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PHYSICAL CORRELATES OF COLLEGE STUDENTS' BODY IMAGE SATISFACTION LEVELS

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Whether or not the association between physical characteristics and body image satisfaction varies by gender was investigated. The sample included 148 male and 104 female college students aged 19-27 years. To assess body image satisfaction, the Body Image Satisfaction Questionnaire (Berscheid, Walster, & Bohrnstedt, 1973) was used. Body fat, waist to hip, chest to shoulder ratio, weight, and height were measured. The results indicate that males had significantly greater body image satisfaction than did females. There was a small but significant correlation between physical characteristics and body image satisfaction for females but not for males. The regression model, consisting of bodily measures, predicted a significant variance in female body image satisfaction. The same model failed to explain male body image satisfaction.

Keywords: body image, waist to hip ratio, body fat ratio, body image satisfaction, gender, college students.

Social anxiety occurs when people are motivated to make certain impressions on others, but doubt either that they will successfully generate a positive impression or forestall an undesirable impression (Schlenker & Leary, 1982). Because ultraslim models, pop singers, and television actresses are portrayed in the media, body image satisfaction has become a significant source of social anxiety. *Body image satisfaction*, which is often conceptualized as *a discrepancy between current and ideal body shape* (Garner, Garfinkel, & O'Shaughnessy, 1985) or *the degree of negative feelings about body shape, body parts, and weight* (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002), is associated

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with developmental, psychological, and social factors such as self-esteem, interpersonal confidence, eating and exercise behaviors, and emotional stability (Cash & Pruzinsky, 1990). In this respect, body image satisfaction may be an important construct in predicting individuals' mental and physical health status. For example, low body image satisfaction is a precursor to unhealthy eating behaviors and predicts the severity of eating problems (Striegel-Moore, McAvay, & Rodin, 1986; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989). Koyuncu, Tok, Gunes, and Dogan (2009) found that body image (dis)satisfaction and emotional stability were moderately correlated with each other and that emotional stability could explain a significant amount of variance in body image (dis)satisfaction.

Despite these findings a relationship between body image satisfaction and psychological and behavioral tendencies, physical and anthropometrical correlates of body image satisfaction has not been clearly demonstrated. In previous studies the effects of body mass index (BMI) on daily fluctuations in state-body image satisfaction has been examined (Melnyk, Cash, & Janda, 2004; Rudiger, Cash, Roehrig, & Thompson, 2007). However, physical correlates of body image satisfaction still require more detailed examination. In this respect, waist to hip ratio (WHR) has attracted a considerable amount of interest in the assessment of body image (dis)satisfaction. There is extensive evidence to support the concept that WHR is an accurate indicator of androgenicity (male hormone effect), estrogenicity (female hormone effect) (Evans, Barth, & Burke, 1988), risk of major diseases (Björntorp, 1991), and potential reproductive success (De Ridder et al., 1990). A direct relationship has been reported between WHR and fertility (Kaye, Folsom, Prineas, Potter, & Gapstur, 1990). Findings regarding the role of physical characteristics in body image satisfaction for males and females are less clear. Chen, Gao, and Jackson (2007) demonstrated that females are more vulnerable to the development of body image dissatisfaction, indicating that the relationship between physical characteristics and body image satisfaction may vary according to gender. Therefore, in the current study I examined whether or not the association between physical characteristics and body image satisfaction varies according to gender with the aim of determining the predictive ability of physical characteristics on body image satisfaction based on gender.

METHOD

PARTICIPANTS

There were 252 college students (148 males and 104 females) in the sample, ranging in age from 19 to 27 years.

Materials and Procedure

Body Fat Ratio Skinfold measurements were obtained from the following sites: triceps, subscapula, suprailiac, and abdomen. In order to determine body fat ratio, the Yuhasz (1986) method was used. According to this method percentage of body fat is measured as follows: 0.153 (triceps + subscapula + abdomen + suprailiac) + 5.788.

Body Image Satisfaction In order to evaluate the level of participants' body image satisfaction, the Body Image Satisfaction Questionnaire, developed by Berscheid, Walster, and Bohrnstedt (1973), was used. The questionnaire includes 25 items for females and 24 items for males. Each item in this questionnaire is evaluated on a 5-point Likert-type scale. The reliability of this questionnaire for the Turkish population was verified by Gökdoğan (1988). In my study, the internal consistency score was .81.

Waist (WC), hip (HC), shoulder (SC), and chest circumference (CC) were measured according to the recommendations of the World Health Organization. WHR was calculated by dividing WC by HC. Chest to shoulder ratio (CSR) was calculated by dividing SC by CC.

RESULTS

Results of Pearson correlation analyses showed that body image satisfaction was correlated with body fat ratio, WHR, and CSR, among the female sample. However, no such relationship existed for the male sample. Correlation coefficients for groups according to gender are presented in Tables 1 and 2.

TABLE 1
Correlations Between Physical Characteristics and Body Image Satisfaction – Female Sample

	1	2	3	4	5
Body fat ratio					
Waist to hip ratio	.40**				
Body image satisfaction	-.22*	-.26**			
Chest to shoulder ratio	.12	-.35**	.21*		
Height	-.05	.003	.08	.03	
Weight	.60**	.27**	-.02	.04	.13

Note: * $p < .05$, ** $p < .001$.

TABLE 2
CORRELATIONS BETWEEN PHYSICAL CHARACTERISTICS AND BODY IMAGE SATISFACTION – MALE SAMPLE

	1	2	3	4	5
Body fat ratio					
Waist to hip ratio	.09				
Body image satisfaction	-.01	.04			
Chest to shoulder ratio	.12	-.002	-.05		
Height	.11	.07	-.01	.02	
Weight	.56**	.04	-.11	.08	.59**

Note: ** $p < .001$.

A regression model consisting of bodily measures explained 14% of the variance in female body image, with most of the variance being explained by body fat ratio. However, the same model failed to explain a significant amount of variance in body image satisfaction in the male sample.

TABLE 3
PREDICTIVE ABILITY OF PHYSICAL CHARACTERISTICS IN FEMALE AND MALE BODY IMAGE SATISFACTION

	Independent variables	β	*t*	*R*	R^2
Females	Height	.04	.40		
	Weight	.18	1.50		
	Chest to shoulder ratio	.20	1.84	.37	.14
	Body fat ratio	-.31	- 2.34*		
	Waist to hip ratio	-.11	-.99		
	(Constant)		4.74		
Males	Height	.12	1.13		
	Weight	-.25	-1.88		
	Chest to shoulder ratio	-.05	-.58	.17	.03
	Body fat ratio	.12	1.16		
	Waist to hip ratio	.03	.32		
	(Constant)		3.24		

Note: * $p < .05$.

An independent samples *t* test indicated that males ($M = 4.22$, $SD = 0.48$) had significantly higher body image satisfaction scores than did females ($M = 4.04$, $SD = 0.53$, $t(250) = 2.79$, $p = 0.006$), indicating that males were more satisfied with their bodies.

DISCUSSION

Several results that I found interesting were gained concerning WHR and body image satisfaction among the female sample. WHR was negatively and significantly correlated with body image satisfaction only in the female group. This result is consistent with that gained by Furnham, Mistry, and McClelland (2004), who suggested that from an evolutionary perspective, it would be advantageous for males to select mates who have a low WHR. However, the negative relationship between WHR and body image satisfaction may be an indicator of unhealthy weight control strategies or eating habits and females who desire a lower WHR may develop eating pathologies.

Despite strong Turkish cultural norms praising larger WHR in females, the WHR in this study ranged from 0.61 to 0.89 in the female sample, a range similar to those gained by previous researchers (Lanska, Lanska, Hartz, & Rimm, 1985; Marti et al., 1991), suggesting that the normal WHR of a healthy premenopausal woman lies between 0.67 and 0.80. These results indicate that Turkish cultural norms regarding the ideal female body have changed.

In this study I found a negative association between body image satisfaction and body fat ratio. This association was significant only in the female sample, which indicates that females appear to be more sensitive regarding physical characteristics than do males. On the basis of this association, it can be concluded that females may be more vulnerable to the development of eating pathologies and body image disturbances.

No relationship was found between physical characteristics and body image satisfaction in the male sample. However, McPherson and Turnbull (2005) found that anthropometrical measures were associated with body image (dis)satisfaction in Scottish men. Cultural differences may explain these contradictory results. It seems that traditional Turkish cultural norms encouraging males, but not females, to have a higher BMI still have an effect. Results of the regression analyses also support the idea that physical characteristics are stronger predictors of body image (dis)satisfaction in females. The regression model, consisting of physical characteristics, explained a significant amount of variance in female body image satisfaction. However, the same model failed to explain the significant amount of variance in male body image satisfaction.

The results of this study have implications for public health educators. Education programs should be redesigned in order to prevent body image disturbances and related eating pathologies, especially in females. In future studies, examining the association between physical and anthropometric characteristics and body image satisfaction, and also taking into account the effect of culture, may lead to a better understanding of this association.

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