Student Paper Competition

Abstract

An online survey (*N*=197) of Chinese women aged 18-30 assessed predictors of selfie editing and self-photo investment using self-objectification theory. Based on self-objectification theory, trait self-objectification, body surveillance and internalization of media body ideal are tested predictors. Results show that neither the three variables outlined in the self-objectification theory nor the cultural-specific face surveillance significantly predicted selfie-editing. Implications of these results for understanding selfie editing practices among Chinese women are discussed.

Keywords: selfie-editing, self-objectification, Chinese women

Predicting Selfie-Editing Among Young Chinese Women

A selfie is defined as a photograph of oneself taken by oneself (i.e., without the help of others), typically with a smartphone or webcam, and uploaded on social media (Fox and Rooney, 2015). Selfie-editing occurs when the appearance of oneself is altered in selfies using photo-editing software or applications on smart phones. Selfie-editing is popular around the world, especially among East Asian women (Fan, 2017, 2018). However, studies show that selfie-editing may negatively affect user's psychological well-being (McLean, Paxton, Wertheim, & Masters, 2015; Mills, Musto, Williams, & Tiggemann, 2018) and interpersonal relationships (Vendemia & DeAndrea, 2018).

To date, selfie-editing has received limited attention from scholars. Among those who have focused on the topic (Cohen, Newton-John, & Slater, 2018; Fox & Rooney, 2015; Lyu, 2016), the most frequently used operationalizations of selfie-editing concern White populations only, and do not capture the full functionality of selfie-editing apps. Moreover, little research on selfie-editing has been done in China where at least 300 million people are using photo editing apps (Lijingsi, 2018), and half of all selfies posted on social media are modified (Fan, 2017). The present study contributes to the exiting literature by predicting selfie-editing behavior among young Chinese females (18-30 years old) using self-objectification theory.

Selfie-Editing and Self-Photo Investment

Selfies are popular globally, especially on social media. On Instagram, #selfie appeared for the first time in 2011 (Woodruff, Santarossa, & Lacasse, 2018) and as of

April 2020, more than 400 million images are hashtaged with #selfie. On China's Sina Weibo, posts with #selfie have been viewed over 390 million times.

Editing selfies has also been called retouching selfies (Mills et al., 2018), digitally modifying or altering selfies (Vendemia & DeAndrea, 2018), and beautifying selfies (Low, 2015). People could edit their photos on computer software like Adobe's Photoshop years ago, but it wasn't until the widespread use of smartphones and easily operated photo-editing applications that selfie-editing became accessible to the masses (Cosslett, 2016). On these apps, people can use filters, whiten their skin and teeth, and apply selfie stickers. They can also make their eyes larger, face smaller, nose taller, lips fuller, hair straighter, legs thinner, chin narrower, and hips wider.

Selfie-editing is now popular worldwide. In the U.S., Facetune, a photo-editing app, topped the chart of App Store's Top Paid Charts in 2019 (Apple, 2019). In China, half of the selfies posted on social media had been edited by Meitu's apps (Fan, 2017), which boasted of 1.5 billion downloads and 480 million monthly active users worldwide—78% are women (most are aged 19-35) and 73% are Chinese (Gaskin, 2018; Lijingsi, 2018).

As popular as it is, editing selfies may cause physical and psychological harm. Being able to edit their selfies may encourage people to internalize "an unrealistic and often unattainable standard of beauty" (Rajanala, Maymone, & Vashi, 2018, para. 7). They may seek out plastic surgery to look like the filtered versions of themselves (Davies, 2018). Studies show that those who edit their selfies are more likely to experience body dissatisfaction (McLean et al., 2015), internalization of cultural beauty ideals (Cohen et al., 2018), and self-objectification (Fox & Rooney, 2015). Mills et al.

(2018) showed that women who shared selfies on social media experienced an increase in anxiety and a decrease in confidence, and felt less physically attractive. They found that being able to take multiple selfies and edit those before posting failed to mitigate these “selfie” harms.

Selfie viewers are not exempt from these harms. A recent experiment among female Dutch adolescents demonstrated that exposure to retouched and reshaped Instagram photos, as opposed to original photos, led to increased body dissatisfaction, especially for those high in social comparison tendency (Kleemans, Daalmans, Carbaat, & Anschütz, 2018). Similarly, Rajanala et al. (2018) argued being surrounded by a sea of filtered images may trigger body dysmorphic disorder (BDD). Vendemia and DeAndrea (2018) showed that the less participants were aware of photo manipulation, the more likely they were to internalize the thin ideal.

A related concept to selfie-editing is self-photo investment proposed by McLean et al. (2015). Self-photo investment is an attitudinal construct that reflects a person’s concern over how she looks in the photo and her efforts put in choosing the photos for posting (McLean et al., 2015). Photo investment is different from selfie posting in that people having the same posting behavior might be on different levels of investment.

Self-objectification

Objectification theory argues that sociocultural forces might promote sexual objectification such that women are treated as “bodies that exist for the use and pleasure of others” (Fox & Rooney, 2015; Fredrickson & Roberts, 1997, p. 175). These objectification experiences may coax women to internalize a third-person’s perspective on their own physical self; an effect termed as self-objectification (Fredrickson &

Roberts, 1997). Self-objectification has been shown to have negative effects on women's physical and psychological well-being. It is associated with eating disorders, body shame, appearance anxiety, depression, and sexual dysfunction (Moradi, 2010; for a review, see Moradi and Huang, 2008).

Many scholars support a positive relationship between social network sites (SNS) use and self-objectification. Meier and Gary (2014) found that teen girls in the U.S. with more elevated appearance-related exposure (e.g., updating profile photo, and commenting on friends' images) were more likely to self-objectify. Vandenbosch and Eggermont (2012) concluded that among adolescent girls in Belgium, using sexually objectifying social media significantly correlated with high level of self-objectification. Similarly, Slater and Tiggemann (2015) found social media exposure was correlated with a higher level of self-objectification among Australian adolescent girls. Other scholars found that the correlation between SNS use and self-objectification was mediated by the tendency to make appearance comparisons (Fardouly & Vartanian, 2015).

Theoretically, trait self-objectification should be associated with selfie behaviors (Vendemia, 2019). When people take selfies, they may examine their body as an object through the front-facing camera; When editing selfies, people might be adopting a third person's perspective, manipulating the body as an object; When sharing selfies, people might hold an imagined "objectifying *gaze*" (p. 10), imagining how others might respond to the posts. Indeed, an empirical study found that the tendency to self-objectify predicted selfie-editing among men (Fox & Rooney, 2015).

Self-Objectification, Body Surveillance, and Internalization

Self-objectification is not a single and isolated construct. Moradi (2010) suggested that self-objectification should be seen as “a process that is promoted by sexual objectification experience, and is manifested by internalization of cultural standards of attractiveness and body surveillance” (p. 146). Similarly, Vandenbosch and Eggermont (2012) called for “a broader perspective on self-objectification” (p. 872). They argued for combining self-objectification, body surveillance, and internalization of cultural beauty ideals into one model.

Indeed, these three constructs are inextricably related to each other. According to Vandebosch and Eggermont (2012), self-objectification occurs when a person attaches greater importance to the appearance of the body as opposed to the competency of it. Body surveillance, on the other hand, is the behavioral manifestation of self-objectification (Karsay, Knoll, Mattes, 2018; Fitzsimmons-Craft et al., 2012). In their review, Moradi and Huang (2008) found that self-objectification, if not manifested behaviorally, may not lead to harms. Therefore, they recommended the inclusion of behavioral consequence of self-objectification by measuring body surveillance.

Internalization of media body ideal is highly related to both the cognitive and behavioral aspect of self-objectification. Internalization is conceptualized as “the extent to which an individual cognitively ‘buys into’ socially defined ideals of attractiveness and engages in behaviors designed to produce an approximation of these ideals” (Thompson & Stice, 2001, p.181). Vandebosch and Eggermont (2012) posited that internalization of appearance ideals may precede both self-objectification and body surveillance. This is because self-objectification is perceiving oneself as a body consisting of attributes “necessary for attaining the *ideal* body” (p. 872), and women

consistently monitor their body because they want to comply with cultural beauty *ideals* (McKinley & Hyde, 1998). Therefore, the conceptualizations of self-objectification (Frederickson & Roberts, 1997) and body surveillance (McKinley & Hyde, 1998) assume internalization (Vandebosch & Eggermont, 2012). Other scholars (Kim, Seo, & Baek, 2014; Tolaymat & Moradi, 2011) also suggested that internalization of cultural beauty standards be included in the framework of objectification theory.

Cultural Difference in Body Ideals

Body ideals vary across cultures. Although there is a well-documented trend that Asian women have been incorporating Western beauty standards, for example, to be thin (Luo, Parish, Laumann, 2005), they still have unique beauty ideals (Yan & Bissel, 2014). Studies consistently demonstrate that Western women focus more attention to their *bodies*, whereas East Asian women care more about their *faces* (Frith, Shaw, & Cheng, 2005). For example, popular cosmetic procedures for Chinese women relate more often to their faces (i.e., double eyelid, size and shape of face and eyes, height of nose, and shape of jawbone) rather than to their bodies (Jackson & Chen, 2015). According to a report by Deloitte (2018), around 70% of procedures in China were about face or teeth.

Studies showed that the content of self-objectification is heavily influenced by culture (Buchanan, Fischer, Tokar, & Yoder, 2008; Kim et al., 2014). The original objectification theory, developed upon studies where samples were almost exclusively “White, middle-class and women” (Fredrickson & Roberts, 1997, p. 175), only emphasized objectification of body shape and size (Buschanan et al., 2008). Women of other ethnicities, however, may focus on different aspects. For example, Black women

may self-objectify in terms of skin tone (Bushanan et al., 2008) and Korean women in terms of face shape and size (Kim et al., 2014). Similarly, Chinese women, when self-objectify, focus more on their facial appearance and skin than on their body size and shape (Wu & Lang, 2019).

The Present Study

Factors other than those outlined above that have been shown to have influence on people's selfie behavior were treated as control variables. First, time spent on social media has been identified as a key predictor of the frequency of selfie-editing (Fox & Rooney, 2015; Kim & Chock, 2017) so it was identified as the first covariate. Second, studies show those who are more dissatisfied with their body are more likely to edit their selfies before posting them (McLean et al., 2015), and that posting editing selfies significantly decreased people's feeling of physical attractiveness (Mills et al., 2018). Therefore, body dissatisfaction was identified as the second covariate. Also, narcissism is shown to have a positive relationship with the frequency of posting selfies (Weiser, 2015), or the intention to do so (Kim, Lee, Sung, & Choi, 2016). Narcissism was measured as the third covariate. Besides, BMI was also measured.

Based on self-objectification theory and previous findings, the following hypotheses were proposed:

H1: After controlling for covariates, (a) trait self-objectification, (b) body surveillance, and (c) internalization of media body ideal will be significant predictors of selfie-editing.

H2: After controlling for control variables, (a) trait self-objectification, (b) body surveillance, and (c) internalization of media body ideal will be significant predictors of self-photo investment.

H3: After controlling for covariates and the three variables drawn from self-objectification theory, face surveillance will be a significant predictor of (a) selfie-editing, and (b) self-photo investment.

Method

Sample and Procedure

Before the study, a power analysis was conducted via G*Power. The goal was to obtain .95 power to detect a medium effect size of .15 at the standard .05 alpha error probability. The output parameters showed that a sample size of 119 was enough to fulfill this goal.

Participants were recruited through a Chinese online survey company named "Weidiaocha" (meaning "micro survey"). It has four million users worldwide (weidiaocha, n.d.) and data obtained from this platform had been used by several peer-reviewed publications (Zheng, 2019; Ge & Gretzel, 2018; Kaluza, Schuh, Kern, Xin, & van Dick, 2019).

Each participant was told that the study was about people’s selfie behaviors. After completing 20-minute survey on Qualtrics, each person was paid 5 RMB (around 0.7 USD) within two days.

Participants met the following criteria: Chinese citizen, female, 18-30 years old, and have taken, edited, and posted a selfie at least once. Participants not meeting these criteria were excluded. At the start of the survey, participants were shown the

definition of a "selfie", i.e., a photo of *oneself* taken by *oneself*. They then were tested on this definition with three pictures (one self-portrait taken by others, one group selfie and one selfie). Participants who failed the test twice were excluded. Those who passed the test were provided informed consent.

Two hundred participants finished the survey. Closer examination of the data showed that 3 participants were located outside of China at the time of survey completion so their data were excluded from analysis. Therefore, the sample in the present study consisted of 197 Chinese women who had experience with selfies.

Measurements

***Age, and Selfie Activities*.** Participants were asked to report their age from “below 18” to “over 51”, and also the frequency of their selfie-taking, -editing, and -posting. Only those choosing “18-24” and “25-30” were able to proceed further. Those who have neither taken, nor edited, nor posted selfies were not allowed to move further into the survey.

***Selfie-editing*.** A scale developed and validated by Stefanone, Yue and Toh (2019) was used to measure the level of selfie-editing. Participants responded on a five-point Likert scale ranging from 1 (*never*) to 5 (*always*). This scale was primarily designed for Americans and not specifically for Chinese. Since Chinese women tend to enlarge their eyes in selfies (Zhao, 2018), the item of “I enlarge my eyes in my selfies” was added to the original scale. This scale was translated by the author and the translation was critiqued by a professional English-Chinese translator. Cronbach’s alpha in this study was .84.

***Self-photo investment*.** Self-photo investment was measured using an adapted form of the original Self-Photo Investment Scale (McLean et al., 2015). Participants responded on a 5-item Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate higher levels of self-photo investment. The Chinese version of this scale was developed using a back-translation procedure. McLean et al. (2015) reported a Cronbach's alpha of .85. Cronbach's alpha in the current study was .80.

***Trait self-objectification*.** Trait self-objectification was measured using the Female Questionnaire of Trait Self-Objectification Scale (FQSQ; Wu & Lang, 2019). Participants were asked to specify the importance of 10 items about physical appearance (e.g., weight, height, facial features, etc.) and 7 items about physical competence (e.g., health, reaction time, stamina, etc.) to them. Response items ranged from 1 (*not important at all*) to 7 (*very important*).

The level of trait self-objectification was measured by subtracting the total scores for physical competence from that for physical appearance. Greater differences indicate higher levels of trait self-objectification. Wu and Lang (2019) reported good internal consistency for both Physical Appearance Concern (.90) and Physical Competencies Concerns (.87). Cronbach's alphas in this study were $\alpha = .86$ and $\alpha = .82$ respectively.

***Body surveillance*.** The 8-item body surveillance subscale of the Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) was used to assess the level of body surveillance. Chinese translation of this scale was validated by Liu (2009). Participants responded on a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores were averaged and higher scores indicate higher levels of

body surveillance. McKinley and Hyde (1996) reported Cronbach's alpha of .79. For the current study, Cronbach's alpha was .84.

Internalization of media body ideals. The Sociaocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3; Thompson, van den Berg, Roehrigh, Guarda, & Heinberg, 2004) adapted and translated by Liu (2009) was used to measure internalization of media body ideals. Participants responded on a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores were averaged and higher scores indicate higher levels of internalization. Liu (2009) reported a Cronbach's alpha of .88. The scaled showed excellent internal consistency in this study with a Cronbach's alpha of .92.

Face Surveillance. The new scale of "Face Surveillance Scale" was developed by the author of this paper. It was based on the Skin-Tone-Specific Surveillance scale (Buchanan et al., 2008) and the Face Size and Shape Surveillance scale (Kim et al., 2014). Face surveillance scale measures the monitoring of facial skin (skin tone and skin type) and face shape. Participants responded on a five-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores were averaged with higher scores indicating higher levels of face surveillance. Because these items were developed for the current study, no previous reliability or validity data were accessible. The α coefficient for this set of items was .88. As a reference, Buchanan et al. (2008) had an α coefficient of .92 and Kim et al. (2014) α = .94.

Control variables

BMI (body mass index). Participants were asked to report their height (in centimeter) and their weight (in kilogram). BMI was calculated by dividing the weight by the square of the height, expressed as kg/m^2.

Time spent on social media. Participants were asked how much time per day they spend on five of the most popular Chinese social networking sites (i.e., WeChat's Moments, Sina Weibo, Douyin, Xiaohongshu, and QQ-Zone; "Top 3 Most Popular", 2018; Ren, 2018). Participants indicated their time spent on each platform by choosing from 0-5 minutes, 10-15 minutes, half an hour, one hour, 1-2 hours, and more than 2 hours. "0-5 minutes" were assigned to a score of 1 and "more than 2 hours" to a score of 6. Total scores were summed.

Body dissatisfaction. The Chinese version of the Body Area Satisfaction Scale (BASS; Cash, 1990; Kong, 2014) was used. BASS measures dissatisfaction-satisfaction of eight body areas (i.e., face, hair, lower torso, midtorso, upper torso, muscle tone, weight, height) and of the overall appearance. Participants responded on a 5-point Likert scale from 1 (*very dissatisfied*) to 5 (*very satisfied*). Scores were summed and higher scores indicate lower levels of body dissatisfaction. Wang et al. (2018) reported a Cronbach's alpha of .81. In the present study, the Cronbach's alpha was .80.

Narcissism. Narcissism was assessed using the 20-item subscale of Overt Narcissism Personality Scale (Zheng & Huang, 2005) that was designed for Chinese participants. Participants responded on a five-point Likert scale ranging from 1 (*not like me at all*) to 5 (*very much like me*). Scores were averaged and higher scores indicate higher levels of narcissism. This subscale showed excellent internal consistency, with a Cronbach's alpha of .92.

Data Analysis

Hierarchical multiple regression analyses were conducted to test hypothesized predictions. Control variables (BMI, time spent on social media, body dissatisfaction, and narcissism) were entered at Step 1; variables outlined in self-objectification theory framework (self-objectification, body surveillance, and internalization of media body ideal) were entered at Step 2; and face surveillance, at Step 3. Selfie-editing and self-photo investment were the outcome variables.

Before data analysis, missing data and outliers were examined. No missing value was found. In terms of univariate outliers, six cases in "BMI" had standardized scores greater than +3. To deal with these outliers, these six people's weight was halved and their BMI was calculated again. The rationale is that the unit of 0.5 kg, known as "Jin", is widely used in China. Therefore, these outliers might have resulted from these six respondents answering the weight question using "Jin" rather than the "kilogram". Two multivariate outliers were identified by examining Mahalanobis' Distance. These two cases were removed from further analysis. Therefore, the sample consisted of 195 observations.

Stefanone et al. (2019) found a two-factor solution for the selfie-editing construct: *composition editing* and *subject editing*. I conducted a confirmatory factor analysis (CFA) using R's Lavaan package (version 0.6-5; Rosseel, 2012). Results of CFA did not show good fit for this 2-factor model, $\chi^2/df = 3.31$, $p < .001$; RMSEA = .11; CFI = .84; TLI =.81; SRMR = .08. Therefore, in the following analysis, selfie-editing was regarded as one whole construct rather than as comprised of two factors.

Results

Mean, standard deviation and correlations between variables can be viewed in Table 1. As is shown in the table, selfie-editing was significantly associated with all outlined predictors and control variables except for BMI and body dissatisfaction. Self-photo investment was significantly associated with all key predictors and control variables except for BMI and time spent on social media.

Hierarchical regression analyses were conducted to examine whether variables drawn from the self-objectification theory framework predicted selfie-editing and self-photo investment (see Table 2 and 3). Regression diagnostics were conducted first and no serious violations of linear regression assumptions were found. Specially, an examination of variance inflation factors (VIFs) showed multicollinearity was not an issue in both models with the largest VIF being 2.5.

The first hierarchical regression model examined the predictors of selfie-editing (see Table 2). The Step 1 control variables, i.e., BMI, time spent on social media, body dissatisfaction, and narcissism, accounted for 27.1% (adjusted R^2 = .256) of the variance in selfie-editing, F (4, 190) = 17.65, p < .001, with all variables except for BMI contributing significantly to the model. This result supported previous findings that narcissism, time spent on social media, and body dissatisfaction predict selfie-editing (Fox & Rooney, 2015; Kim & Chock, 2017; McLean et al., 2015; Weiser, 2015), such that those who are more narcissistic, spend more time on social media, and are more dissatisfied with their body have a higher level of selfie-editing. In Step 2, the addition of self-objectification, body surveillance, and internalization of media body ideal accounted for an additional 5.0 % of the variance in selfie-editing. This change was significant, F_{change} (3, 187) = 4.63, p < .01. In this model, significant predictors did not change;

neither one of the three variables added was a significant predictor. The addition of face surveillance in Step 3 did not contribute significant additional variance either. In sum, both H1 and H3a were rejected.

The second hierarchical regression model examined the prediction of self-photo investment (see Table 3). Control variables in Step 1 accounted for 23.9% (adjusted R^2 = .223) of the variance in self-photo investment, F (4, 190) = 14.9, p < .001, with all variables except for time spent on social media contributing significantly to the model. In Step 2, introducing self-objectification, body surveillance, and internalization of media body ideal explained an additional 11.50% of variation in self-photo investment and this change in R^2 was significant, F_{change} (3, 187) = 11.11, p < .001. In this step, body surveillance (β = -.22., p = .009) and internalization of media body ideal (β = -.24., p = .008) were significant predictors of self-photo investment. The addition of face surveillance in Step 3 did not contribute significant additional variation in self-photo investment (R^2 change = 8.00 %), F_{change} (1, 186) = 2.37, p = .13. In the final model, BMI, body dissatisfaction, and internalization of media body ideal were significant predictors. To sum, supporting H2b and H2c, body surveillance and internalization of media body ideal were found to be significant predictors of photo investment. However, neither H2a nor H3b was supported.

Discussion

This study examined predictors of selfie-editing and self-photo investment among young Chinese women (18-30 years old). Although photo-editing is very popular among Chinese women (Fan, 2017), this study is among the first few studies focusing on this specific group.

This study found that neither the three variables outlined in the self-objectification theory (i.e., trait self-objectification, body surveillance, and internalization of media body ideals) nor the cultural-specific face surveillance significantly predicted selfie-editing. As for self-photo investment, those who are more likely to monitor their body, and who internalize media body ideal were more invested in their selfies (i.e., worry more about how they look in the photos and how other people respond to these photos).

Contrary to what Fox and Rooney (2015) found, trait self-objectification was not a significant predictor of selfie-editing among young Chinese women. Different from what was found in Australian samples (McLean et al., 2015; Cohen et al., 2018) and Korean samples (Lyu, 2016), neither internalization of body ideals nor body surveillance predicted selfie-editing in this study.

This result has important implications for understanding the behavior of selfie-editing among young Chinese women. For women in the Western societies, those who were higher in trait self-objectification (Fox & Rooney, 2015) and internalization of media body ideal (Cohen at al., 2018) are more involved in selfie-editing. For women in South Korea, those who more frequently monitor their appearance are more likely to edit their selfies (Lyu, 2016). However, none of these would apply to young Chinese women. I took into consideration the possibility that Chinese women focus more on their face than on their body (Wu & Lang, 2019), so I measured face surveillance. However, it did not predict selfie-editing either.

One possibility is that every young Chinese woman edits her selfies regardless of her level of self-objectification, internalization, and body and face surveillance. As Fan (2018) argued, editing selfies is so prevalent that it has become a culture or norm. It

became standard practice for a Chinese woman to take selfies with beautification cameras and to retouch them using photo-editing apps before posting.

Results of self-photo investment told a slightly different story. As can be seen in Table 3, in the final model, internalization of media body ideals was a significant predictor, and before entering face surveillance in the model, body surveillance contributed significant additional variance.

It is interesting to note that internalization of appearance ideals and body surveillance predicted self-photo investment but not selfie-editing. This might be indicating that controlling for BMI, time spent on social media, body dissatisfaction, and narcissism, almost every young Chinese woman edits selfies before posting but it is those who buy into beauty ideals and who constantly monitor their body that are more concerned about their appearance in the photos and about others' comments.

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Table 1

Means, standard deviations, and zero-order correlations between variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. BMI	20.99	4.74									
2. Time spent on SNSs	16.19	4.44	-.05								
3. Body dissatisfaction	27.58	5.80	-.23**	.17*							
4. Narcissism	3.41	0.61	-.06	.16*	.23**						
5. Trait self-objectification	19.23	6.60	-.05	.13	.02	.24**					
6. Body surveillance	3.46	0.63	.04	.11	-.14*	.45**	.49**				
7. Internalization	3.69	0.68	-.00	.26**	.02	.61**	.37**	.62**			
8. Face surveillance	3.56	0.76	-.10	.20**	-.02	.52**	.38**	.67**	.58**		
9. Selfie-editing	3.43	0.63	.03	.27**	-.07	.43**	.28**	.41**	.46**	.41**	
10. Self-photo investment	3.62	0.59	-.13	.12	-.20**	.34**	.29**	.48**	.48**	.46**	.35**

Note. M and *SD* are used to represent mean and standard deviation, respectively.
* $p < .05$. ; ** $p < .01$

Table 2
Summary of hierarchical regression analysis for variables predicting selfie-editing

	Model 1		Model 2		Model 3	
Variable	*beta*	*beta* 95% CI	*beta*	*beta* 95% CI	*beta*	*beta* 95% CI
BMI	0.02	[-0.10, 0.15]	0.02	[-0.10, 0.15]	0.03	[-0.09, 0.15]
Time spent on SNSs	0.24**	[0.12, 0.37]	0.19**	[0.07, 0.32]	0.19**	[0.06, 0.32]
Body Dissatisfaction	-0.21**	[-0.34, -0.08]	-0.15*	[-0.29, -0.02]	-0.15*	[-0.28, -0.02]
Narcissism	0.44**	[0.31, 0.57]	0.27**	[0.11, 0.43]	0.26**	[0.09, 0.42]
Trait self-objectification			0.08	[-0.05, 0.22]	0.08	[-0.06, 0.22]
Body surveillance			0.11	[-0.06, 0.28]	0.08	[-0.11, 0.27]
Internalization of media body ideal			0.15	[-0.03, 0.33]	0.14	[-0.04, 0.32]
Face surveillance					0.07	[-0.11, 0.24]
R^2	.271		.321		.323	
F for R^2	17.65***		12.65***		11.12***	
ΔR^2			.050		.002	
F for ΔR^2			4.63**		.58	

Note: 95% CI stands for 95% confidence interval.
*p < .05 ; **p < .01 ; ***p < .001

Table 3

Summary of hierarchical regression analysis for variables predicting photo investment

	Model 1		Model 2		Model 3	
Variable	*beta*	*beta* 95% CI	*beta*	*beta* 95% CI	*beta*	*beta* 95% CI
BMI	-0.18**	[-0.31, -0.05]	-0.18**	[-0.30, -0.06]	-0.17**	[-0.29, -0.05]
Time spent on SNSs	0.11	[-0.02, 0.24]	0.04	[-0.08, 0.16]	0.03	[-0.09, 0.15]
Body Dissatisfaction	-0.35**	[-0.48, -0.21]	-0.25**	[-0.37, -0.12]	-0.24**	[-0.37, -0.11]
Narcissism	0.39**	[0.26, 0.52]	0.12	[-0.03, 0.28]	0.10	[-0.06, 0.25]
Trait self-objectification			0.05	[-0.08, 0.19]	0.05	[-0.09, 0.18]
Body surveillance			0.22**	[0.06, 0.39]	0.16	[-0.02, 0.34]
Internalization of media body ideal			0.24**	[0.06, 0.41]	0.22*	[0.05, 0.39]
Face surveillance					0.13	[-0.04, 0.30]
R^2	.239		.354		.362	
F for R^2	17.88***		14.63***		13.82***	
ΔR^2			.115		.008	
F for ΔR^2			11.11***		2.37	

Note: 95% CI stands for 95% confidence interval.
*p < .05 ; **p < .01 ; ***p < .001