensatory consumer behaviour model,¹⁷ self-discrepancy (eg, appearance self-discrepancy) is a salient driver for compensatory buying (eg, impulse purchases); that is, individuals with appearance self-discrepancy may engage in impulse buying to solve their perceived discrepancy issue directly. This is because purchasing a specific product is effective in resolving self-image disparities and improving self-concept.⁴⁰ For instance, when feeling appearance self-discrepancy, females tend to purchase beauty-enhancing products to improve their self-image and reduce appearance discrepancy,^{17,41} and clothing is also regarded as a popular technique for women's appearance management.⁴² Considering that most women are concerned with improving their attractiveness, their desire for beauty could make them vulnerable to the temptations of impulse buying of appearance-related products (eg, fashionable outfits).²¹ As enhancing self-image is one salient trigger for impulse buying,^{26,32} it is feasible to propose that female college students with social appearance may engage in online impulse purchases of fashionable outfits to reduce their appearance self-discrepancy and improve their self-image.

As we discussed above, social appearance anxiety may affect young females' online impulse purchase of fashionable outfits by repairing the negative emotion or reducing appearance self-discrepancy and improving self-image. Therefore, it is reasonable to speculate that young females with social appearance anxiety tend to buy fashionable outfits impulsively online.

Self-Control as a Mediator

Self-control is a conscious, effortful, and aversive self-regulating process⁴³ that involves impulse-constraining ability and automatic behavioural responses.⁴⁴ Self-control includes the control of one's ideas, emotions, desires, and behaviours to make them consistent with social expectations.⁴⁵ Previous studies have explored the mediating role of self-control between stress-related factors (ie, perceived stress, social anxiety) and mental and behavioural problems (ie, life satisfaction, shopping addiction),^{46–48} however, few studies have analysed the mediating effect between social appearance anxiety and online impulse purchase behaviour of fashionable outfits under the background of pandemic periods. There is some preliminary literature support for this mediation process.

First, social appearance anxiety may be negatively related to self-control. Based on the self-control strength model,⁴⁹ self-control resources are finite and can cause ego depletion and impaired self-control ability once expended by negative emotion. Previous studies have found that dealing with the negative affective state is significantly related to ego depletion and self-control failure.^{46,47} Furthermore, according to Gan et al, women who struggle with appearance anxiety routinely check their body image, and such habitual monitoring diverts their attention-control resources to body-related information, thereby impairing their attention-control function and exhausting their control resources.⁵⁰ Thus, it may imply that young females with social appearance anxiety tend to monitor their appearance frequently,⁵¹ and their self-control resource is depleted by dealing with negative appearance-concerned information. Indeed, previous studies have revealed that high social anxiety is significantly related to poor self-control capacity.^{48,52} Therefore, it is reasonable to propose a significantly negative relationship between social appearance anxiety and self-control.

Second, self-control can negatively affect online impulse purchases of fashionable outfits. Self-control allows consumers to engage in thoughtful and predetermined psychological behaviour, which ultimately leads them to forgo short-term benefits in favour of long-term ones in making purchase decisions.^{53,54} When consumers lack self-control, they are more prone to make impulsive and unexpected purchases.^{18,55} Moreover, based on the dual systems model of self-control,⁵⁶ individuals with high self-control rely more on the reflective system that helps

them delay gratification under stressful events, while individuals with low self-control depend more on the impulse system to satisfy their current demands. In this way, individuals with low self-control are prone to make impulsive decisions such as those leading to smartphone addiction⁵⁷ and addictive buying.⁴⁸ Therefore, it may suggest that young females with low self-control rely more on the impulse system and are more likely to engage in online impulse purchases of fashionable outfits. Thus, it is reasonable to suggest that female college students with low self-control caused by social appearance anxiety are inclined to buy fashionable outfits impulsively.

Based on the above theoretical and empirical evidence, we hypothesized that self-control mediates the relation between social appearance anxiety and the online impulse purchase of fashionable outfits.

Subjective Socioeconomic Status as a Moderator

Although social appearance anxiety may be correlated with online impulse purchases of fashionable outfits through self-control, it may not impact all consumers equally. Specifically, not all young females with high social appearance anxiety tend to buy fashionable outfits impulsively. Subjective socioeconomic status is a subjective evaluation of one's socioeconomic status by comparing it with surrounding individuals.⁵⁸ Compared to objective socioeconomic status, subjective socioeconomic status can better predict individuals' behaviour and condition⁵⁹ such as impulse purchases.⁶⁰ In the present study, we will examine whether subjective socioeconomic status moderates the direct and/or indirect links between social appearance anxiety and impulse purchases.

First, individuals with high socioeconomic status always show higher self-control ability⁶¹ and lower impulse buying intention.⁶⁰ This may be because subjective socioeconomic status can act as a protection against stress and anxiety, as it provides individuals with financial resources (ie, money) and psychological resources (ie, sense of control, social capital, and high self-esteem).^{62,63} Thus, individuals with high subjective socioeconomic status are less vulnerable to stressful events and deal with them better.^{64,65} For instance, women's appearance concerns entice them to make impulsive purchases of appearance-enhancing products that would align their body image with culturally prescribed attractiveness, particularly in eastern cultures emphasizing interdependence.^{31,66} Individuals with high socioeconomic status, on the other hand, value their own preferences and choices more than conforming to societally based beauty standards due to their financial and psychological resources;⁶⁷ hence, their high subjective socioeconomic position may buffer the detrimental effect of social appearance anxiety on self-control and impulsive buying of fashionable outfits. In contrast, young females with low subjective socioeconomic status may be more likely to adhere to societal body-image norms, strengthening the risk effect of social appearance anxiety on self-control and online impulse purchases of fashionable outfits due to the lack of financial and psychological support. That is, subjective socioeconomic status may moderate the first half of the mediating path of self-control and the direct pathway from social appearance anxiety to online impulse purchases of fashionable outfits.

Additionally, individuals feel high relative deprivation when their subjective socioeconomic status is low.⁶⁸ Under a relative deprivation situation, individuals may inhibit the cognitive process and rely more on the affect-based system when making decisions.^{69,70} For instance, farmers tend to apply their emotional system and show impaired cognitive performance when facing financial deprivation.⁷¹ Thus, we may assume that young females with low subjective socioeconomic status may be more likely to make affect-based impulse purchase decisions and thus amplify the risk effect of low self-control on online impulse purchases. In contrast, young females with high socioeconomic status may feel less deprived and tend to rely more on the cognitive system to make decisions, weakening the low self-control risk effect on online impulse purchases of fashionable outfits. That is, subjective socioeconomic status moderates the second half of the mediating path of self-control. Taken together, we hypothesized that subjective socioeconomic status moderates the direct and indirect relations between social appearance anxiety and online impulse purchases of fashionable outfits through self-control during pandemic periods.

Current Study

The current study employed a moderated mediation model to analyse the effect of social appearance anxiety on online impulse purchases of fashionable outfits (Figure 1). Specifically, after controlling for the potential effect of coronavirus

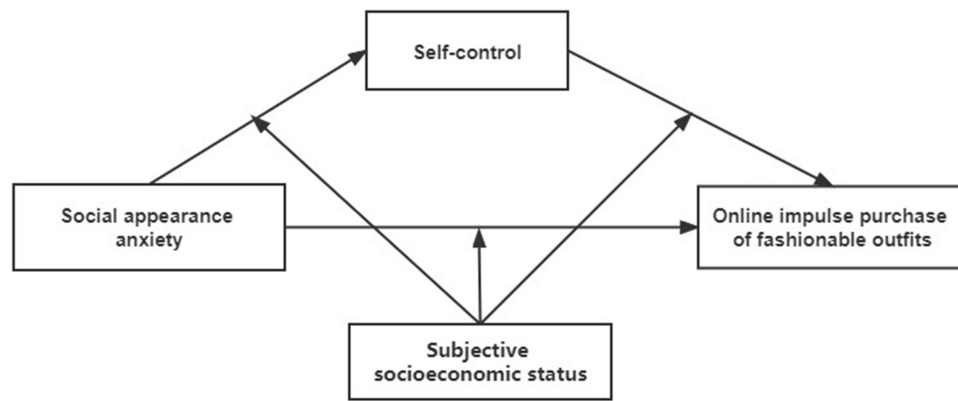


Figure 1 Proposed moderated mediation model.

stress, we examined the relationship between social appearance anxiety and online impulse purchases of fashionable outfits and extended previous research by investigating the mediating effect of self-control and the moderating effect of subjective socioeconomic status among female college students during pandemic periods. Based on the theoretical and empirical evidence mentioned in the introduction, we proposed the following hypotheses:

Hypothesis 1. Social appearance anxiety was positively related to the online impulse purchase of fashionable outfits.

Hypothesis 2. Self-control mediates the relationship between social appearance anxiety and the online impulse purchase of fashionable outfits.

Hypothesis 3. Subjective socioeconomic status moderates the direct and indirect relationships between social appearance anxiety and online impulse purchases of fashionable outfits through self-control.

Methods

Participants

We initially selected 1732 female college students by applying random sampling methods. After eliminating invalid questionnaires (ie, too short answering time), we retained the data from 1651 participants ($Age = 17-24$, $M_{age} = 19.30$, $SD = 1.14$) from four colleges in the first-tier city Shanghai ($n = 421$), second-tier city Nanchang ($n = 438$), third-tier city Ganzhou ($n = 366$), and fourth-tier city Fuzhou ($n = 426$). The colleges ranged from distinguished universities, which are listed on China's "Double First-Class" university project, to other ordinary universities that are not listed on this project. Selected participants had experienced more than one month of closed-off management due to the coronavirus. In our sample, 36.64% ($n = 605$) of the participants were from rural areas. Most of the participants ($n = 982$, 59.48%) focused on their clothing every day or frequently during the pandemic periods, while the rest sometimes ($n = 443$, 26.83%) or hardly ever ($n = 226$, 13.69%) paid attention to it. Additionally, clothing expenses account for approximately 11~20% ($n = 431$, 26.11%) and 21~30% ($n = 400$, 24.23%) of the total monthly online shopping expenses for most participants, while this expense even represents more than 40% of some participants ($n = 144$, 8.72%). In the study, the tutor distributed the questionnaires through an online platform powered by www.wjx.cn, and no personal information of the participants was disclosed to the tutors. Participation was voluntary, and all participants signed informed consent forms, filled out questionnaires anonymously and were free to withdraw from the study at any time. The ethics committee of Shanghai University approved this study, and permissions were obtained from the universities the students were studying.

Measures

Social Appearance Anxiety

The Chinese version⁷² of the Social Appearance Anxiety Scale²² was used to assess the anxiety of overall appearance due to others' negative evaluations, which demonstrated good divergent validity in female college students.²³ The scale

has good reliability and applicability in the study of the Chinese student population.⁷³ This 5-point scale has 16 items, and examples from the items are “I am afraid that people find me unattractive” and “I feel anxious when other people say something about my appearance.” Higher scores indicated a higher level of social appearance anxiety. This scale showed good reliability in the current study (Cronbach’s $\alpha = 0.941$).

Online Impulse Purchase of Fashionable Outfits

The online impulse purchase of fashionable outfits was measured by modifying the Buying Impulsiveness Scale (BIS).⁷⁴ This scale consists of nine items with a 5-point Likert response format from 1 (strongly disagree) to 5 (strongly agree). In the current study, the items of general impulse buying situations in the original scale (eg, “Sometimes I feel like buying things on the spur-of-the-moment”) were modified into items of the online impulse buying of fashionable outfits (eg, “Sometimes I feel like buying fashionable outfits online on the spur-of-the-moment”). Higher scores indicate that individuals are more likely to buy fashionable outfits on online platforms impulsively. This scale showed good reliability in this study (Cronbach’s $\alpha = 0.862$). Confirmatory factor analysis (CFA) showed that the model fit the data well: $\chi^2/df = 2.691$; CFI = 0.997; TLI = 0.993; SRMR = 0.015; RMSEA = 0.032.

Self-Control

In the current study, the Chinese version of the Self-control Scale (SCS) was used,⁷⁵ which was adapted from the original scale developed by Tangney, Boone, and Baumeister.⁷⁶ Answers are given on a 7-point Likert scale from 1 (not at all applicable to me) to 7 (very much applicable to me). Example items include “I spend too much money” and “I do certain things that are bad for me if they are fun”. Higher scores indicated higher levels of self-control. This scale showed good reliability in this study (Cronbach’s $\alpha = 0.926$).

Subjective Socioeconomic Status

In the current study, the Chinese version of the Subjective Socioeconomic Status Scale for Adolescents (SSS-A)⁷⁷ was used, which was adapted from the original scale developed by Goodman et al,⁷⁸ changing the instruction from “this ladder pictures how American society is set up” to “this ladder pictures how Chinese society is set up”. As most of the participants do not have jobs and depend on their parents for monthly living expenses, we chose the adolescent version of the scale in this study. This 2-item scale measures both subjective family status and school status. Answers to family status are given on a 10-point scale from 1 (extremely poor with lowest education levels and being looked down upon by others) to 10 (extremely superior with highest education levels and highly respected). Similarly, answers to school status are also given on a 10-point scale from 1 (At the bottom of the class, have poor grades, no one respects you or wants to be with you) to 10 (At the top of the class, respected by most people, have good grades and high prestige). The test-retest reliability was 0.78 for the SSS-A, 0.76 for subjective family status, and 0.71 for subjective school status.⁷⁷

Coronavirus Stress as a Covariate

This current study mainly focused on the online impulse purchase behaviour of fashionable outfits under the background of COVID-19; therefore, it is crucial to consider the potential influence of coronavirus stress. Previous studies have revealed that perceived coronavirus stress negatively affects impulsive buying.^{79–81} Therefore, we included coronavirus stress as a covariate in all hypothesis testing.

In the current study, we applied the coronavirus stress scale⁸² adapted from the 14-item perceived stress scales.⁸³ The 4-point Likert coronavirus stress scale retained 5 items, which altered the original items about general stress (eg, “In the last month, how often have you felt that you were unable to control the important things in your life?”) into stress associated with coronavirus (eg, “How often have you felt that you were unable to control the important things in your life due to the COVID-19 pandemic”), ranging from 0 (never) to 4 (always). The scale has shown good reliability and validity among the Chinese student sample.^{84,85} Higher scores represented a higher level of coronavirus stress. The fit indices of CFA were $\chi^2/df = 3.122$; CFI = 0.999; TLI = 0.995; SRMR = 0.036; RMSEA = 0.001. In this study, the scale showed good reliability (Cronbach’s $\alpha = 0.877$). The complete scales of online impulse purchases of fashionable outfits, subjective socioeconomic status, and coronavirus stress are included in the [Supplementary Material](#).

Data Analysis

In the current study, social appearance anxiety was the predictor variable, and the online impulse purchase of fashionable outfits was the outcome variable, with self-control acting as the mediator. Additionally, subjective socioeconomic status was the proposed moderator. First, this study analysed the correlations between these variables, showed the descriptive statistics using SPSS 26.0, and performed confirmatory factor analyses (CFA) using Amos 24.0. Second, the mediating role of self-control between social appearance anxiety and online impulse purchases of fashionable outfits was examined via the “PROCESS” macro, Model 4.⁸⁶ The biased-corrected percentile bootstrap method was applied to analyse the indirect effect of the mediating relationship, with a bias-corrected 95% confidence intervals (CIs) with $n = 5000$. The exclusion of zero within the CIs means statistically significant. Third, moderated mediation analysis was performed using Hayes’s “PROCESS” macro (Model 59).⁸⁶ Furthermore, the bootstrapping approach was used to test the significance of conditional indirect effects between high and low levels of the moderator (ie, subjective socioeconomic status). Similarly, the absence of zero within the CIs can show statistical significance. Before testing, all continuous variables were standardized.

Results

Descriptive Analyses

The means, standard deviation, and correlations among the variables are presented in Table 1. Social appearance anxiety was negatively related to both self-control ($r = -0.29, p < 0.001$) and subjective socioeconomic status ($r = -0.11, p < 0.001$) but positively correlated with online impulse purchases of fashionable outfits ($r = 0.35, p < 0.001$). Self-control was negatively correlated with online impulse purchases of fashionable outfits ($r = -0.40, p < 0.001$) but positively related to subjective socioeconomic status ($r = 0.36, p < 0.001$). Subjective socioeconomic status was negatively associated with online impulse purchases of fashionable outfits ($r = -0.26, p < 0.001$). In addition, coronavirus stress was significantly positively correlated with social appearance anxiety ($r = 0.16, p < 0.001$) and online impulse purchases of fashionable outfits ($r = 0.36, p < 0.001$), while it was significantly negatively related to self-control ($r = -0.15, p < 0.001$). Therefore, it is reasonable to set coronavirus stress as a covariate in the following tests. The results supported Hypothesis 1.

Testing for Mediation Effect

Hypothesis 2 assumed that self-control mediates the relationship between social appearance anxiety and the online impulse purchase of fashionable outfits among female college students. To test the hypothesis, the “PROCESS” macro, Model 4,⁸⁶ was used to test the mediating effect of self-control. The regression results of this mediation process are shown in Table 2. As Table 2 shows, social appearance anxiety was negatively associated with self-control ($\beta = -0.28, p < 0.001$), and self-control was negatively linked with online impulse purchases of fashionable outfits ($\beta = -0.29, p < 0.001$). Additionally, social appearance anxiety was positively related to online impulse purchases of fashionable outfits ($\beta = 0.21, p < 0.001$). Self-control partly mediated the relation between social appearance anxiety and online impulse purchases of fashionable outfits ($ab = 0.08, SE = 0.01, 95\% CI = [0.06, 0.10]$). The mediation effect accounted for 27.80% of the total effect. Therefore, Hypothesis 2 was supported.

Table 1 Descriptive Statistics and Correlations Among Study Variables (N=1651)

Variables	M	SD	1	2	3	4	5
1. CS	1.50	0.75	–				
2. SAA	2.62	0.90	0.16***	–			
3. SC	3.04	0.70	–0.15***	–0.29***	–		
4. OIP	2.70	0.67	0.38***	–0.35***	–0.40***	–	
5. SSS	5.46	1.61	–0.07**	–0.11***	0.36***	–0.26***	–

Notes: *** $p < 0.001$; ** $p < 0.01$.

Abbreviations: M, mean; SD, standard deviation. CS, coronavirus stress; SAA, social appearance anxiety; SC, self-control; OIP, online impulse purchase of fashionable outfits; SSS, Subjective socioeconomic status.

Table 2 Testing the Mediating Effect of Self-Control on Impulse Purchase

Predictors	Self-Control		Online Impulse Purchases of Fashionable Outfits	
	β	t	β	t
CS	0.10	-4.30***	0.30	14.18***
SAA	-0.28	-11.70***	0.21	9.71***
SC			-0.29	-13.50***
R^2	0.10		0.30	
F	88.02***		236.33***	

Notes: *** $p < 0.001$.

Abbreviations: CS, coronavirus stress; SAA, social appearance anxiety; SC, self-control.

Testing for Moderated Mediation

Hypothesis 3 proposed that subjective socioeconomic status moderates the direct and indirect relationship between social appearance anxiety and the online impulse purchase of fashionable outfits through self-control. As Table 3 shows, social appearance anxiety positively predicted the online impulse purchase of fashionable outfits, and subjective socioeconomic status played a moderating role in this indirect relationship. Separately, subjective socioeconomic status moderated the link between social appearance anxiety and self-control ($\beta = 0.11$, $\beta_{se} = 0.02$, $t = 5.71$, $p < 0.001$, $CI_{boot} = [0.07, 0.15]$) and the effect of self-control on online impulse purchases of fashionable outfits ($\beta = 0.07$, $\beta_{se} = 0.02$, $t = 4.40$, $p < 0.001$, $CI_{boot} = [0.04, 0.11]$). The absence of zero within the CI s indicates the significant moderating role of subjective socioeconomic status on the indirect effect of social appearance anxiety on online impulse purchases via self-control. However, the direct relation between social appearance anxiety and online impulse purchases of fashionable outfits was not moderated by subjective socioeconomic status ($\beta = 0.004$, $\beta_{se} = 0.02$, $t = 0.21$, $p > 0.05$, $CI_{boot} = [-0.03, 0.04]$). That is, subjective socioeconomic status did not moderate the direct relationship between social appearance anxiety and the online impulse purchase of fashionable outfits.

To give a clear descriptive demonstration, this study plotted predicted self-control against social appearance anxiety for low and high levels of subjective socioeconomic status (\pm SD; Figure 2). In the simple slope test, for female college students with high subjective socioeconomic status, social appearance anxiety significantly negatively predicted self-control ($\beta_{simple} = -0.12$, $\beta_{se} = 0.03$, $t = -3.76$, $p < 0.001$, $CI_{boot} = [-0.18, -0.06]$). However, for female college students

Table 3 Testing the Moderated Mediation Effect of Social Appearance Anxiety on Impulse Purchase

Predictors	Self-Control		Online Impulse Purchases of Fashionable Outfits	
	β	t	β	t
CS	-0.08	-3.63***	0.29	13.94***
SAA	-0.23	-10.14***	0.20	9.45***
SSS	0.32	14.32***	-0.10	-4.68***
SAA \times SSS	0.11	5.71***	0.004	0.83
SC			-0.23	-9.85***
SC \times SSS			0.07	4.40***
R^2	0.22		0.32	
F	114.06***		156.98***	

Notes: *** $p < 0.001$.

Abbreviations: CS, coronavirus stress; SAA, social appearance anxiety; SC, self-control; SSS, Subjective socioeconomic status.

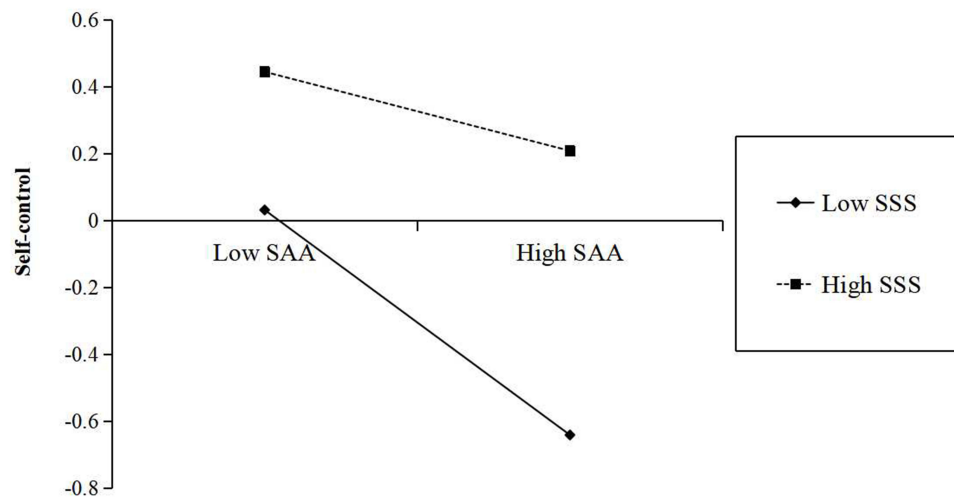


Figure 2 Interaction between social appearance anxiety and subjective socioeconomic status on self-control.

Abbreviations: SAA, social appearance anxiety; SSS, subjective socioeconomic status.

with low subjective socioeconomic status, the predictive effect of social appearance anxiety on low self-control was much more significant ($\beta_{simple} = -0.34$, $\beta_{se} = 0.03$, $t = -12.30$, $p < 0.001$, $CI_{boot} = [-0.39, -0.28]$).

As Table 3 shows, self-control was negatively related to online impulse purchases of fashionable outfits, and this relationship was moderated by subjective socioeconomic status. To give a clear descriptive demonstration, this study plotted predicted online impulse purchases of fashionable outfits against self-control for low and high levels of subjective socioeconomic status ($\pm SD$; Figure 3). In the simple slope test, for female college students with high subjective socioeconomic status, self-control significantly negatively predicted online impulse purchases of fashionable outfits ($\beta_{simple} = -0.15$, $\beta_{se} = 0.03$, $t = -4.98$, $p < 0.001$, $CI_{boot} = [-0.21, -0.09]$). However, for female college students with low levels of subjective socioeconomic status, this effect of low self-control on online impulse purchases of fashionable outfits was still significant but stronger ($\beta_{simple} = -0.30$, $\beta_{se} = 0.03$, $t = -11.41$, $p < 0.001$, $CI_{boot} = [-0.36, -0.25]$).

Furthermore, the bias-corrected percentile bootstrap method was applied to examine the moderating effect of subjective socioeconomic status on the indirect effect of social appearance anxiety on impulse purchases through self-control. For female college students with low levels of subjective socioeconomic status, the indirect effect of social appearance anxiety on the online impulse purchase of fashionable outfits via self-control was significant ($\beta = 0.10$, $\beta_{se} =$

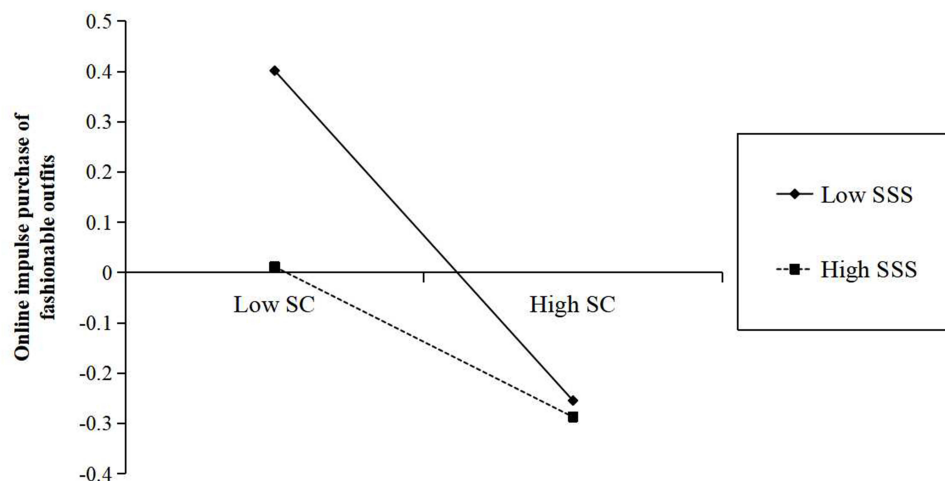


Figure 3 Interaction between self-control and subjective socioeconomic status on impulse purchase.

Abbreviations: SAA, social appearance anxiety; SC, self-control; SSS, subjective socioeconomic status.

0.02, $CI_{boot} = [0.07, 0.13]$). For female college students with high levels of subjective socioeconomic status, the indirect effect was still significant but weaker ($\beta = 0.02$, $\beta_{se} = 0.01$, $CI_{boot} = [0.01, 0.03]$). Therefore, subjective socioeconomic status moderated the indirect effect of social appearance anxiety on impulse purchases through self-control in the current study.

Discussion

Although several studies have shown a positive relationship between the negative evaluation of the body and purchase behaviour in a general situation, few studies have considered the relation between social appearance anxiety and impulse purchases in online fashionable outfits markets and pandemic periods. Investigating the degrees to which these underlying mechanisms of online impulse purchases of fashionable outfits with different levels of social appearance anxiety are vital for young females. In the current study, a moderated mediation model was formulated to test whether social appearance anxiety was indirectly correlated with online impulse purchases of fashionable outfits via self-control during pandemic periods. After controlling for the effect of coronavirus stress, our results indicated that self-control partly explained the catalyst effect of social appearance anxiety on online impulse purchases of fashionable outfits. Moreover, the path from social appearance anxiety to self-control and the path from self-control to online impulse purchases were moderated by subjective socioeconomic status.

Young women are the dominant group in online impulse purchases either before or during pandemic periods, especially for appearance-related products.²⁶ Specifically, young females were more inclined than males to make impulse purchases and expend more on fashion items (eg, fashionable clothing).¹⁴ Compared with males, females are more likely to experience self-objectification and develop anxiety about their appearance.⁵¹ This appearance concern (ie, social appearance anxiety) was found to be closely connected to their online impulse purchases of fashionable outfits in this study, which is consistent with previous studies supporting that young females would make impulse purchases to improve their attractiveness.^{21,30} First, impulse purchases of fashionable outfits can alleviate the negative emotions triggered by social appearance anxiety for young females. Buying beauty-related products (eg, apparel) was found to be an effective way for young women to deal with negative emotions associated with their body image.²¹ Compared with males, females are more likely to make impulse purchases to alleviate their negative emotions.^{37,38} Second, young females may engage in impulsive fashionable outfit buying for self-improvement. This was consistent with previous studies revealing that enhancing self-attractiveness is one salient trigger for women to buy appearance-related goods impulsively.^{30,87} Young females have a stronger desire than males to improve their appearance,⁸⁸ and clothing is closely connected with women's appearance enhancement.⁴² Especially for young women in Eastern countries (more dependent culture), they feel a stronger desire to conform to the norms of societal ideals of beauty, therefore stimulating them to buy beauty-enhancing products such as fashionable outfits.³¹

Although most evidence relative to fashionable outfit buying is based on the young female sample, a few studies have revealed that homosexual men also purchase beauty-enhancing products (eg, clothing) to lessen disparities between their actual and ideal self-image, making them feel more positive about their body image.⁸⁹ In addition, it was found that while females are more influenced by fashion, males are more impacted by brand fame when buying clothes.⁹⁰ However, Sari (2018) demonstrated that young males are more sensitive to others' expectations when considering which fashion apparel to buy than females.²⁹ Apart from the different genders, a study also revealed that older women still purchase clothes for assurance, fashion, and individuality to the same extent as younger women despite the former choosing clothes more for comfort.⁴² Thus, regardless of age, it would appear that purchasing fashionable outfits is important for women for self-enhancement. Therefore, future research could further consider the role of gender and age in the relationship between social appearance anxiety and fashion impulse purchases.

The Mediating Effect of Self-Control

Our results identified that self-control is a mediator between social appearance anxiety and online impulse purchases of fashionable outfits among young females. Consistent with previous studies, self-control is a significant mediator between stress factors and mental^{47,91} or behavioural⁴⁸ problems. Moreover, it is worth mentioning that self-control only partially

accounts for the relationship between social appearance anxiety and online impulsive purchases of fashionable outfits. A study has already revealed the mediating role of self-esteem between negative body image and impulsive buying.²⁰ Therefore, it is necessary to consider other mediators in this mechanism between social appearance anxiety and online impulse purchases of fashionable outfits in the future.

In addition to the overall mediation result, each of the separate links in the mediation model is noteworthy. For the first stage of the mediation process (ie, social appearance anxiety \rightarrow self-control), the present study identified a significant relationship between social appearance anxiety and self-control among female college students. This process was consistent with previous studies, which found that anxiety negatively correlates with self-control.^{48,52} The strength model can be one possible explanation,⁴⁹ which proposes that dealing with negative emotions may consume restricted self-control resources.^{46,47} Thus, female college students may deplete their self-control resources as a result of copying their social appearance anxiety. In addition, a study also revealed that regular appearance monitoring can consume restricted attention and self-control resources for young females.⁵⁰ In this way, female college students with social appearance anxiety are more likely to monitor their appearance frequently,⁵¹ thus depleting their self-control resources.

For the second stage of our mediation model (ie, self-control \rightarrow online impulse purchase of fashionable outfits), our results support the premise that self-control is significantly correlated with online impulse purchases of fashionable outfits among female college students. This result is consistent with previous studies revealing the negative relation between self-control and impulse buying.^{92,93} The dual systems model of self-control theory can be a feasible explanation,⁵⁶ which suggests that individuals with low self-control are prone to rely on the impulse system and make intuitive heuristic decisions to gain instant gratification. Therefore, female students with a low level of self-control may apply their impulse system and are more likely to buy fashionable outfits impulsively. In summary, social appearance anxiety might impact the establishment of self-control and consequently affect the online impulse purchase of fashionable outfits among female college students during pandemic periods.

The Moderating Effect of Subjective Socioeconomic Status

Consistent with the hypotheses, our findings suggested that subjective socioeconomic status moderates the indirect relation between social appearance anxiety and the online impulse purchase of fashionable outfits via self-control. Although previous research has explicated the moderating effect of subjective socioeconomic status between stress-related factors and problematic behaviour,⁹⁴ the current research is the first to confirm that subjective socioeconomic status moderates the indirect relation between social appearance anxiety and the online impulse purchase of fashionable outfits via self-control.

For the first stage of the moderated mediation model pattern, subjective socioeconomic status mediates the link between social appearance anxiety and self-control. Concretely, our results showed that the adverse effect of social appearance anxiety on low self-control was weaker among female college students with high subjective socioeconomic status. One possible explanation can be the buffering and protective effect of subjective socioeconomic status.^{64,94} This may be because high subjective socioeconomic status can provide individuals with psychological resources such as social capital to help them better deal with stressful events and negative emotions.^{62,63} Meanwhile, young females can feel less bound to obey socially prescribed beauty norms due to their high subjective socioeconomic status,^{31,67} thus buffering the negative effect of social appearance anxiety. Therefore, female college students with high subjective socioeconomic status may be less susceptible to the negative impact of social appearance anxiety and thus weaken the negative impact of social appearance anxiety on self-control.

For the second stage of the moderated mediation model, our study showed that subjective socioeconomic status mediates the second half of the moderating path of self-control. Specifically, the risk effect of low self-control on the online impulse purchase of fashionable outfits was stronger among female college students with low subjective socioeconomic status, whereas this association weakened for individuals with high subjective socioeconomic status. Relative deprivation theory is one possible explanation for this finding.⁶⁸ Under deprivation conditions, individuals tend to apply the affect system rather than the cognitive system to make decisions.^{69,70} Similarly, female college students with low subjective socioeconomic status may depend more on the emotional system to make decisions and thus have more online impulse purchases of fashionable outfits, amplifying low self-control's risk effect on online impulse purchases.

Inconsistent with our hypothesis, subjective socioeconomic status does not moderate the direct relation between social appearance anxiety and the online impulse purchase of fashionable outfits. This result shows that social appearance anxiety is an influential predictive factor of online impulse purchases of fashionable outfits and that this relation is less susceptible to the influence of subjective socioeconomic status. This result contradicts the previous study that subjective socioeconomic status weakens the relation between stress-related factors and problematic behaviour.⁹⁴ One feasible explanation is that purchasing and wearing fashionable outfits can be one straightforward solution to improve body image and reduce social appearance anxiety.¹⁷ As mentioned above, relieving negative emotions and achieving self-attractiveness can be two primary motivations for online impulse purchases of fashionable outfits. Although subjective socioeconomic status may buffer the negative emotion brought by social appearance anxiety, it may not influence female college students' strong desires to achieve self-improvement. Nonetheless, more studies are required before we can make any definitive conclusions about the role of subjective socioeconomic status in changing the relation between social appearance anxiety and the online impulse purchase of fashionable outfits.

Limitations and Implications

In conclusion, our study contributes to understanding how social appearance anxiety is correlated with online impulse purchases of fashionable outfits through the mediation of self-control and how this relationship varies with subjective socioeconomic status. However, some limitations should be taken into consideration. First, the current study is a cross-sectional design, which means causality cannot be drawn. Future studies can use longitudinal data to test the indirect effect of social appearance anxiety on online impulse purchases of fashionable outfits. Second, the data were collected only through self-report measures that response biases can influence. Therefore, future studies should involve experimental or actual situations where impulse purchase behaviour happens. Additionally, multimethod and multi-informant methods are worthwhile to apply in future studies. Finally, young females were selected as the sample in the current study without considering the role of males or older females, which may cause gender bias and limit the generalizability of the study. Given that much of the present evidence about self-image and fashion buying is limited to young women samples, it could be beneficial to broaden the scope of future research to other gender and age groups.

Despite the limitations, the present study has some theoretical and practical implications. First, existing studies have mainly focused on the relationship between negative body evaluation and buying behaviour in general situations^{20,21,95} rather than in the online fashionable outfits marketplace and pandemic environment. This not only helps us understand that online impulse buying behaviour, as a cyber behaviour, is affected by personal factors but also expands the research on impulse purchases. Second, young females are susceptible to the influence of social appearance anxiety during the pandemic and easily make impulse purchases in fashionable outfits, leading to excessive money spending, unnecessary purchases or even harmful levels of debt. Given the knowledge of risk and buffer factors for online impulse purchases of fashionable outfits, this study helps us develop intervention strategies to reduce it. Based on the current results, it is vital for young females to reduce appearance comparison⁹⁶ and treat idealized photos on social networking sites rationally to avoid unnecessary social appearance anxiety.⁹⁷ Third, considering the buffer role of subjective socioeconomic status, female college students should also form an objective judgement of themselves and their families' socioeconomic level. Meanwhile, psychological teachers and educators should guide them in eliminating the negative cognition imposed by their family's socioeconomic situations.

Conclusion

This current study fills the void in the impulsive buying literature by investigating how social appearance anxiety is associated with online impulse purchases of fashionable outfits among female college students during the pandemic period. It advances the understanding of online impulse purchases by clarifying how self-control mediates this association between social appearance anxiety and online impulse purchases of fashionable outfits and how this mediation mechanism is moderated by subjective socioeconomic status. Our findings underscore the importance of targeting social appearance anxiety, self-control, and subjective socioeconomic status in interventions designed to assist young females who impulsively buy fashionable outfits online.

Disclosure

The authors report no conflicts of interest in this work.

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