

Full Length Research Paper

Beautiful skin hides all faults - Effects of body satisfaction on self-esteem and shyness in Japanese female youths

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This study examined the influence of satisfaction from each body part in Japanese female youths on self-esteem and shyness. We hypothesized that body satisfaction in each body part has influence on shyness (social anxiety, social passivity) through self-esteem; and examined the hypothesis using path analysis. As a result, only the body satisfaction of "skin" has been shown to affect shyness and self-esteem. We conclude that body satisfaction especially in "Skin" has important influences on self-esteem and shyness in female youths.

Key words: Body satisfaction, self-esteem, shyness, social anxiety, social passivity.

INTRODUCTION

Appearance is important to adolescents, many of whom have a tendency to feel dissatisfied with their bodies. Harter (1998) reported that a female's lower satisfaction with her physical appearance as a teenager increases with age. Eda (2006) conducted a survey of college women and found that those who judged their own figure to be "somewhat fat" or "fat", in spite of having a normal body weight, were more than 80%. The result is dissatisfaction with one's own body.

Studies of female adolescents' satisfaction-dissatisfaction of the whole body have revealed their findings in relation to psychological traits. Studies have examined the relationship between self-esteem and body satisfaction of female university students; they found that self-esteem was low when body satisfaction was low (Suzuki and Ito 2001). You and Jeon (2005) revealed that body satisfaction enhances the self-esteem in teenage youths of Korea. Furthermore, there are some studies

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examine the relationship between body satisfaction of female adolescents and shyness, which is an individual characteristic in interpersonal situations. Shibata (1990) examined the relationship between shyness and body satisfaction of female adolescents and made it clear that the low level of body satisfaction had the following effects ranging from a sense of anxiety, embarrassment, and loss of speech, to shyness in conversations. In addition, Kanamoto et al. (1999) revealed that people who are dissatisfied with their body have high social anxiety (subordinate concept of shyness).

Some studies have revealed the relationship between body satisfaction of female adolescents and self-esteem and social physique anxiety, which is similar concept of shyness. Social physique anxiety is that "anxiousness when others observe or evaluate their physiques" (Hart et al., 1989). Koyuncu et al. (2010) have revealed that there is a negative correlation between body dissatisfaction and self-esteem and there is a positive correlation between body dissatisfaction and social physique anxiety. Therefore, it would be possible from the results of the previous studies that low body satisfaction results in low self-esteem, and low self-esteem results in negative interpersonal relationships.

Dissatisfaction with the body usually is accompanied by the individual's feelings of dissatisfaction with particular body parts in addition to the whole body. Ishihara and Osawa (2003) revealed that adolescent girls were dissatisfied with their "(a thick) foot", "(a thick) waist", or "(a thick) arm". In addition, Kanamoto et al. (1999) surveyed female university students about their satisfaction with each part of their body and found that their dissatisfaction was mostly directed to the lower part of their body: "thigh", "hip", and "legs". Kanamoto et al. (1999) pointed out the survey's findings to the possibility that it is easy to accept a strong dissatisfaction with the lower part of the body because instantaneous changes in those parts of the body are difficult. Research studies have been conducted on satisfaction and dissatisfaction with part of the body other than the lower body, but not by direct examination. In the Annual Survey of a Beautiful or Ugly View of the Face, which was conducted by Murasawa (2000), the nose, eyes, mouth, and skin are not only the "upper level of the hate face part" but also the "upper level of favorite face part" in female adolescents. In addition, Phillips et al. (2006) reported that in dysmorphic disorder, the body parts that women found most troublesome and that they had the highest number of complaints about were the skin and hair.

As described above, some studies have examined the satisfaction or dissatisfaction for body part. However, studies have examined the association between body satisfaction and psychological traits are little. Among the few, there is research that examined the relationship between satisfaction or dissatisfaction due to makeup of skin, self-esteem and shyness. Graham and Klighman

(1985) have reported that through the makeup of patients with skin trouble, negative attitude was improved. Kanzaki et al. (1998) reveal that patients with facial nerve paralysis wore make up to eliminate depression and inferiority complex; they came out in the public without hiding their face. Even for people that do not have skin disease, Yogo et al. (1990) have reported that those who do not wear makeup have low self-esteem. When the defects of the skin are hidden with cosmetic, satisfaction with the skin increases. It is considered to enhance self-esteem. Previous research (Koydemir and Demir, 2009) shows that satisfaction with "Skin" strengthens self-esteem and weakens social passivity and anxiety. Study of Kanzaki et al. (1998) also showed that the patients came out in public due to the aforementioned reasons. Satisfaction with skin enhances self-esteem, mediates self-esteem, and may suppress shyness. On the other hand, it has also been reported that female adolescents feel dissatisfied with their legs and waist (Ishihara-Osawa, 2003). In other words, dissatisfaction with legs and waist are affecting psychological traits such as self-esteem and shyness.

In the present study, the hypothesis examines whether body satisfaction with each body part has an influence on shyness (social anxiety, social passivity) through self-esteem.

METHOD

Participants

The survey was conducted three times. Total participants were 401 females university students. 1st survey, participants included 201 female university students, from 18 to 23 ($M = 19.44$, $SD = 1.97$) years in the University of Tokyo in June-July 2004. 2nd survey, participants included 135 female university students, from 18 to 29 ($M = 20.43$, $SD = 4.68$) years in the University of Tokyo in mid-November 2012. 3rd survey, participants included 65 female university students, from 18 to 23 ($M = 19.29$, $SD = 1.23$) years in the University of Saitama Prefecture in mid-May 2013.

Procedures

The participants were recruited from psychology classes. The lecturer was contacted for permission to collect data from their students who were told that they were not obligated to participate in the study and that if they wished to participate, their responses would remain anonymous and confidential. The students also were informed that their participation in the study would not influence their grades or relations with the lecturer in any way. At the end of the class period, the researchers conducted a short debriefing for research purposes.

Measurement

Questions of body satisfaction (32 items)

We used the 26¹⁾ questions in the "Body cathexis scale (Masuda et

al., 1992)" which measures the satisfaction with body. We added the six questions of the "Hair style," "Hair of quality," "Depth of eyebrow," "Entire face," "Make-up" and "Having no make-up" to these 26 items²). Students responded to the questions using a 5-point Likert type scale of the degree of satisfaction of each body part, ranging from (5) "it is very satisfied (5) to (1) "it is not satisfied" (1).

Self-esteem scale (9 items)

To assess the participants' self-esteem levels, the Self-esteem Scale, developed by Rosenberg (1965) and adapted to Japanese population by Yamamoto et al. (1982) was used. The scale has 10 items; I was using the 9 items except for the eighth item. Students responded to the questions using a 4-point Likert type scale of the degree of self-esteem, ranging from (4) "it is true (4) to (1) "it is not true" (1).

Shyness scale (10 items)

To assess the participants' shyness levels, the Shyness Scale, developed by Sugawara (1998) was used. Shyness scale consists of social anxiety (5 items) and social passivity (5 items). Students responded to the questions using a 4-point Likert type scale of the degree of shyness, ranging from (4) "it is true (4) to (1) "it is not true" (1).

RESULTS

Factor analysis

The data of 367 female university students ($M = 19.63$, $SD = 1.50$) were analyzed and no deficiencies in their responses were found. They were divided into three groups. Group 1 consisted of 183 students of 1st survey. Group 2 consisted of 123 students of 2nd survey. Group 3 consisted of 61 students of 3rd survey. Examination of the scree plot of eigenvalues for the 32 items suggested five factors. These items were factor analyzed using a major factor method and a Promax rotation. Commonality was .25 or less items and factor loading was .30 following items were deleted. As a result of repeated factor analysis, it was possible to put together the final interpretable 5 factors. Table 1 shows these items and their factor loadings. High items of load in the first factor are: "Obesity degree", "Waist thickness", "Arm thickness", "Proportions", "Form of hip", "Leg length", "Leg shape", "Finger length", "Shoulder width", "Neck thickness". Therefore, this factor was named "Body shape" factor. High items of load in the second factor were: "Eye size", "Eye shape", "Eyelashes length". Therefore, this factor was named "Eyes" factor. High items of load in the third factor were: "Skin luster", "Skin texture", "No-makeup", "Entire face", "Complexion", "Makeup face". Therefore, this factor was named "Skin" factor. High items of load in the fourth factor were: "Mouth size", "Lip thickness", "Nose shape", "Nose height". Therefore, this factor was named "Nose and Mouth" factor. High items of load in the

fifth factor were "Hair color", "Hair style", "Hair quality". Therefore, this factor was named "Hair" factor.

In order to verify the reliability, alpha coefficient for each factor was calculated. "Body shape" was $\alpha = .896$, "Eyes" was $\alpha = .838$, "Skin" was $\alpha = .825$, "Nose and Mouth" were $\alpha = .809$, "Hair" was $\alpha = .679$. In addition, self-esteem was $\alpha = .88$, social anxiety was $\alpha = .75$, social passivity was $\alpha = .80$.

Based on the results of the factor analysis, "Body shape" was simple tabulation of 10 items of body shape scoring, "Eyes" was simple tabulation of 3 items of eyes scoring, "Skin" was simple tabulation of 6 items of skin scoring, "Nose and Mouth" were simple tabulation of 4 items of nose and mouth scoring and "Hair" was simple tabulation of 3 items of Hair scoring.

Correlation analysis

Correlation analysis was performed to examine relationship between satisfaction of five body part, self-esteem and shyness (Table 2). Relationships between self-esteem and all of each factor of body satisfaction were positive correlation at the 1% level (.275 to .441). There was a negative correlation between social passivity and shape, Eyes, Skin, Hair at 1% or 5% level (from -.115 to -.187). There were no relationships between social passivity and Nose and Mouth ($r = -.098$).

There was a negative correlation between social anxiety and Skin, Hair at 1 or 5% level (range from -.106 to -.159). There was no relationship between social anxiety and Eyes, Nose and Mouth ($r = -.037$, $r = -.083$).

There was a negative correlation between self-esteem, social anxiety and social passivity at the 1% level ($r = -.462$, $r = -.316$).

Path analysis

The hypotheses were tested through path analysis by using Amos 16.0 statistical software. First, Path diagram (Figure 1) including all paths from each body part and self-esteem to shyness (social anxiety, social passivity); paths from all body part to both self-esteem; and path from self-esteem to shyness (social anxiety, social passivity) were tested. The paths from "Body shape", "Eyes", "Nose and Mouth", and "Hair" to self-esteem were not significant. Thus, these paths were removed to create a more parsimonious model. The significant direct paths in the revised model with the beta weights are depicted in Figure 2. This second model was assessed in terms of overall goodness-of-fit, and then individual paths were tested for significance. Overall, the analysis indicated that the model excellently explained the data; RMSEA=.000; GFI=1.00; AGFI=.99 ($\chi^2 = .188$, $df = 2$).

Table 1. Factor analysis results of body satisfaction and coefficient.

	Body shape	Eyes	Skin	Nose and Mouth	Hair
Obesity degree	.890	.018	-.164	-.028	-.032
Waist thickness	.857	-.019	-.073	.006	-.079
Arm thickness	.816	-.065	-.103	.026	.039
Proportion	.802	.030	.035	-.116	.084
Hip form	.671	.000	.162	.044	-.056
Leg length	.633	.016	.189	.040	.045
Leg shape	.628	.001	.225	.048	.069
Finger length	.560	.087	.046	.000	.047
Shoulder width	.445	.059	.161	.285	.047
Neck thickness	.401	.089	.050	.273	.127
Eye size	.003	1.000	.072	.012	.100
Eye shape	.034	.868	.080	-.091	.088
Eyelashes length	.005	.618	.067	.061	.041
Skin luster	.111	-.126	.892	.006	.037
Skin texture	.009	-.095	.873	.049	.111
No-makeup	.018	.278	.467	.050	.018
Entire face	.088	.309	.350	.158	.118
Complexion	.170	.103	.338	.069	.167
Makeup face	.051	.263	.311	.107	.055
Mouth size	.024	.067	.003	.862	.019
Lip thickness	.075	-.078	.025	.853	.036
Nose shape	.104	.101	.034	.541	.107
Nose height	.020	.242	.038	.512	.075
Hair color	.051	.038	.069	-.009	.718
Hair style	.029	-.057	.035	.091	.711
Hair quality	.002	.081	.012	.029	.526
factor correlation					
Body shape	-	.376	.475	.496	.267
Eyes		-	.497	.539	.360
Skin			-	.576	.471
Nose and Mouth				—	.476

Table 2 Correlation coefficient between body satisfaction and two scale.

	Social passivity	Social anxiety	Body shape	Eyes	Skin	Nose and Mouth	Hair
self-esteem	-.462**	.316**	.356**	.350**	.441**	.348**	.275**
social passivity		.489**	.156**	.163**	.187**	.098**	.115**
social anxiety			.106**	.037**	.126**	.083**	.159**
Body shape				.297**	.483**	.450**	.200**
Eyes					.440**	.426**	.254**
Skin						.534**	.376**
Nose and Mouth							.323**

Standardized partial regression coefficient was, "Skin" from the self-esteem was a direct positive related ($\beta = .44, p < .001$); from self-esteem to social passivity and social anxiety was a direct negative related (each, $\beta = -.46, p < .001, \beta = -.32, p < .001$).

"Skin" was negative related to the mediate the self-esteem to social passivity and social anxiety was observed. The result reveals that satisfaction with "Skin" strengthens self-esteem and

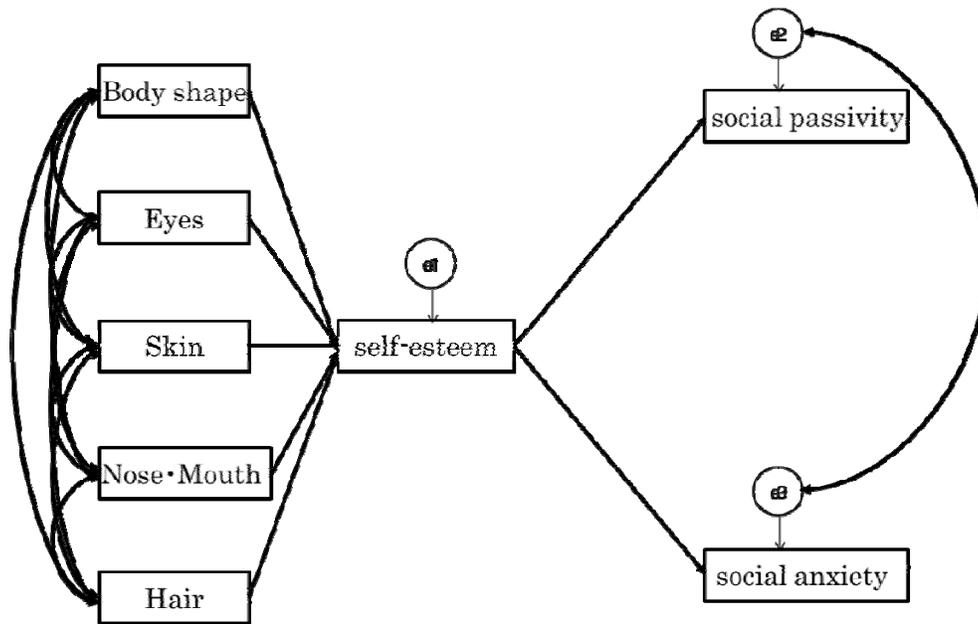


Figure 1. Path diagram: self-esteem and shyness are dependent variables.

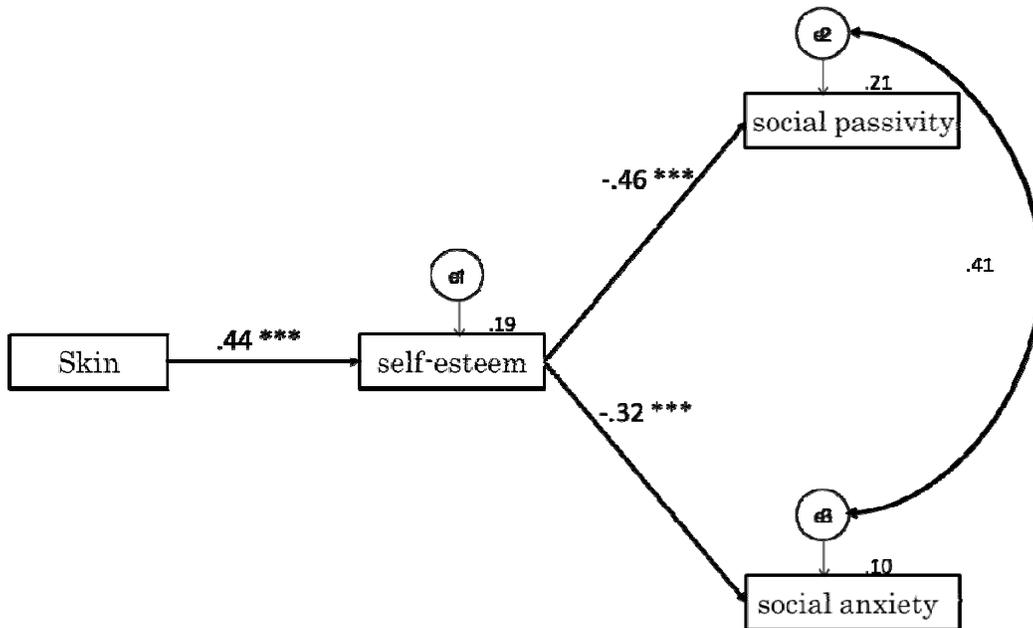


Figure 2. Final path model: Path coefficients of influence of body satisfactions and self-esteem on shyness. Note 1. Numerical value represents the standardized path coefficient. Note 2. *** $p < .001$.

weakens social passivity and anxiety.

DISCUSSION

This study examined the hypothesis that body satisfac-

tion in female adolescents has an influence on shyness (social anxiety, social passivity) through self-esteem. Factor analysis revealed that body satisfaction in female adolescents was divided into five body part: "Body shape", "Eyes", "Nose and Mouth", "Skin", and "Hair". Path analysis revealed an effect of self-esteem only on

satisfaction with "skin". In other words, female adolescents who feel satisfied with their skin have a higher level of self-esteem. In the previous study, it has been reported that parents demonstrate the degree of the ability of body satisfaction to influence self-esteem (Endo et al., 2002). Among them, "Skin" influences self-esteem more.

There are previous studies that suggest that the skin is important for Japanese women. In the research on cosmetics advertising in women's magazines, advertising of skin care was often overwhelmingly more compared to other makeup (Watanabe, 1985). Japanese women compared to even Westerners have been reported to spend time in taking care of the skin, such as whitening and skin care (Shiseido, 2010). Those Japanese women preferring white skin are demonstrated in international comparison study of Asian college students (Saito, 1996). From these previous studies, it was suggested that skin for Japanese women is an important body part directly connected to self-concept.

Path analysis revealed an effect of shyness on satisfaction with "skin" to mediate self-esteem.

Path analysis revealed an effect of shyness and self-esteem only on satisfaction with "Skin". By comparison, satisfaction with four other body parts had no effect on shyness or self-esteem. That hypothesis was not supported by some scholars. It is considered that "Skin" is directly associated with self-concept to a greater degree than the other parts of the body. People who cannot go out if they are not satisfied with their "Eyes" and "Hair" are rare. On the other hand, people cannot go out if they are not satisfied with their skin (Kanzaki, et al., 1998).

In previous studies, social skills improve shyness (Goto, 2001). But in this study, it is suggested shyness can be improved by increasing body satisfaction in form of skin care lessons.

Limitation of the study

The limitation of this study is merely cross-sectional study. To overcome the limitation, it will be necessary to examine body satisfaction in relation to social anxiety and passivity. In the future, it would be necessary to investigate longitudinal study, and to consider the specific impact of body satisfaction. At the same time, the authors plan to fill the ideal and the reality of the gap of body image in Japanese female youths, makeup lessons or skin care lessons effectively (e.g., use of serum face mask, use of foundation that suits someone and choice of hairstyle which covers the face line).

Social skill training has been effective against shyness in previous studies. But it has been suggested that it is also effective in increasing body satisfaction in this study. Therefore, such lessons will have a positive impact on

shyness.

Note

1) "Body cathexis scale" is composed of 50 items. In this study, because there are restrictions on the amount of the questionnaire during the study, it was not possible to use all of the items. Therefore, the form, in which body part field contents are duplicated, was used by extracting 26 items.

2) "Body cathexis scale" as items related to body parts of the face was relatively small, we have these added.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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