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BODY IMAGE SATISFACTION AND EATING ATTITUDES: ROLE OF SOCIODEMOGRAPHIC CHARACTERISTICS

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ABSTRACT

This study aimed to investigate the role of sociodemographic among body image satisfaction and eating attitudes in late adolescents. It was hypothesized that there would be a significant relationship among sociodemographic, body image satisfaction and eating attitudes while sociodemographic and body image satisfaction would likely predict eating attitudes. Through non-probability convenient sampling technique, a sample of (*N*= 150) late adolescents including (*n* = 62 boys and *n* = 88 girls), with an age range of (16-19) years, (*M* = 17.59, *SD* = 1.00) were recruited online through Google Forms. A self-constructed Sociodemographic Information Sheet, The Body Shape Questionnaire (Cooper et al., 1987) and Eating Attitude Test (Garneret al., 1998) were administered to collect data that was further analyzed through SPSS version 21. Results found a significant negative correlation in body image satisfaction and father's education with eating attitudes while body mass index (BMI) and eating attitudes showed a positive relationship. Also, BMI and body image satisfaction were positively predicted and father's education negatively predicted eating attitudes. Lastly, significant gender differences were found in body image satisfaction while obese participants exhibited a higher level of eating attitudes and body image satisfaction as compared to other groups. The findings have significant implications in the field of academia, research, clinical and counselling settings by creating awareness regarding body image satisfaction and eating attitudes that will eventually result in healthy eating patterns and well-being.

INTRODUCTION

It has also been observed that issues related to body image satisfaction are on a rise (Latiff et al., 2017). Though they affect individuals of all ages, several studies suggest that during adolescence, individuals become more conscious about their body shape and appearance and start paying more attention to the social standards of acceptable body image that among other things affect their eating patterns (Damiano et al., 2015). Similarly, Musaiger et al., (2016) reported a high prevalence of being overweight and obese in adolescents, which can also be attributed to the rapid changes in the socio-cultural context by increasing the risk of eating disorders (Latzer et al., 2014).

In recent years, the physical and psychological effects of poor body image have received a lot of attention in research (Paans et al., 2018; Ribeiro-Silva et al., 2018) and are found to be harmful causing physical and mental health based problems, including eating patterns and habits (Ganesan et al., 2018). But before going into a detailed overview of the research literature, it is pertinent to look into the theoretical justifications for the study variables that may either directly or indirectly be related to body image dissatisfaction and eating attitudes.

Theoretical Perspectives Underpinnings on Body Image Satisfaction and Eating Attitudes

One of the primary frameworks in which we can incorporate both body image and eating attitudes is the socio-cultural theory that argued for the influence of different social agents like a peer, social media and parents that play a significant role in conveying important messages related to physical appearance while demanding conformity to societal body ideals (Brown & Bobkowski, 2011).

Further, the feminist perspective on body image and eating concerns talks about the increased social success of women and its relationship with them paying more attention to their appearance to conform to the standards and expectations of a patriarchal society (Berry et al., 2021). Also, feminist theory talks about the objectification of women's bodies in the context of the male gaze (Fredrickson & Roberts, 1997).

Also, the self-discrepancy theory, the incongruity between the ideal self (what the society wants one to be) and the real self (what a person is) can lead to emotional and behavioural problems and argued that this failure can lead to body image concerns and eating pathology (Lavender et al., 2013).

Lastly, according to social identity theory, an individual's sense of personal identity results from their participation in social activities with social institutions in a normative manner, enabling them to develop the stereotypical characteristics made by society (Hogg, 2020).

Research Literature on Body Image Satisfaction and Eating Attitudes

It is significant to note that the behavioural manifestations about the body image dissatisfaction included those actions that the individual performs (Neagu, 2015) while the socio-cultural manifestations involved socio-cultural ideals, gender roles, socialization and social media that influence body dissatisfaction (Izydorczyk & Sitnik-Warchulska, 2018; Amaral & Ferreira, 2017). Body image is regarded as a multidimensional, subjective and dynamic concept that includes the perception of a person's thoughts and feelings regarding their body (Neagu, 2015). And a key point in maintaining this body image involves healthy eating attitudes.

Several studies have found that body dissatisfaction is linked with eating disorders and frequent dieting in adolescents (Peckmezian & Hay, 2017). Similarly, another study concluded that body image dissatisfaction resulted in having a significant and direct effect on binge eating's frequency (Mitchison et al., 2017). Also, Further, another study concluded that association among body dissatisfaction, subjective well-being, optimism and life satisfaction (Lemes et al., 2018).Taking into account middle-aged participants del Mar Bibiloni et al. (2017) found that women were more dissatisfied with being overweight than being underweight, while unemployed women were more concerned about their weight gain. Similarly, Prioreschi et al. (2017) reported a higher obesity rate in urban women who also showed a greater desire to be thinner than women from rural areas. Also, body image satisfaction had a negative relationship with disordered eating attitudes in urban women while a positive among rural women. This highlights the variation in body image trends across rural and urban women.

In a cross-cultural comparative study examining eating patterns and sense of coherence (SOC), a negative effect of SOC on restrained, emotional and external types of eating was found but only among Austrian men and women. While the negative effect of SOC was observed on external eating only in Japanese students (Kato et al., 2019). Also, Radwan et al. (2019) investigated body image and body mass index (BMI) to weight control practices in university students. Findings reported that most of the participants were dissatisfied with their bodies while a majority of women wanted to lose weight and preferred diet over-exercise. Also, most of the men wanted to gain weight and preferred exercise over diet. Similarly, Kumar (2016) also found significant gender differences in fitness and body dissatisfaction in married men and women.

Through the bio-psychosocial model, Rodgers et al. (2013) studied body image concerns and eating disorders in early adolescent girls and found a strong positive association between the study variables while also concluding a negative effect of the bio-psychosocial model on body image dissatisfaction and disordered eating. Similarly, Rudiger and Winstead (2013) researched body talk and its association with body image and attitudes of eating and concluded that the negative body talk was positively related to the investment related to appearance, distorted cognition

regarding body image and negatively related to body image dissatisfaction.

Moreover, a study investigated the impact of media on body image and reported (Khan et al., 2011) an overall negative effect of media on the individual's body image while women were found to experience more body image dissatisfaction than men (Khan et al., 2011). Also, Syed et al. (2018) studied the association among eating disorders, depression and body appearance and concluded that eating disorders (anorexia) are more present in university going, adolescent girls. Similarly, Farias et al. (2018) found that majority of older adults were dissatisfied with their body image, especially women.

In contrast to these findings, Bhatti and Ali (2018) studied gender differences in eating attitudes among university students and reported more men having disturbed eating attitudes than women students. Also, Saleh et al. (2018) found a positive association between body mass index and eating attitudes while another study found that healthy parental eating attitudes affect the eating patterns of preschoolers (Romanos-Nanclares et al., 2018). Moreover, Pace et al. (2018) reported that maternal achievement-oriented psychological control during early adolescence predicts negative eating attitudes during late adolescence. Hayes et al. (2018) argued that family-based multicomponent behavioural weight loss treatment (FBT) is an effective technique to treat childhood obesity and disorganized eating attitudes.

Also, another study found more disorganized eating attitudes among overweight and obese students (Alkazemi et al., 2018). Moreover, Costa et al. (2018) found disorganized eating attitudes contributing to a decline in quality of life in students. Further, Emery et al. (2021) reported that childhood maltreatment contributes to disordered eating attitudes in adulthood. A study has also highlighted that abnormal eating attitudes caused exercise addiction (Levit et al., 2018).

Personality traits have also been found significant predictors of body dissatisfaction as MacNeill et al. (2017) reported that high neuroticism and low conscientiousness in men while high neuroticism (only) in women predicted body dissatisfaction beyond the influence of body mass index. As theoretical perspectives have already highlighted the role of media study about body image dissatisfaction and unhealthy eating patterns, a study concluded that highly visual social media usage is quite popular among adolescents and is a contributing factor towards the development of body image concerns and poor psychological adjustment (Marengo et al., 2018). Similarly, another study that examined the effect of advertisements on popular websites revealed that the majority of them were cosmetics and beauty products, targeting adolescent girls (Tiggemann & Slater, 2014). Also, Lim and An (2018) found that social media exposure can induce appearance and weight-related teasing and stigmatization.

The Rationale of the Study

From the theoretical perspectives and a brief overview of the research scholarship involving eating attitudes and body image dissatisfaction, it seems quite natural to investigate the relationship between these two as it seems to hold a significant effect on each other. As per our best knowledge, this relationship has been studied in western as well as indigenous literature so far; therefore, it will be pertinent to develop empirical evidence on these constructs. Also, the present study would not only bring in the interrelationships of these psychological constructs but will highlight the association of significant sociodemographic variables as well that did not get significant attention in the research literature. Other than focusing exclusively on late adolescents, the present study would also bring in an indigenous understanding and empirical knowledge representing our socio-cultural context.

METHOD

Research Design and Sample

This cross-sectional correlational study recruited a sample of (N=150) late adolescents including (n = 62 boys and n = 88 girls), with an age range of (16-19) years, (M = 17.59, SD = 1.00) through non-probability convenient sampling technique. Only adolescents without any diagnosed physical or mental health-related issues were recruited, affiliated with various schools and colleges of Lahore city.

ASSESSMENT MEASURES

Self-constructed Sociodemographic Information Sheet

A self-constructed sociodemographic information sheet including age, gender, height, weight, education level, father's education and mother's education was administered to collect relevant sociodemographic information.

Body Shape Questionnaire (BSQ-16B)

The Body Shape Questionnaire (Cooper et al., 1987) was used to assess body image satisfaction. It's a 16-items, self-report measure that assesses one's concerns about body shape, specifically, the experience of 'feeling fat'.

Eating Attitude Test (EAT-26)

The Eating Attitude test (Garner & Grafinkel, 1982) was used to assess eating attitudes and is a 26-items, self-report measure.

Ethical Considerations

After obtaining permission from the authors of respective assessment measures, official approval was taken from the Institutional Board of Studies (BOS) to conduct this study. When the approval was received then data was collected online through Google Forms, where each initially read briefly about the criteria, nature, purpose and privacy policies of the study and only after agreeing to the terms, consented for participating voluntarily. After filling in basic demographic information, the participants then proceeded to complete the questionnaires of study variables. All the data was collected anonymously and kept confidential in line with the American Psychological Association (APA) guidelines.

RESULTS

Results were generated through SPSS version 21 by running descriptive analysis, correlation, hierarchal regression, t-test and one-way ANOVA. The Cronbach alpha reliability for body image satisfaction was (a=.95) while for eating attitude it was (a =.82), both of which were found to have high reliability.

Table 1 revealed sociodemographic characteristics of the study where BMI was calculated based on self-reported weights and heights provided by the participants.

Table 2 revealed a significant negative relationship of body image satisfaction with eating attitude (r = -.59**), as well as with body mass index (r = -.47**), while father's education level was also revealed to have a negative relationship with eating attitudes (r = -.16*). On the other hand, a positive relationship was found between body mass index and eating attitudes (r = .33**).

Table 3 shows the impact of BMI, father's education level and body image satisfaction on eating attitudes of adolescents through stepwise hierarchal regression analysis. In step 1, the R^2 value of .11 revealed that the BMI explained 11% variance in the eating attitudes with F (1, 148) = 17.61, p < .001. This shows that BMI positively predicted eating attitudes (β = .33, p < .001).

In step 2, the R^2 value .14 revealed that the BMI and father's education level explained 14% variance in the eating attitudes with F(2, 147) = 12.11, p < .001. This showed that BMI (β = .34, p < .001) positively predicted while father's education (β = -.18, p < .01) negatively predicted the eating attitudes. The ΔR^2 value of .04 revealed 4% chance in the variance of model 1 and model 2 with ΔF (1, 147) = 6.01, p < .05.

In step 3, the R^2 value .39 revealed that the BMI, father's education level and body image satisfaction explained 39% variance in the eating attitudes with F(3, 146) = 30.76, p < .001. This showed that BMI (β = .07, p >.05) did not predict eating attitudes while father's education (β = -.18, p < .01) negatively predicted and body image satisfaction (β = .56, p < .001) positively predicted the eating

attitudes. The ΔR^2 value of .25 revealed 25% chance in the variance of model 2 and model 3 with ΔF (1, 146) = 58.58, p < .001.

In step 4, the R^2 value .37 revealed that the father's education level and body image satisfaction explained 37% variance in the eating attitudes with $F(2, 147) = 45.59$, $p < .001$. This showed that father's education (β = -.18, p >.01) negatively predict while body image satisfaction (β = -.18, $p < .01$) negatively predicted and body image satisfaction (β = .59, $p < .001$) positively predicted the eating attitudes. The ΔR^2 value of .004 revealed .4% chance in the variance of model 3 and model 4 with ΔF (1, 146) = 1.05, p > .05.

Table 4 revealed gender differences of study variables through t-test and found that adolescent girls exhibited higher scores on body image satisfaction (M = 40.55, SD = 21.06) as compared to adolescent boys (M = 38.77, SD = 18.75). The value of Cohen's d was .09 (<.20) which indicated a small effect size. Further, there was not any difference in eating attitudes between adolescent boys and girls.

Table 5 showed a one-way ANOVA analysis for eating attitudes and body image satisfaction across levels of BMI. Results indicated significant mean differences across BMI groups on eating attitudes with F (5, 144) = 5.50, p <.001 and body image satisfaction with F (5, 144) = 10.72, p <.001. Findings revealed that BMI 4 (30-34.99) exhibited a higher level of eating attitudes as compared to other groups, with η^2 =.16 (<.50) which indicated a small effect size. Similarly, BMI 4 (30-34.99) also exhibited a higher level of body image satisfaction as compared to other groups, with η^2 =.27 (<.50) also indicating a small effect size.

Table 1: Sociodemographic Characteristics of Late Adolescents (N = 150)

Variables	n	%
Gender of participants		
Male	62	41.3
Female	88	58.7
Body Mass Index (BMI)		
13.000-18.999	49	32.7
19.000-24.999	63	42.0
25.000-29.999	24	16.0
30.000-34.999	10	6.7
35.000-39.999	2	1.3
40.000-44.999	2	1.3
Education of Fathers		
No formal education	10	6.7
Primary	8	5.3
Middle	4	2.7
Matriculation	27	18.0
Intermediate	25	16.7

Graduation	45	30.0
Masters	27	18.0
MS/M Phil	2	1.3
Ph.D.	2	1.3
Education of Mothers		
No formal education	3	2.0
Primary	2	1.3
Middle	13	8.7
Matriculation	20	13.3
Intermediate	35	23.3
Graduation	44	29.3
Masters	18	12.0

Note. BMI was calculated through the reported weights and heights of the participants.

Table 2: Correlation among Body Image Satisfaction, Eating Attitudes and Sociodemographic Characteristics (N=150)

Variables	**1**	**2**	**3**	**4**	**5**
Mother's Education	---	.49**	-.04	.02	.03
Father's Education		---	.08	.03	-.16*
Body Mass Index			---	-.47**	.33**
Body Image Satisfaction				---	-.59**
Eating Attitudes					---

Note. *p < .05, **p < .01.

Table 3

Hierarchal regression analysis predicting eating attitudes from body mass index, father's education and body image satisfaction (N=150)

Variable	***B***	**95% CI**		**SE *B***	**β**	**R^2**	**ΔR^2**
		LL	**UL**				
Step 1						.11	.11***
(Constant)	-.38	-6.99	6.23	3.35			
BMI	.61***	.33	.90	.15	.33***		

Step 2						.14	.04**
(Constant)	5.58	-2.50	13.67	4.09			
BMI	.64***	.36	.93	.14	.34***		
Father's Education	-1.21**	-2.19	-.24	.49	-.18**		
Step 3						.39	.25***
(Constant)	4.97	-1.89	11.83	3.47			

Table Continued

Variable	***B***	**95% CI**		**SE *B***	**β**	**R^2**	**ΔR^2**
		LL	**UL**				
BMI	.14	-.13	.42	.14	.07		
Father's Education	-1.18**	-2.01	-.35	.42	-.18**		
BIS	.29***	.26	.37	.04	.56***		
Step 4						.37	-.004
(Constant)	7.23**	1.93	12.52	2.68			
Father's Education	-1.15**	-1.97	-.32	.42	-.18**		
BIS	.31***	.24	.37	.03	.59***		

Note. BMI= Body mass index, BIS= Body image satisfaction. *p < .05, **p < .01, ***p < .001.

Table 4
T-test showing gender differences in body image satisfaction and eating attitudes (N=150)

	Boys		**Girls**				
Variables	***M***	***SD***	***M***	***SD***	***t*(148)**	***p***	**Cohen's *d***
Body Image Satisfaction	38.77	18.75	40.55	21.06	-.53	.59	.09
Eating Attitudes	13.24	8.60	13.25	11.46	-.005	.99	.0009

Table 5: Mean, standard deviation, one-way analysis of variance in eating attitudes and body image satisfaction across body mass index (BMI) groups (N=150)

	BMI 1		**BMI 2**		**BMI 3**		**BMI 4**		**BMI 5**		**BMI 6**		***F*(5, 144)**	**η^2**
Variables	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***		
Eating Attitudes	9.45	9.17	13.90	9.95	13.17	9.63	26.10	10.56	22.50	9.19	13	.00	5.50***	.16
Body Image Satisfaction	28.47	11.82	43.29	18.40	39.13	22.37	67.40	22.59	55	4.24	64	.00	10.72***	.27

Note. BMI 1= (13-18.99), BMI 2 (19-24.99), BMI 3 (25-29.99), BMI 4 (30-34.99), BMI 5 (35-39.99), BMI 6 (40-44.99). ***p < .001.

DISCUSSION

The current findings highlighted the fact that demographic variables do have an impact on the relationship between body image satisfaction and eating attitudes, while also reporting quite a few indigenous results that reaffirm the need for indigenous studies. Our findings showed a negative relationship between BMI and body image satisfaction as well as between eating attitudes and body image satisfaction, both of which are following the previous studies that generated similar results (Ganesan et al., 2018; Mitchison et al., 2016). Also, we concluded that both BMI and body image satisfaction positively predict eating attitudes that are also in congruence with several studies conducted on adult as well as adolescent populations (Paans et al., 2018; Mitchison et al., 2016). Moreover, our study also added to the research literature that a father's education negatively predicts eating attitudes. With a bit of deliberation, this sociodemographic finding can be attributed to our indigenous sociocultural context.

Current findings further indicated gender differences in body image satisfaction which is also per the results of studies by Latiff et al. (2017) and MacNeill et al. (2017). But, we did not find any significant gender differences for eating attitudes which seems like an indigenous difference with technologically advanced nations where several contributing factors including media usage and exposure to unhealthy body ideals vouching for disorganized eating patterns is quite common (Marengo et al., 2018).

Moreover, we already cited the finding of Bhatti and Ali (2018) that showed contrasting evidence of men instead of women having disordered eating attitudes that suggest the possibility of socio-cultural differences across study variables. Similarly, our finding can also be interpreted as an indigenous result.

Lastly, our study also found adolescents with obesity exhibiting higher levels of eating attitudes and body image satisfaction as compared to other groups. These results are also similar to another study that reported that overweight youth had a higher risk for indulging in disorganized eating attitudes (Latiff et al., 2017).
Limitations and Suggestions.

One of the major strengths of the present study is to bring out the indigenous aspects of body image satisfaction and eating patterns about a diverse sociodemographic sample of adolescents. But having said that, the current study also has quite a few limitations primarily the small sample size, collected from the city of Lahore only that limits the external validity of the findings. Also, due to COVID-19 restrictions, the data was collected online with complete reliance on self-report measures that may have affected the authenticity of participants' responses. Especially, for the calculation of BMI that was done by simply asking their weight and height. In future, with large and diverse sample size and by taking physical in-person measurements regarding weight and height, both of these issues can be addressed.

CONCLUSIONS

This study concluded that with a decline in body image satisfaction and father's education, adolescents would likely have problematic eating attitudes while the increase in BMI is associated with an increase in disorganized eating attitudes. Moreover, BMI, body image satisfaction and father's education were found to have an impact on eating attitudes in adolescents, with gender differences found only in body image satisfaction. Finally, it was also concluded that those adolescents with obesity would show more disordered eating attitudes as well as body image dissatisfaction.

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