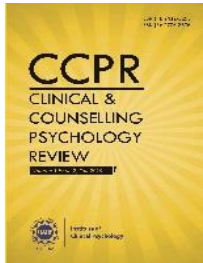


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Correlates of Eating Problems in University Students

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Abstract

The current study examined the relationship between sociocultural influences (family, peers, media), body image dissatisfaction (BE-Appearance, BE-Weight, BE-Attribution), and eating problems in university students. It was hypothesized that (a) sociocultural influences are likely to be positively correlated with eating problems and body image dissatisfaction, (b) body image dissatisfaction may have positive correlation with eating problems, (c) sociocultural influences and body image dissatisfaction predict eating problems, and (d) there may exist gender differences in sociocultural influences, body image dissatisfaction, and eating problems. A cross-sectional study was conducted with 181 participants (men = 91; women = 89) selected from a private university (Mage = 21.87 years, SD = 1.88) through convenient sampling. An online self-administered survey was undertaken with Sociocultural Attitudes towards Appearance Questionnaire (SATAQ-4), Body Esteem Scale for Adolescents and Adults (BESAA), and Eating Attitudes Test (EAT-26). The results indicated that sociocultural influences (family, peers, media) were positively correlated with eating problems and body image dissatisfaction (BE-Appearance, BE-Weight). Similarly, body image dissatisfaction (BE-Appearance, BE-Weight) was positively correlated with eating problems. Media, peer influence, and BE-Attribution positively predicted eating problems, while BE-Appearance negatively predicted eating problems. It was found that women had significantly more eating problems than men. This research has implications for prevention and intervention concerning media literacy programs, skills training, and psychoeducation.

Keywords: eating disorders, media, parental influence, peer pressure influence, body image, university students

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Introduction

Eating disorders or disturbed eating behaviors comprise severe dietary restriction, skipping meals, consuming diet pills and compulsive eating, (Hart, [2016](#)). The presence of these eating behavior can be referred by the term “eating problems”. They impact one’s physical, mental and psychosocial functioning and are linked with increased difficulties in relationships, mood disorders and cognitive dysfunction (Fairburn, [2008](#)).

Three sociocultural models have provided the theoretical background for this study, namely the Tripartite Influence Model (TIM), Dual-pathway Model (DPM) and Objectification Framework. The Tripartite Influence Model (Thompson et al., [1999](#)) suggests that family, peers and media are key players in encouraging body dissatisfaction and eating disturbances. These factors promote making unrealistic ideals of attractiveness through appearance-related feedback ultimately fostering body dissatisfaction via internalization (thin-ideal or muscular-ideal) and social comparison, ending in eating problems. Similarly, the Dual Pathway Model (Stice, [1994](#)) emphasizes that family, peers and media encourage body dissatisfaction in women, which ends in bulimia through dieting and negative affect. Lastly, the Objectification Framework (Fredrickson & Roberts, [1997](#)) holds that hyper-sexualized portrayals of women (nudity, catcalling, gazing, eve-teasing) results into self-objectification that leads to develop poor body image eliciting eating problems.

Mass media are the most powerful source of conventional beauty norms (Bandura, [2009](#)). In the current digital era, the social networking play vital role in shaping dysfunctional attitudes and behaviors. Time spent on social media positively predicts disordered eating (Santarossa & Woodruff, [2017](#)). Additionally, appearance-related peer pressure such as direct comments, dieting encouragement, teasing, or observing peers having appearance concerns, e.g. fat-talk and diet-talk among friends, normalizes appearance anxiety and shame (Thompson et al., [1999](#)). Peers can have a lasting impact on one’s eating attitudes. A study revealed that peers’ dieting predicted eating disturbances in men and women after ten years of influence (Keel et al., [2013](#)). Furthermore, appearance-related family pressure can be indirect (casually calling a sibling “fat”) (Johnson

et al., [2015](#)) or more direct (negative comments, teasing, fat-shaming the daughter, or efforts to prevent future weight gain (Levine et al., [1994](#)) that can lead to eating problems. A study showed that maternal influence (teasing, modeling, criticism) predicted 23% variance in disordered eating in daughters (Hart, [2016](#)).

Above discussed multi-faceted sociocultural pressures can lead to poor body image. Thompson et al. ([1999](#)) described three dimensions of body image as perceptual (perception about weight or size), cognitive-affective/attitudinal (thoughts and feelings about one's body) and behavioral (body-avoidance or body-checking behaviors). Any disturbance in the attitudinal dimension is called body image dissatisfaction and is the focus of the present study. Such dissatisfaction with one's body creates distress and promotes risky weight-control behaviors like cosmetic surgery, dieting, binge-eating, etc. to cope with body dissatisfaction (Vartanian, [2012](#)). A study on university students has shown that family and media pressures, BMI and body dissatisfaction were positively associated with disordered eating, while body dissatisfaction was also a strong predictor of disordered eating (Radwan et al., [2018](#)).

Rationale

Most of the researches on eating problems in Asia has been conducted in East and Southeast Asia like China, Hong Kong, Japan, Malaysia, and South Korea (Thomas et al., [2016](#)); little relevant research is done in Pakistan. Moreover, Pakistani literature on eating problems predominantly emphasizes prevalence rates (descriptive studies) and overlooks the sociocultural risk factors. Moreover, the overall literature primarily recruits adolescents and young adult women while underrepresenting college-age men. In light of these gaps, the present study aims to investigate the relationship between sociocultural influences, body image dissatisfaction and eating problems in men and women and makes an indigenous contribution to the literature. Pakistani psychologists can devise effective prevention and intervention programs for eating problems by specifically targeting family, peers and media. This study will also help

in spreading awareness about the growing number of eating disorders and their etiology in the Pakistani context.

Objectives

- To investigate the relationship between sociocultural influences, body image dissatisfaction and eating problems in university students.
- To explore the predictive role of sociocultural influences and body image dissatisfaction in eating problems in university students
- To find out gender difference in sociocultural influences, body image dissatisfaction and eating problems in university students.

Hypotheses

H1: Sociocultural influences (family, peers, media) would be positively correlated with eating problems and body image dissatisfaction; body image dissatisfaction would be positively correlated with eating problems in university students.

H2: Sociocultural influences (family, peers, media) and body image dissatisfaction (BE-Appearance, BE-Weight, BE-Attribution) would positively predict eating problems in university students.

H3: Women score high in sociocultural influences (family, peers, media), body image dissatisfaction (BE-Appearance, BE-Weight, BE-Attribution) and eating problems as compared to the men.

Method

Research Design

The current study employed a quantitative, correlational research design.

Sample

The G-power formula was used to calculate the sample size. Convenience sampling was undertaken to select one hundred and eighty-one participants (N = 181). Ninety-two men (n = 92) and eighty-nine women (n = 89), 18 – 25 years of age were recruited from the University of Management and Technology (UMT), Lahore. Married students,

students studying privately and those with any kind of intellectual or physical disability were excluded.

Operational Definitions

Sociocultural Influences

According to Schaefer et al. (2015), individuals are pressured by powerful social agents (i.e., peers, family, and the media) to adhere to culturally idealized appearance ideals, emphasizing thinness for women and muscularity for men.

Body Image Dissatisfaction

In the current study, body image dissatisfaction was measured through the Body-Esteem Scale for Adolescents and Adults (BESAA). Body-esteem is defined as self-evaluations of one's body or appearance (Mendelson et al., 2001). High scores on BESAA indicate higher satisfaction with one's body. Hence, body image dissatisfaction was measured by lower BESAA scores.

Eating Problems

Eating problems involve weight and shape concerns and extreme weight-control behaviors like excessive dieting, binge-eating, self-induced vomiting, laxative abuse and over-exercising (Garner et al., 1982).

Assessment Measures

Demographic Information Sheet

A self-constructed questionnaire was administered that included items on their age, gender, marital status, weight, height, ideal weight, education, working status, household monthly income and access to mass media.

Social Attitudes Towards Appearance Questionnaire (SATAQ-4)

Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4) (Schaefer et al., 2015) is a 22-item self-report scale with a 5-point Likert-type scale from 1 (definitely disagree) to 5 (definitely agree). It has five subscales, out of which three "Pressures" subscales were used, i.e. Pressures: Family (items 11–14), Media (items 19-22) and Peers

(items 15–18). The internal consistency ranges between $\alpha = .82$ to $\alpha = .95$ for women, and between $\alpha = .75$ to $\alpha = .93$ for men.

Body-Esteem Scale for Adults and Adolescents (BESAA)

Body-esteem Scale for Adolescents and Adults (BESAA) (Mendelson et al., [2001](#)) is a 30-item self-report questionnaire with a 5-point Likert-type scale from 0 (never) to 4 (always). It has 3 subscales: BE–Appearance (10 items; $\alpha = .92$), BE–Weight (8 items; $\alpha = .94$) and BE–Attribution (5 items; $\alpha = .81$).

Eating Attitude Test (EAT-26)

Eating Attitudes Test-26 (EAT-26) (Garner et al., [1982](#)) is a 26-item self-report questionnaire with a 6-point Likert-type scale ranging from “always” to “never.” It has 3 subscales: Dieting, Bulimia and Food preoccupation and Oral Control with total scores ranging from 0 to 78 with a reliability coefficient of $\alpha = .86$ (Sanlier et al., [2017](#)).

Procedure

After taking formal permission from the authors of the instruments and the respective authorities in the university, a sample of students was conveniently recruited. A pilot study was conducted with 12 participants ($n = 6$ men; $n = 6$ women) via online Google Forms questionnaires. Each participant was sent a hyperlink of the assessment measures through WhatsApp. Participants were informed about the generic purpose of the study (not actual), i.e. testing human behavior. They were reassured about confidentiality (identity and data), their right to leave and that their data will only be used for research. Then, informed consent was taken and online forms were filled out. The data were transferred to Statistical Package for Social Sciences (SPSS) and reliability analyses were conducted. After ensuring good reliability, data for the actual study were collected from new participants through the same procedure, and the required analyses were run.

Ethical Considerations

Formal permissions to conduct the study were taken from the thesis supervisor, the Department of Applied Psychology, UMT and the authors

of the instruments before conducting the research. Participants were informed about the nature of the research, ensured their confidentiality, and withdrawal rights, and were selected voluntarily.

Results

Pearson Product Moment Correlation was conducted to assess the relationship between sociocultural influences, body image dissatisfaction and eating problems. Hierarchical multiple regression was conducted to assess the predictive role of sociocultural influences and body image dissatisfaction in eating problems. Independent sample *t*-test was run to assess gender differences in the three variables.

Table 1

Pearson Product Moment Correlation among Study Variables (N=181)

Variable	1	2	3	4	5	6	7
1. Family Pressure	-	.55***	.44***	-.36***	-.43***	-.10	.37***
2. Peer Pressure	-	-	.51***	-.24**	-.31***	-.00	.40***
3. Media Pressure	-	-	-	-.44***	-.48***	.04	.39***
4. BE-Appearance	-	-	-	-	.75***	.41***	-.46***
5. BE-Weight	-	-	-	-	-	.37***	-.44***
6. BE-Attribution	-	-	-	-	-	-	-.04
7. Eating problems	-	-	-	-	-	-	-

Note. ** $p < .01$, *** $p < .001$

Table 1 shows that sociocultural influences (family, peer, media) were positively correlated with eating problems and negatively correlated with BE-Appearance and BE-Weight, while BE-Appearance and BE-Weight were negatively correlated with eating problems. Therefore, H1 was supported, i.e. higher sociocultural pressures were likely to increase eating problems and reduce body-esteem (increasing body dissatisfaction), and reduced body-esteem (i.e. increased body dissatisfaction) likely increased eating problems.

Table 2

Hierarchical Regression Analysis for Predictors of Eating Problems (N = 181)

Variable	B	95% CI		SE	β	R ²	ΔR^2
		LL	UL				
Step 1						.09	.09***
Constant	.57	-.24	1.39	.41			
Age	-.02	-.06	.01	.02	-.10		
BMI	.03***	.02	.05	.01	.30***		
Step 2						.23	.14***
Constant	.18	-.59	.96	.39			
Age	-.01	-.05	.02	.02	-.05		
BMI	.01	-.01	.03	.01	.09		
Family	.07	-.01	.15	.04	.14		
Peer	.08*	.01	.16	.04	.18*		
Media	.08*	.02	.14	.03	.20*		
Step 3						.34	.10***
Constant	.85*	.06	1.63	.40			
Age	-.01	-.04	.02	.02	-.04		
BMI	.01	-.01	.02	.01	.06		
Family	.03	-.05	.11	.04	.06		
Peer	.10*	.02	.17	.04	.21*		
Media	.01	-.06	.07	.03	.02		
BE-Appearance	-.19**	-.30	-.07	.06	-.32**		
BE-Weight	-.07	-.17	.04	.05	-.13		
BE-Attribution	.11*	.01	.21	.05	.16*		

Note. CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit

* $p < .05$, ** $p < .01$, *** $p < .001$

As shown in Table 2, a three-step hierarchical multiple regression was conducted with eating problems as the dependent variable. In step 1, age and BMI were entered. The model was statistically significant, $F(2,178) = 9.23$, $p < .001$ and accounted for 9% of the variance in eating problems, while BMI was a positive predictor of eating problems. In step 2, family, peer and media pressure were entered. The model was statistically significant, $F(3,175) = 10.67$, $p < .001$ and accounted for an additional 14% of the variance in eating problems, while peer and media were positive predictors of eating problems. In step 3, BE-Appearance, BE-Weight and BE-Attribution were entered. The model was statistically significant, $F(3,172) = 8.83$, $p < .001$ and accounted for an additional 10% of the variance in eating problems. BE-Attribution was a positive predictor, while BE-Appearance was a negative predictor of eating problems. Together, the eight variables accounted for 34% of the variance in eating problems.

Table 3

Gender Differences in Sociocultural Influences Body Image Dissatisfaction and Eating Problems (N = 181)

Variables	Women		Men		<i>t</i> (179)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Sociocultural Influences									
Family	2.64	1.04	2.82	.82	-1.27	.20	-.45	.10	0.19
Peer	2.36	.98	2.58	1.01	-1.53	.13	-.52	.06	0.23
Media	2.97	1.27	2.85	1.05	.70	.49	-.22	.46	0.10
Body Image Dissatisfaction									
BE-Appearance	2.55	.87	2.66	.71	-.94	.35	-.34	.12	0.13
BE-Weight	2.23	1.02	2.38	.79	-1.06	.29	-.41	.12	0.15
BE-Attribution	2.24	.62	2.25	.71	-.00	.99	-.20	.20	0.66
Eating Problems	.83	.46	.69	.46	2.09	.04	.00	.28	0.31

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Table 3 indicates that women had significantly more eating problems than men. However, no significant gender differences were found in

sociocultural influences and body image dissatisfaction in university students.

Discussion

As per the first hypothesis, sociocultural influences and eating problems were positively correlated (see Table 1). Family influence was positively correlated with eating problems. It was consistent with the previous study by Kluck (2010). Appearance criticism by family causes distress and low self-esteem in the individuals (Keery et al., 2005) resulting into disturbed eating as a coping mechanism (Naeimi et al., 2016). Peer influence was also positively correlated with eating problems in the current study and was in line with a previous cross-sectional (Marcos et al., 2013) and longitudinal studies (Keel et al., 2013). Possibly, participants learn disordered eating from their peers (as a reference group) (Zalta & Keel, 2006) or they select and socialize with peers having similar body weight/shape, concerns, and dieting behaviors (Keel & Forney, 2013). In the current research, media influence was positively correlated with eating and is consistent with Santarossa and Woodruff (2017). Participants may be affected by other factors (e.g. low self-esteem, salience of appearance, perfectionism, thin-ideal internalization) predisposing them to high media use, social comparison and poor body image, and eventually eating problems (Perloff, 2014).

Moreover, sociocultural influences were positively correlated with body image dissatisfaction (see Table 1). Family influence was negatively correlated with BE-Appearance and BE-Weight, meaning that increased family influence likely reduced body satisfaction (or increase body dissatisfaction). These findings were consistent with Abraczinskas et al. (2012). As per the self-objectification framework (Fredrickson & Roberts, 1997), parental pressure may foster anxiety, shame, self-consciousness and eventually, body dissatisfaction (Calogero et al., 2009). Similarly, peer influence was negatively correlated with BE-Appearance and BE-Weight, meaning that increased peer influence reduced body satisfaction (or increased body dissatisfaction) consistent with Rodgers et al. (2011). Plausibly, in-group norms influenced participants' body image attitudes, as per the social identity framework (Tajfel & Turner, 1979). Media influence was negatively correlated with BE-Appearance and BE-Weight,

i.e. increased media influence likely reduced body satisfaction (or increased body dissatisfaction), consistent with Santarosso and Woodruff (2017). As per the self-objectification framework (Fredrickson & Roberts, 1997), i.e. hyper-sexualization in media may have eventually fostered poor body image.

Furthermore, body dissatisfaction was positively correlated with eating problems (see Table 1). Our finding, BE-Appearance and BE-Weight negatively correlated with eating problems, meaning that reduced body satisfaction (or increased body dissatisfaction) increased eating problems was supported by the research done by Radwan et al. (2018). Participants with body image distress had certain vulnerability factors (negative emotions, low self-esteem, high self-objectification) that lead them to cope through disordered eating (Dakanalis et al., 2016).

As per the second hypothesis, sociocultural influences and body image dissatisfaction predicted eating problems (see Table 2). Peer and media influences positively predicted eating problems, consistent with Rodgers et al. (2011) and Santarossa and Woodruff (2017), respectively. Additionally, BE-Appearance negatively and BE-Attribution positively predicted eating problems, consistent with Sridachati et al. (2011).

As per the third hypothesis, Table 3 shows that no gender differences were found for family (consistent with Radwan et al. 2018), peer pressures (consistent with Al-sheyab et al. 2018), or media. Maybe, the sample was not sufficient to establish significant differences, or perhaps, Pakistani men have started to face appearance pressures equivalent to women in today's appearance-oriented culture. Likewise, no gender difference was found for body image dissatisfaction, consistent with Mattillion (2019), which might be attributed to the limited sample.

Interestingly, women showed more eating problems than men, consistent with Saleem et al. (2014) but inconsistent with Radwan et al. (2018). Possibly, women had higher perfectionism, negative emotions, thin-ideal internalization (Nigar & Naqvi, 2019), lower self-esteem (Naeimi et al., 2016) and higher self-objectification (Dakanalis et al., 2016) predisposing them to eating problems. Men could've had higher eating self-efficacy and may have hesitated to report eating problems (being "female" issues).

Additional analysis suggested that BMI was positively correlated with eating problems, consistent with Abraczinskas et al. (2012). Arguably, high BMI participants faced higher social pressures to lose weight, risking disordered eating.

Limitations and Suggestions

- As it was a cross-sectional study; no causal inferences can be made. Longitudinal and experimental studies are needed to determine the direction and long-term impact of sociocultural pressures.
- Participants were primarily undergraduates from the same university. Future studies should incorporate government and private universities across Pakistan with undergraduates, post-graduates and doctoral students to improve generalizability.
- Participants' residence status (i.e. hostelites vs. day scholars) was not assessed, which may be pertinent in family's influence. Future studies should consider this categorization.

Future Implications

- Media literacy interventions are needed for youth to promote mindful media consumption and to empower them against unrealistic beauty standards.
- Youth should be taught emotion-regulation, eating self-efficacy, critical thinking, self-esteem and ways to curb maladaptive perfectionism and self-objectification.
- Parents need to be psycho-educated on the impact of their words and behaviors on young adults' mental health.
- Social media awareness campaigns can be started against diet culture and body-shaming.

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