

BODY PERCEPTION, BODY-ESTEEM, AND EATING ATTITUDES OF FEMALE UNIVERSITY STUDENTS

Sirinmas Sridachati^{1,*}, Arunya Tuicomepee², Supapan Kotrsjras²

¹College of Public Health Sciences, Chulalongkorn University, Bangkok 10330, Thailand

²Faculty of Psychology, Chulalongkorn University, Bangkok 10330, Thailand

ABSTRACT: The purpose of this study was to investigate body perception, body esteem and eating attitudes of female students at university. Data was collected among 432 female students of Chulalongkorn University. These students were classified into three levels according to their body mass index from 4 fields of study (108 students in each group), by using multistage and convenience sampling technique. The self-administered questionnaire comprised multiple measures of body perception, body-esteem, and eating attitudes test/EAT-26 was used to collect the data. A One-way ANOVA analysis and Multiple Regression Analysis were used to analyze the data. The finding shows that female students whose body perception was thin had higher body-esteem than those whose perceptions were slender and fats. Female students whose body perception was fat had higher and negative attitudes toward eating than those whose perceptions were slender and thin. There is no significant different in eating attitudes among female students whose body perception was slender and thin. Significant and negative correlation was found between BE-Appearance, BE-Weight and eating attitudes ($p < .01$). In term of the predictive abilities, all predictors (BE-Appearance, BE-Weight and BE-Attribution) together accounted for 21 percent of the variance in predicting eating attitudes.

Keywords: body perception, body-esteem, eating attitudes, female university students

INTRODUCTION

Body image is that a society pays lot of attention to, especially female adolescents who cares about their appearance. They desire to be thin rather than being fat as they have to face negative attitude of the society for being fat. Most of the women fear of fat and their willingness is to become thin as well as those who have overweight and obese wish for good body esteem. Body-esteem is self evaluation of one's body or appearance or how satisfied is a person with his or her appearance) and body image dissatisfaction [1].

However, not only those with overweight or obesity are unsatisfied with their body image or they have very low body image, but also the ones who are underweight or have normal weight are unsatisfied with their weight and body image [2].

For example, a study of Paxton et al [3] showed that 27 percent of women with normal weights perceived that they were overweight and wanted to lose weight. Another study from Shin and Kubo [4] revealed that 65.5 percent of women were not satisfied with their body image and thought that they were fat or had overweight [5] and tried to reduce weight more often than men [6]. In addition, female adolescents with thought about food, shape, and weight all the time are likely to have eating concerns.

Not only adolescents wanted slimmer bodies or lower weights, but they also had distorted

impression towards their own body. Forty three percent of them with normal weight or overweight were aware that they were fat or had overweight [7]. Several researches have revealed that university students, especially females, were more aware of their overweight [8]. In fact, this perception was incorrect and a distorted-causing wrong body image perception, leading to misconception of body and weight and unsuitable diet or weight reduction behavior, or even eating disorders [8].

When female adolescents were not satisfied with their body image, they had low body-esteem and had negative emotions [3] like anxiety, depression, anger, confusion etc. [9]. It also creates eating disorders like Anorexia nervosa or Bulimia nervosa. This study therefore aims to examine the association between body esteem and eating attitudes of female students; to compare body esteem and eating attitudes of students who have different body perceptions; and compare the influence of body perception and body esteem toward eating attitudes.

MATERIALS AND METHODS

Four hundred and thirty-two female Participants aged between 18 to 21 years were selected from the undergraduate students of Chulalongkorn University. Multistage and convenience sampling technique was used to select the students. Instruments like Self-administrative questionnaire consists of multiple measures of body perception (which is a modified version of Contour Drawing Rating Scale) [10], body-esteem [11] and eating

* Correspondence to: Sirinmas Sridachati
E-mail: sirinmas_srid@hotmail.com

attitudes test/EAT-26 [12] were used for data collection. Before providing the questionnaire a cover letter, study information and consent form were also distributed to participants.

Approval from Institutional Review Board of Chulalongkorn University was received prior to participant selection. Students from 4 different faculties (i.e., Science and Technology, Biological Science, Social Sciences and Humanities) were selected. Each faculty comprised of 108 students who were further divided into 3 groups according to BMI index (underweight, normal weight and overweight and obese). The SPSS software package was used for analyzing the dates.

Research variables were 1) Body perception (e.g. perception about one's appearance; thin, slender and fat) 2) Body Esteem (BE) divided into 3 parts; (BE: general feeling about appearance), BE: Weight (weight satisfaction), and BE: Attribution (evaluations attributed to others about one's body and appearance). Dependent variable was eating attitudes (evaluate the subjects' attitudes toward and their preoccupation with food, dieting, binge eating are concerns with the risk of eating disorder).

RESULTS

The participants who were first year students and aged between 18-21 years, had normal BMI (18.5-24.9) and similar body perception, choosing image picture number 4 (20.4%). The image desired most was picture number 4 by 44.7% of the participants where as 47.7% of the group thought that they were slender.

After the satisfactory score check 72.5% were not satisfied with their body image and desired for slimmer bodies or lower weights. When divided according to BMI index, it was found that the group with body weights below standard or about 50.0%, perceived being slender, while those with slender weights or 86.8% thought they were slender, and those overweight or equivalent to 93.8% thought they were fat.

From the One-way ANOVA, the body esteem and eating attitudes of the female students of different body perception showed that different average scores were found between body perception and eating attitudes among the 3 groups of female students who had different perceptions. This difference was statistically significant at $p < .000$.

After the Post-Hoc test, it shows that average score of the body esteem of the female students whose body perception were thin (52.70 ± 10.28) was higher than those whose perception were slender (43.37 ± 11.91) and fat (31.7 ± 10.00). This was statistically significant at $p < .05$ (Table 1).

After the Post-Hoc test, it also shows that the average score of eating attitudes of the female students whose body perception was fat (7.84 ± 0.63) was higher than those who thought they were thin

Table 1 Post-Hoc Comparison of average score of the body perception of the female students with different body perceptions

Body perception	Body esteem		
	1	2	3
1. Thin			
2. Slender	1>2*		
3. Fat	1>3*	2>3*	

* $p < .05$

Table 2 Post-Hoc Comparison of average score of eating attitudes of the female students with different body perceptions

Body perception	Eating attitudes		
	1	2	3
1. Thin			
2. Slender	~		
3. Fat	3>1*	3>2*	

* $p < .05$

Table 3 Correlation between body esteem in 3 parts and eating attitudes of female students (n=432)

Variables	1	2	3	4
1. BE-Appearance	1.00			
2. BE-Weight	.74**	1.00		
3. BE-Attribution	.46**	.54**	1.00	
4. Eating attitudes	-.38**	-.39**	-.05	1.00

** $p < .01$

(6.22 ± 0.57) and slender (6.23 ± 0.43). This was significant at $p < .05$ (Table 2).

Correlation analysis of the body esteem in 3 parts and eating attitudes of the female students revealed that BE-Appearance had significant positive association with BE-Weight at $p < .01$, likewise it has positive association with body image perception by others (BE-Attribution) which was statistically significant at $p < .01$. The general feeling about BE-Appearance had a significant negative association with Eating attitudes at $p < .01$

BE-Weight satisfactory level had a significant statistical association with body image perception of other person towards ourselves (BE-Attribution), at $p < .01$, and significant negative association with eating attitudes at $p < .01$. However, there was no association found between body image perception of the other person towards ourselves (BE-Attribution) and Eating attitudes (Table 3).

Multiple Regression Analysis by Enter Method showed that variables about body esteem could predict significant statistical eating attitudes of the female students in 3 parts which are 1. General feeling about appearance 2. Satisfactory about weight and 3. Body image perception of others towards ourselves. Multiple Regression Analysis was significantly different at $p = .001$ of the association 0.46 (Table 4) and could explain variance about dependent variable like eating attitudes at 21%.

Table 4 Multiple Regression analysis result of body perception regarding satisfactory in weight and body image perception of the other person towards oneself regarding eating attitudes.

Variables	B	t	Sig
Fixed value	13.58	13.26	.000
BE-Appearance	-0.26	-3.77***	.000
BE-Weight	-0.37	-5.20***	.000
BE-Attribution	0.52	4.90***	.000

F(3,428)= 39.79 ($p = .000$)
 R = 0.46, R² = 0.21, Adj R² = 0.21

*** $p > .001$

By considering regression coefficient (b), it can be drawn an equation to predict eating attitudes as follows:

Eating attitudes = 13.58 -0.26*** BE-Appearance -0.37*** BE-Weight +0.52*** BE-Attribution

CONCLUSION

Study results show that the sampling group has an average BMI at a normal scale (BMI 18.5-24.9) but 69.9% wanted to control weight. This is in line with a study of Storz and Greene [13] that has 83% of the sampling group wanted to reduce obesity, 63% of them having normal BMI index. Those with weight below standard or about 50.0 % were aware that their bodies were slender; it is in line with the research of Xie et al. [14] which tells female students with weights above the standard knew that they were obese and overweight. In contrast to Xie et al. [14], this study found that most of female students (86.8%) with standard weight were likely to perceive their bodies as slender.

Body-esteem is the “self-evaluation of one’s body or appearance and how satisfied is a person with his or her appearance” [14]. Female students knew that those who were thin had the highest body esteem compared to those who thought they were slender and fat. Women specially care for the appearance and the society give the value of them who has been slender which reflects the beautifulness. On the contrary, obesity is bad and has a poor image [1]. Persons who have positive body perception have a higher body esteem, but those one who have negative body perception may have less body esteem and poor and unsatisfied body image perception.

Interestingly, female students who perceive that they are obese were likely to have a higher eating attitude score as compared to those who perceived that they are thin and slender. However, no statistical difference was found between those who thought they were thin and slender. This information is in line with Marchessaolt [15], the reasons are due to value of being slim or thin-making, the sampling group who felt unsatisfied with their body and had lower body image [16]. When they are not satisfied with their body image, they will surely devalue their body image, causing

negative emotion e.g. anxiety, depression etc. [17]. It also created eating disorders like Anorexia nervosa or Bulimia nervosa because perception about body and weight is important on behavior and attitude in connection with eating and weight reduction.

In addition, the body-esteem (BE) Appearance, BE-Weight and BE-Attribution are significantly associated with eating attitudes. These two variables enable to significantly predict eating attitudes of the female students. General feeling about BE-Appearance, BE-Weight, and BE-Attribution all had positive associations, that is, if any variable becomes high, the other 2 variables would be high too. The more a person felt satisfied in BE-Appearance, the more pleased she would be with BE-Weight. And there was an estimation of positive BE-Attribution of the other person in line with study of Mendelson et al. [11]. The more the person was satisfied with appearance and weight, the better his eating attitudes (lower score of eating attitudes).

Regarding prediction, the result of this study is in line with parts of research from Ferrand, Champely and Filaire [18]. Being satisfied with weight and body image from other person towards ourselves could also predict eating attitudes. One reason would be for some dissatisfaction is the person perceive of her body. The bad perception about her appearance, people may lead one to lose her confidence and become anxious and develop an eating concern. This might lead to eating disorders [18]. Body esteem is important to late female adolescence where they create concern about appearance-inspiring her to improve herself in order to be accepted.

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