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Analysis of the Relationship Between Eating Attitudes and Body Shape in Female Students

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Abstract: This study aims at investigating the relationship between eating attitudes and body image dissatisfaction. Among the female students of psychology from Shahid Chamran University of Ahvaz, during 2008, 140 students were selected through random sampling. This research was conducted in a field work fashion using the Eating Attitudes Test (EAT) and the Body Shape Questionnaire (BSQ). The data collected were analyzed using correlational statistics. Results suggested that there is a significant positive correlation between the eating attitudes and body image dissatisfaction. Thus, students who are overly dissatisfied with their body shape are at a higher risk for an eating disorder.

Key words: Eating disorders, body shape, bulimia nervosa, anorexia nervosa, eating disorder not otherwise specified

INTRODUCTION

Eating disorders are often thought to be a Twentieth Century Western phenomenon. This is not so: patients with these features have been described for over thousand years. Eating disorders, in fact, can be separated into at least three different types: anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified. Early descriptions are found in religious literature and case examples of anorexia nervosa were described but not named by physicians in the Seventeenth Century. Eating disorders are most common among females in late adolescence and early adulthood. The female to male ratio is approximately 10:1 (Blashki *et al*., 2007). Notably there is appears to be an increase in the prevalence of eating disorders in the last 50-60 years. Anorexia nervosa occurs predominantly in females and usually presents in late adolescence. The median age of onset is 17, with new cases rarely occurring after age 40. The deported prevalence of anorexia nervosa in the United States ranges from 1 in 100 to 1 in 800 for females between the ages of 12 and 18 years. The diagnosis of anorexia nervosa may be missed more often in males, where there is no obvious maker such as cessation of menstruation (Blashki *et al*., 2007).

Bulimia nervosa also occurs predominantly in females (90%) and usually presents in adolescence or early adult life. Bulimia nervosa has been studied primarily in college students and therefore, knowledge of its prevalence may be limited by the lack of data from other populations. Between 1 and 3% of adolescent and young adult females meet diagnostic criteria for bulimia nervosa, with the prevalence being about one-tenth that in males.

Cattarin *et al*. (2000) argued that media-presented images of women have the ability to affect (either positively or negatively) both mood and satisfaction with appearance within a normative female sample. A moderating factor to this finding was the tendency of the participant to internalize sociocultural norms for attractiveness. Thus, if females are especially susceptible to the sociocultural norm of attractiveness being associated with thinness and are bombarded with images of such, they tend to be more at risk to have a higher level of body dissatisfaction and thus an eating disorder.

In another study, Groesz *et al*. (2002) explained that female's participants were significantly more dissatisfied with their bodies after viewing thin media images than after viewing of average sized models, plus sized models.

Body dissatisfaction and body distortion are both strongly predict mild and severe eating disorders (Cattarin and Thoson, 1994; Stice, 2002). Stice (2002) in a meta-analytic review showed that body dissatisfaction predicted increase in negative effect ($r = 0.14$), bulimic pathology and eating pathology ($r = 0.13$) and dieting ($r = 0.26$). In addition, body dissatisfaction predicted maintenance of bulimic symptoms ($r = 0.30$). Statistics supported Stice's result that the body dissatisfaction variable emerged as one of the most consistent and robust risk and maintenance factors for eating pathology.

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In European and African American women, there was association between greater awareness and acceptance of the thin beauty ideal and greater disordered eating characteristics.

Social comparison theory says that women usually compare themselves to thin models in the media. Bissell and Zhou (2004) argued that high exposure to entertainment television that had thin ideal characters predicted decreased satisfaction with the body and more negative attitudes regarding the ideal body shape as well as higher scores on disordered-eating scales.

Faer *et al*. (2006) studied the relationship between female intrasexual competition and the pursuit of thinness. They found that females compete among themselves for mates and status.

Weichmann (2007) in the longitudinal course of body dissatisfaction on a college sample of undergraduate females showed that new students had highest levels of dissatisfaction. This dissatisfaction decreased throughout their college experience.

With so many studies looking at the correlation between body shape perception and eating disorders, a natural inquiry would be to see how measures for each variable correlate. Though some studies have looked at this correlation, very little research on the subject has been done in Iran. The present study attempts to examine correlations between eating attitudes and the body Shape in college students.

The main research question is whether there is relationship between body shape and the risk of eating disorders. To answer this question, the following hypotheses (primary and secondary) are proposed:

Hypotheses 1: There is correlation between eating disorders and body shape.

Hypotheses 2: The weight has influential impact on eating disorder symptomatology.

In the present study, the term eating disorders defined as a general category of eating disturbance. Eating disorders, in fact, can be separated into at least three different types: anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified. The core features of anorexia nervosa include refusal to maintain a minimal normal body weight (e.g., >85% normal body weight or body mass index >17.5 kg m^{-2}), intense fear and obsession about weight gain or being fat, a distorted body image and amenorrhea (clinical). The core features of bulimia nervosa is binge eating-an excessive intake of calorie-laden food over a short period of time (clinical). Some inappropriate methods of compensating for a binge is vomiting, misusing laxatives, diuretics and enemas and excessive fasting or exercise. Of all these methods, 80-90% of individuals with bulimia engage in vomiting (APA, 2000). Eating disorder not otherwise specified, describes disorder of eating that fail to meet the criteria for either anorexia or bulimia.

Admittedly, observations of or responses to appearance are highly subjective. Indeed, what is beautiful to one person might be distasteful to another. Even so, a person's perception of or attitude toward his or her body is most likely only a portion of what he or she uses to evaluate the self, but these perceptions and attitudes often constitute an important part of this self evaluation. The body shape is the only portion of the self that is immediately observable to others. The physical body is unique among other characteristics of the self in that it is readily comparable to other bodies, is easily objectified, requires nothing more than observation in order to be judged and yet can be responsible for affecting most-if not all-of the aforementioned internal features of the self.

MATERIALS AND METHODS

Eating disorders often remain unreported, which may put the lives of individuals suffering from them at risk. To decrease this risk, researchers have developed various methods of assessing individuals for an eating disturbance. Since, negative body shape and image have been found to be a risk factor for eating disorders, researchers have developed various measurements and questionnaires that measure an individual's body shape perceptions.

Due to time limitation it was not virtually possible to cover all the female students in universities of Iran. Therefore, the research population is reduced to the female students in Department of Psychology in Shahid Chamran University of Ahvaz. Considering the size of population and necessity of representativeness of the sample, the initial size of the sample, using Morgan's formula was 100. The studied sample size which was obtained through random selection increased to 140. The majority of participants were within the age range of 18-24 in 2008. In order to collect the data, each student was given the Eating Attitudes Test (EAT-40), the Body Shape Questionnaire (BSQ) and a demographics questionnaire to fill out. Each subject was assigned an identification number so as to keep track of each individual case.

The Eating Attitudes Test (EAT) was developed in 1979 to be used as a screening tool for anorexia nervosa. It is an objective, self-report questionnaire that consists

of 40 questions that are answered using a 6-point Likert scale ranging from never to always. Only the three most extreme scores are assigned a point value from 1 to 3, resulting in total scores that can range from 0 to 120. Any subject who has a total score of 30 or above on the EAT is considered to be at risk for eating disorder behavior and symptomatology. The EAT has a validity coefficient of .87 and an internal consistency coefficient of .79 for anorexic patients and .94 for control subjects (Garner and Garfinkel, 1979).

The Body Shape Questionnaire (BSQ) was developed in 1987 to measure an individual's concerns about body shape, especially their concerns of feeling fat. It is a self-report questionnaire that consists of 34 questions that refer to the subject's feelings about their appearance for the earlier four weeks. Questions are answered using a 6-point Likert scale ranging from never to always. Each scaled answer is assigned a point value from 1 to 6 resulting in total scores that can range from 34 to 204. Those who are considered probable cases or definite cases of bulimia score about 130 or above on the BSQ (Cooper *et al*., 1987). The BSQ takes approximately 10 min to complete. This questionnaire provides a measure of the extent of psychopathology rather than a means of case detection (Cooper *et al*., 1987). Rosen *et al*. (1996) reported a test-retest reliability of 0.88 and a concurrent validity of 0.77 with the Body Dysmorphic Disorder Examination among university undergraduates.

The collected data was imported in to SPSS software. The data were analyzed using correlational statistics.

RESULTS AND DISCUSSION

Data analysis yielded information included in Table 1 and for the purposes of this analysis and according to the questionnaire creators, any subject who has a total score of 30 or above on the Eating Attitudes Test (EAT) is consider to be at risk for eating disorder and 130 or above on the Body Shape Questionnaire (BSQ) probable cases or definite cases of bulimia (Cooper *et al*., 1987). As shown in Table 1, median and mean for EAT and BSQ indicate that large number of sample are not at risk for eating disorder or bulimia. The results showed that the correlations on the EAT and BSQ is r = 0.689. In EAT 94.3 and in BSQ 92.9 of the total sample scored within non clinically significant rang. The majors with percentages of participants who scored within the non clinically ranges that are lower than that reported for life total sample were designated as majors of non clinically significant rang. Consider to that only 7.1% of students are probable cases for bulimia and 5.7 of them are at risk for eating disorder. This risk of eating disorder is decreased according to high level of body satisfaction. After descriptive evidence, we turn the arguments toward the main research question that whether there is a statically significant relationship between the eating disorders and body shape. To this end, pearson correlation was used to test the research hypotheses which were presented in the first section to answer the research question. Results of correlation indicate that there is a significant positive correlation (r = 0.689) between EAT and BSQ.

Table 1: Descriptive indexes for EAT and BSQ

Samples	High	Weight	Age	EAT	BSQ
Median	160.00	54.00	21.00	15.50	56.00
Mean	161.33	54.86	21.46	16.46	67.80
SD	5.41	6.53	2.36	10.35	10.35

The correlations between Thus, it can be said with more confidence that if subjects scored low on the EAT, they were more likely to score low on the BSQ. This result is slightly higher as that of Cooper *et al*. (1987) (r = 0.61) and Mumford and Choudry (2000) (r = 0.57).

Since, in this study the high correlation has been found between EAT and BSQ, thus Hypothesis 1 holding that there is correlation between eating disorders and body shape is accepted. The results also show that the weight had the most influential impact on eating disorder symptomatology and body dissatisfaction, which is supported by Freedman *et al*. (2004). That of Freedman, et al many people consider weight as the determining factor of outward appearance, regardless of body shape. The mean weight of the present sample was 54.86 and the mean high was 161.33. Regarding to that the body mass index is 21.078 kg m^{-2}, which shows normal body weight (body mass index >17.5 kg m^{-2}). Hence, according to the findings, Hypothesis 2 holding that the weight have influential impact on eating disorder symptomatology is accepted.

The total frequency of the studied bedridden eating Attitudes, in females according to their weight, high, age and body mass index suggests that the eating disorder follows by body dissatisfaction.

This finding is precisely in line with previous related studies, mainly after 1980s, which have been reviewed in the study.

The results suggest that there is a positive correlation between the likelihood of eating disorder and body dissatisfaction.

CONCLUSIONS

In this study, the students are often satisfied with their body shapes. So, their eating attitudes are often positive and there isn't a significant eating disorder.

Two factors which cause these results include: Linear growth of a person continues to about 25 years, then he/she starts to become obese.

Mean age of our sample is 21.4. The sample hasn't entered to this critical stage. In this stage, a person is high risk for getting obesity. So, they are afraid of gaining weight which leads to eating disorder. Also, it is possible that they exercise. These factors lead them to close to thin ideal. Mean body mass index is 210.78 that is more than estimated range (BMI<17) which causes eating disorder. According to this study, we haven't any eating disorder. This conclusion accepts the results from BMI. However, the people who are high risk for eating disorder should be treated. Because we always bombard through movies, television, our culture and magazines, they affect our body images and our attitude toward eating. The message is only women who are thin are attractive. It is true that their physical changes affect their eating attitudes. However, cultural and social pressures have powerful influences over the way human feel, think, image and act.

Multidisciplinary treatment is necessary to ensure a positive outcome, because the cause of eating disorder is complex.

The cornerstone of treatment is non pharmacologic measures such as nutritional counseling, educational therapy, multimodal behavioral therapy. These kinds of psychotherapies can help to change the way person thinks and behaves not just about food but about herself and her world. These therapies identify and challenge the characteristic images and thoughts that reinforce eating attitudes. Pharmacotherapy (Antidepressants such as Selective Serotonin Reuptake Inhibitors (SSRIs) remains adjunctive to nondrug treatments.

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