

Rejection Sensitivity, Shyness and Body Mass Index: Determinants of Self-worth among Obese Adolescents

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Abstract

Background: Research has established the negative impacts of obesity upon the adolescents especially in the form of peer rejection and bullying behaviors. Shyness is a natural response of obese adolescents which adversely affects their self-worth.

Objectives: To observe the relationship of obesity with rejection sensitivity, shyness and self-worth of obese adolescents and to explore the differences of rejection sensitivity, shyness and self-worth among obese and non-obese adolescents.

Study design, settings and duration: This cross-sectional study was carried out in private schools of Lahore from August 2013 to January 2014.

Subjects and Methods: In this study, both boys and girls were taken as participants and a sample of 200 adolescents (obese = 100, non-obese = 100) was recruited from private schools. Demographic information form, Rejection sensitivity scale, Shyness scale and Contingencies of self-worth scale were used for data collection. Correlation and regression analyses were used to analyze the data

Results: Obesity was significantly associated with rejection-sensitivity and shyness in obese adolescents and had negative relationship with self-worth. Obese boys scored high on obesity and self-worth as compared to obese girls, whereas, obese girls scored high on feelings of rejection sensitivity and shyness than obese boys. Similarly obese adolescents scored high on rejection sensitivity and shyness than non-obese; however non-obese adolescents scored high on self-worth than obese adolescents.

Conclusion: Obese adolescent experience more rejection sensitivity and shyness while had less self-worth as compared to non-obese adolescents of their age.

Policy message: Public awareness may be increased regarding the problems, obese adolescents face in the society. They should be accepted, and rewarded for their positive behaviors; especially their weight reduction efforts should be appreciated by the society. Penalizing approaches by their parents, teachers or other family members targeting to their body shape should be avoided.

Key words: Rejection sensitivity, shyness, body mass index (BMI), self-worth, obesity.

Introduction

A great threat to public health, obesity calls for attention of health care professionals and researchers due to second major reason of preventable deaths in United States¹. Obesity is the most widespread nutritional disorder in developed countries which is related to greater mortality and morbidity of cardiovascular diseases². A huge body of research demonstrates the deep rooted concerns over the harmful health consequences associated with increased body

weight and is associated with high mortality rate due to multiple reasons³.

The yearning to be socially accepted and stay away from social rejection is widely attributed as a central human incentive. Adolescents with obesity face discrimination and unfairness in many fields of their lives, and it has been understood that ultimately their psychological well-being is compromised⁴. Peers play a significant role in the psychological development of a child and one of the major problems confronted by obese children is the shift of peer rejection from social acceptance⁴.

Individuals are different in terms of their perception of social rejection. Some accept it by maintaining their psychological equilibrium but mostly they become anxious with the feeling of socially rejected⁵. Social rejection sensitivity has long term

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consequences on the physical and psychological health of the child. Rejection sensitivity has been associated with loneliness and depression across development⁶.

A fundamental outcome of social rejection appears in the form of anxiety to interact with other members of society which ultimately leads to shyness and low self-image. It is observed from prospective data on obese children that they suffer more stress, depression and low self-worth as compared to normal weight children. Among obese children, there is a degree of nervousness, inhibition, and self-consciousness in their social interactions⁷. The anxiety experienced by an individual due to social events and inhibits to appear before others is called shyness⁸. It has been observed that obese adolescents experience higher lifetime prevalence of social interaction, anxiety and shyness as compared to non-obese controls⁹. Obese adolescents avoid interacting with their mates and are resistant to form social relations due to fear of criticism¹⁰.

There is research evidence that obese adolescents are likely to suffer from negative or decreased self-worth and self-image, increased anxiety, sad affect and depression¹¹. The findings also indicate that adolescents experiencing low self-worth also suffer high level of sadness, nervousness and loneliness and are at a greater risk of smoking and alcohol consumption habits¹².

Gender is considered an important variable in relation to psychological health of obese adolescents. Men's self-esteem is found to be higher than women particularly during adolescence¹³. It is reported that women are more worried about the shape of their bodies and body image as compared to men¹⁴. So if they suffer from obesity, their psychological health is also affected badly and they are more stigmatized than obese men. The significant difference of rejection and shyness appears to be more noticeable in girls than boys¹⁵.

Research evidence supports the relationship of obesity with physical health problems like hypertension in Pakistan¹⁶. Psychological aspects of obesity have always been condoned by researchers. If proper attention is given in identifying the psychological outcomes of obesity, it will help in understanding the mental health of obese adolescents. Obesity may be one of the many reasons due to which adolescents lose their self-worth and start feeling shy to perform any task in front of others. Adolescence is a highly sensitive stage of life and many investigations have been conducted worldwide to ensure the psychological health of adolescents but no research focusing on rejection sensitivity, shyness and self-worth of obese adolescents has been conducted before in Pakistan. The current research is an endeavor to investigate the negative impacts of peer rejection sensitivity which leads to shyness in the overall personality of obese children and the effect of rejection sensitivity and shyness on the self-worth of obese adolescents.

Subjects and Methods

This was a cross-sectional study and the purposive sampling technique was used. Sample consisted of 200 adolescents including 100 obese adolescents (boys = 50, girls = 50) and 100 non obese (boys = 50, girls = 50) of secondary classes adolescents who were enrolled from well known private English medium schools.

A total 10 schools of a famous chain of private schools were selected randomly. Only one school system was included to control the socio-economic status of the participants. Five were girl's schools and 5 were boy's schools. Inclusion criteria settled for participants was (a) that they should fulfill the BMI criteria of obesity as described by the World Health organization (WHO) i.e. BMI ranged from 25 through 29.9, or a waist limit more than 94 cm for boys and 80 cm for girls and (b) age ranged between 14 to 17 years.

After taking permission from administrative authorities for data collection, different class rooms were visited. A trained nurse calculated the BMI with the help of weighing machine and height measuring scale¹⁷. Before administration, the participants were told about the rationale of the study and their informed consent was obtained and those agreed to participate in the research, were given questionnaires to fill. Data was collected individually from each participant using a questionnaire.

Rejection was assessed by Rejection Sensitivity Questionnaire (RSQ) by Downey, Lebolt, and Freitas (1998) having 8 items¹⁸. Original English version of the test was used for data collection because participants were comfortable with English language. Participants were asked to indicate the likelihood that the other person would respond in an accepting manner (e.g. "I would expect that he/she would willingly agree to help me out") on a 6-point Likert scale, from 1 (very unlikely) to 6 (very likely). An overall rejection sensitivity score was calculated by summing the expectation of rejection by concern ratings of individual for each situation and then dividing by the total number of situations. Highest scores on each item indicate the highest rejection sensitivity.

Shyness Questionnaire (ShyQ) was used to measure shyness which is 35 items scale with highest scores indicates more shyness¹⁹.

Self-esteem was measured using Contingencies of Self-Worth Scale by Crocker (2003) having 35 item measure which assesses seven areas of self-esteem. The subscales include others' approval, physical appearance, competition with others, academic competence, family love and support, virtuousness, and God's love²⁰. It is a 7 point scale ranging from (1) not at all to (7) very often. Highest scores indicate high self-worth.

Correlation analysis was carried out to explore the relationship of social rejection with shyness, obesity and self-worth in obese adolescents. Regression analysis was run to find out the predictors for self-worth among obese adolescents. Rejection sensitivity, shyness and

obesity were considered as negative predictors of self-worth among obese adolescents. Independent samples t test was run to find the difference of rejection sensitivity, shyness, BMI and self-worth between obese boys and girls.

Results

Rejection sensitivity had significant positive correlation with shyness ($r = 0.50$), whereas, it had significant negative correlation with self-worth ($r = -0.76$) and obesity ($r = -0.56$) showing that rejection sensitivity was closely related with shyness. Similarly, shyness was negatively correlated with self-worth ($r = -0.19$) but positively correlated with obesity ($r = 0.82$) (Table-1).

Table 1: Relationship of self-worth with social rejection, shyness and obesity in obese adolescents.

Variables	M	SD	α	1	2	3	4
Rejection sensitivity	252.06	21.34	.84	-	.50**	-.76**	.56**
Shyness	168.47	7.55	.82		-	-.19**	.82**
Self-worth	130.39	25.33	.66			-	-.33**
Obesity	32.95	2.09	-				-

Note: M = mean; SD = standard deviation; ** $p < .01$, α = reliability coefficient.

Regression coefficients of shyness ($B = -1.00$) and social rejection ($B = -1.01$) were statistically significant at $\alpha = 0.01$ and 0.001 indicating that social rejection, shyness and obesity were significantly and negatively predicting self-worth among obese adolescents (Table-2).

Table 3: Difference of rejection sensitivity, shyness, obesity and self-worth between obese boys and obese girls.

Variables	Obese boys (n = 50)		Obese girls (n = 50)		t (98)	Cohen's d	C.I 95%	
	M	SD	M	SD			Lower	Upper
Social rejection	202.35	11.22	263.00	13.48	-24.73***	4.89	-66.26	-56.42
Shyness	155.80	15.74	169.80	20.06	-6.13***	1.22	-18.52	-09.47
Obesity	33.32	2.68	28.78	2.81	8.25	1.67	03.44	5.63
Self-worth	147.00	25.63	81.86	14.43	15.70***	3.61	56.91	73.36

Note: *** $p < .001$

Table 4: Difference of rejection sensitivity, shyness, obesity and self-worth between obese and non-obese participants.

Variables	Obese adolescents (n = 100)		Non-obese adolescents (n = 100)		t (198)	Cohen's d	C.I 95%	
	M	SD	M	SD			Lower	Upper
Social rejection	280.27	25.32	156.71	23.51	-32.93***	4.91	-71.31	-56.27
Shyness	172.48	17.83	126.41	21.18	-7.07***	1.43	-20.23	-10.38
Obesity	31.92	3.27	18.66	1.02	8.09***	1.28	10.14	25.27
Self-worth	97.51	25.63	151.23	22.42	14.62***	2.22	51.67	75.81

Note: *** $p < .001$

Table 2: Rejection sensitivity, shyness and obesity predicting self-worth in obese adolescents.

Variables	B	SE	t	β
Constant	248.05	30.71	8.07	-.12***
Rejection sensitivity	-1.01	.087	-11.63	-.87***
Shyness	-1.00	.315	-3.18	-.34**
Obesity	-1.77	1.60	-1.10	-.272

Note: $R^2 = .79$, β = standardized beta coefficient, SE = standard error.

Results given in Table-3 shows the t values of rejection sensitivity, shyness and self-worth which were statistically significant at $\alpha = 0.001$ and all variables were significantly affected by gender. Mean values showed that girls' rejection sensitivity and shyness were significantly greater than boys and boys' self-worth was significantly higher than girls.

Table-4 shows that there was statistically significant difference of rejection sensitivity, shyness, obesity and self-worth between obese and non-obese participants at $\alpha = 0.001$. Results also showed that all rejection sensitivity, shyness, obese and self-worth were significantly affected by being obese or non-obese population. Mean values show that obese participants are significantly higher to non-obese participants on rejection sensitivity, shyness, obesity and self-worth.

Discussion

The present study has sought the relationship of rejection sensitivity, shyness and obesity with self-worth among obese adolescents. The results indicated the statistically significant relationship of rejection sensitivity, shyness and obesity with self-worth among obese adolescents.

As expected, rejection sensitivity appeared as a significant and negatively correlate and predictor of self-worth. Findings suggest that obese adolescents with more rejection sensitivity have less self-worth. Regression analysis brings to light a great amount of variance i.e. 79% was accounted for by rejection sensitivity in self-worth which means that rejection sensitivity contributed 79% in the reduction of self-worth in a person. This finding is alarming and invites the attention of parents, school teachers and researchers to enhance efforts for the physical activity of the adolescents. The present findings coincide with the studies conducted in Europe and America which concluded that shyness is a negative predictor of self-worth. There is research evidence that relationship with peer group is a key factor to the healthy socialization and psychological growth of adolescents⁴. Peer group starts to ignore the obese adolescents and make fun of their physique. Social rejection has long term effects upon the psychological health of the adolescents²¹. It is observed that obese adolescents often face peer victimization, discrimination and negative stereo typing behaviors of their peers. This leads to lowering the self-worth of the obese adolescents⁴. The social rejection of peer group might be explained that they get satisfaction from their physique while making fun or teasing the obese. Mostly they call names, victimize and reject obese adolescents to satisfy their own aggressive impulses²¹.

Regression analysis revealed that shyness predict significantly but negatively self-worth in obese children. If there is shyness in the personality of an individual he/she cannot attain high self-worth. The present findings coincide with the findings of the previous studies that negative relationship exists between shyness and self worth¹¹. Obese adolescents experience more self-consciousness, nervousness and are impervious to take initiatives. This feeling of self-consciousness anxiety inculcate in them high level of shyness and insecurity⁹, which leads to depression and low self-concept among obese adolescents⁷. Thus it is concluded that shyness works dangerously in deteriorating their self-worth.

The next main finding of the current research is significant negative relationship of BMI with self-worth. Large body mass index is a source of fun for peers and they repeatedly make mockery of their body shape. Obesity has been reported as a great factor in reducing self-esteem among adolescents. An insightful conclusion was drawn by an empirical research that obese adolescents psychologically experience social rejection sensitivity which lowers their self-worth²¹. Furthermore, the difference of gender on self-rejection, shyness, BMI and self-worth remained significant in the existing study. The scores of girls on rejection sensitivity were significantly higher than boys. The finding corroborates with previous studies reporting the effect of gender on rejection sensitivity²². The difference between the self-

worth of boys and girls can be explained to the social context of Pakistan. Boys are encouraged to be self-confident, dominant and self-dependent. Such social expectations may contribute to the development of higher level of self-worth among boys whereas; girls are discouraged to become dominant and self-confident in our country. Therefore, it may be concluded that they have obtained more score on shyness as compared to boys.

The existing research has also shown the difference of rejection-sensitivity, shyness, BMI and self-worth between obese and non-obese adolescents. The results can be interpreted in the context of their body shape. As mentioned above that obese adolescents face the ridiculous remarks from their peers and family members which lowers their self-worth and enhances their rejection sensitivity and shyness. Therefore, it is inferred that body shape matters a lot in the psychological health and overall personality composition of the individual.

The existing research was limited to the sample size, which yielded only 200 respondents. A large sample could have provided more valid results. Data was obtained from only one school system and city which limited our research's external validity.

The present study has provided the repercussions of social rejection upon personality and suggests the society for changing attitude towards obese adults.

Conflict of interest: None declared.

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