

ORIGINAL ARTICLE

Body related Shame, Guilt, Dissatisfaction and Depression among University Students with ObesityAQSA NAVEED¹, UMME RUBAB KAZMI², TUSAMMA HAQ³, MARYAM BAWER⁴¹Department of Applied Psychology, Lahore College for Women University, Lahore, Pakistan²Assistant Professor of Applied Psychology, Lahore College for Women University, Lahore, Pakistan³Department of Applied Psychology, Lahore College for Women University, Lahore, Pakistan⁴Lecturer, Department of Applied Psychology, Lahore College for Women University, Lahore, Pakistan.Correspondence to Dr. Umm E Rubab Kazmi, Email: kazmi_rubab@yahoo.com, ORCID #. 0000-0002-2249-1977**ABSTRACT****Aim:** To explore the relationship among body related shame, guilt, dissatisfaction and depression among university students with obesity.**Study design:** Correlation research design was used.**Place and duration:** The sample was selected from four different public and private sector universities of Lahore, Pakistan and the research was conducted from February-June 2022.**Methodology:** Purposive sampling strategy was used to select sample (n=200). The Weight related Body Shame and Guilt Scale, Depression Scale from DASS-21 and Body Satisfaction Scale were administered on the participants along with demographic sheet.**Results:** Weight-related body shame has significant positive correlation with guilt (.72**), depression (.77**) and BMI (.72**). Furthermore, weight-related body shame ($\beta=.34$), weight-related body guilt ($\beta=.28$), general dissatisfaction ($\beta=.81$), head dissatisfaction ($\beta=.30$), and body dissatisfaction ($\beta=.27$) were found to be significant positive predictors of depression among university students with obesity. Female students with obesity had more body-related shame, general dissatisfaction, head and body dissatisfaction.**Conclusion:** This research is helpful to understand the role of body related shame and guilt in causing depression among students with obesity.**Keywords:** Obesity, body shame, guilt, dissatisfaction, depression**INTRODUCTION**

Obesity is one of the major public health concern as its causing serious health related and psychological issues among individuals¹. In Pakistan, 58.1% individuals are obese, with 43.9% being overweight². Obesity in young adults is primarily caused by overeating and lack of physical activity³. Higher BMI is found to be associated with internalised weight stigma and increased body-related shame⁴. Students who believe they are excessively obese feel more shame and regret about their bodies than those who believe they are not obese^{5,6}. Body-shame refers to feelings of shame about one's body or any portion of it⁷. Body-shaming is more prevalent in people who have suffered trauma, depression, self-harm and low self-esteem, despair and dysphoria^{8,9}.

Many people experience shame as a result of the disparity between their own standards and the behaviour that resulted in the guilt that leads to body dissatisfaction^{8,10}. Body-related guilt is an irrational thought defined by repentance and regret in reaction to sensibly unwanted bodily activity. Chronic pain, impaired function, stroke, muscular tension, insomnia and exhaustion are all symptoms related to guilt¹¹. A higher sense of guilt is linked to a considerable increase in cortisol levels in people who were exposed to social-evaluative settings¹². Higher body-related shame and guilt is associated with higher pathological perfectionism¹³. Women with a higher BMI exhibit more body dissatisfaction and reported higher levels of emotional discomfort than men^{14,15}.

When individuals have negative ideas and feelings about their bodies, they develop physical dissatisfaction¹⁶. Females are more likely than males to be dissatisfied with their bodies, but negative body images can affect people of all genders¹⁷. Students who are obese and self-conscious about their bodies are less likely to seek or maintain friendships, which increases their risk of depressive symptoms¹⁸. Depression is a mental disorder which includes emotions of sadness and lack of interest. It differs from the typical mood fluctuations that people experience on a daily basis¹⁹. Obesity is linked to depression, particularly in women as well as trauma history, poor nutrition, unresolved grief or loss, and

personality traits are all the causes of depression^{20,21}. Regardless of the weight category, half of the population is at risk to develop disordered eating habits, and three-quarters of the population disliked their body shape²².

Rationale of the study: Literature reveals that students feel shame, dissatisfaction and guilt due to their weight in front of others, and they usually try to hide their feelings which cause mental health problems ranging from social isolation to eating disorders and depression. These variables were chosen to check the role of body-shame, guilt and dissatisfaction predicts depression among university students with obesity.

Hypotheses

- There would be a positive relationship among body-related shame, guilt, dissatisfaction and depression among university students with obesity.
- Body-related shame, guilt and dissatisfaction would likely to predict depression in university students with obesity.
- Female students have higher body-related shame, guilt, dissatisfaction and depression as compared to male.

MATERIALS AND METHODS**Research design:** Correlation research design was used.**Sample and sampling strategy:** The sample consisted of university students with obesity (n=200). The size of sample was determined by using the G power software. Their age ranged from 19–30 years ($M=22.86$, $SD=21.95$). Purposive sampling strategy was used to select the participants.**Inclusion Criteria**

- University students who had BMI > 27 were selected.
- Only BS and MS students were selected.

Instruments**Demographic Sheet:** A detailed demographic sheet was designed for the purpose of obtaining demographic information. It consists of questions regarding age, gender, educational background, marital status, height and weight.**Weight and Body-Related Shame and Guilt (WEB - SG):** This scale consists of 12 items with two subscales Body shame and

Received on 22-09-2022

Accepted on 23-02-2023

Body guilt. Each subscale has 6 items. The Cronbach's alpha coefficient for body shame is .92 and body guilt is .87 for WEB-G²³. Higher scores showed more frequent feelings of shame and guilt.

Body Satisfaction Scale (BSS): This 20 item scale has three subscales that measure contentment or unhappiness with 16 bodily components ("general," "head" and "body"). Cronbach's alpha coefficient for general dissatisfaction scale is .87, body dissatisfaction .78 and head dissatisfaction .80²⁴. Higher BSS score indicates higher level of body dissatisfaction.

Depression Scale: Depression scale of DASS-21 consists of 7 items was used in the present study. Cronbach's alpha coefficient for depression scale is .91²⁵. High scores on this scale show greater level of severity or frequency of these negative emotional symptoms.

Procedure: The Ethical Committee and the Board of Study gave approval for the study. The permission to use the scales in the present research was sought from authors. Prior to data collection, approval/permission was obtained from the concerned institutions. In order to initiate data collection, permission was taken from the study supervisor and Chairperson of the Department of Applied Psychology, Lahore College for Women University. Afterwards, permission for data collection was sought from the Heads of different institutes. Participants were approached through purposive sampling strategy and research protocol was administered on them. Afterwards, the researchers thanked the participants for their participation.

Statistical analysis: In order to test the hypotheses of the study, SPSS 21 was used SPSS 21.

RESULTS

The majority of the study participants were females (57%) while males were 42%. Their age ranged from 19-30 years. Majority of the participants had BMI 30-40, which falls in obese-1 category (57%). 94% of the participants were unmarried and 67% of them were BS students.

The results reveal that there is a positive correlation among all study variables. General Dissatisfaction has significant positive correlation with body dissatisfaction (.93**) and with head dissatisfaction (.84**). Weight-related body shame has significant positive correlation with guilt (.72**), depression (.77**) and BMI (.72**). The findings reveal that the students who are obese have more weight related shame, guilt, dissatisfied from their bodies and have higher depression.

The overall regression model explains 71.9% of the variance ($F(5, 194) = 99.11, p < .001, R^2 = .71$) in the dependent variable (depression). The results of the table reveal that weight-related body shame ($\beta = .34$), weight-related body guilt ($\beta = .28$), general dissatisfaction ($\beta = .81$), head dissatisfaction ($\beta = .30$) and body dissatisfaction ($\beta = .27$) are significant positive predictors of depression. These findings reveal that increase in body shame, guilt and dissatisfaction related to body can cause depression among university students with obesity.

Findings reveal that female university students scored higher on weight-related body shame ($t = -2.67, p = .008$), general dissatisfaction ($t = -4.35, p = .001$), head dissatisfaction ($t = -6.62, p = .001$), and body dissatisfaction ($t = -3.77, p = .001$). These findings suggest that female university students with obesity feel more body related shame, are more dissatisfied from their bodies and head parts as compared to male university students with obesity. However, there are non-significant differences on weight-related body guilt and depression.

Table 1: Correlation among weight-related body shame and guilt, body dissatisfaction, depression and BMI.

Variables	1	2	3	4	5	6	7
Body Shame	-	.72**	.66**	.44**	.64**	.77**	.72**
Body Guilt	-	-	.51**	.26**	.47**	.73**	.60**
General Dissatisfaction	-	-	-	.84**	.93**	.66**	.57**
Head Dissatisfaction	-	-	-	-	.72**	.41**	.34**
Body Dissatisfaction	-	-	-	-	-	.62**	.53**
Depression	-	-	-	-	-	-	.67**
BMI	-	-	-	-	-	-	-

Note. ** $p < .01$

Table 2: Multiple linear regression analysis of body-related shame, guilt, and dissatisfaction as predictors of depression.

Variables	B	SE	t	P	95%CI
Constant	1.68	.57	2.93	.004	[2.81, .55]
Weight-Related Body Shame	.27	.05	5.32	.000	[.17, .37]
Weight-Related Body Guilt	.21	.04	4.85	.000	[.12, .30]
General Dissatisfaction	.23	.05	4.63	.000	[.13, .34]
Head Dissatisfaction	.23	.06	3.52	.001	[.36, .10]
Body Dissatisfaction	.16	.07	2.24	0.26	[.30, .02]

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

Table 3: Independent sample t-test for comparison of means on all study variables across gender.

Variables	Male. S (n=85)		Female. S (n=115)		t	p	Cohen's d
	M	SD	M	SD			
Body Shame	8.60	7.78	11.27	6.36	-2.67	.008	-.37
Body Guilt	14.27	8.61	12.66	6.65	1.49	.13	-.20
General Dissatisfaction	30.50	16.95	42.11	19.75	-4.35	.000	.63
Head Dissatisfaction	9.52	3.67	15.81	8.15	-6.62	.000	.99
Body Dissatisfaction	15.94	8.55	21.01	9.97	-3.77	.000	.54
Depression	6.72	6.39	6.66	5.20	.08	.93	-.01

DISCUSSION

The present study aims to examine the relationship among body related shame, guilt, dissatisfaction and depression in university students with obesity. The Cronbach's alpha of all study scales along with subscales show significant internal consistency. The value of alpha ranged from .80 - .90. Firstly it was hypothesized that there would be a significant positive relationship among all the

variables. The correlation analysis reveals that there is a significant positive correlation among all study variables. Body satisfaction scale has significant positive correlation with body dissatisfaction (.93**) and head dissatisfaction (.84**) Weight-related body shame has significant positive correlation with depression (.77**) and BMI (.72**). The findings reveal that the students who are obese have higher weight related shame, guilt, dissatisfaction and depression. These results are consistent with various researches which reveal

that, obese students feel more shame and guilt as a result of their weight^{26,27,28}. Students with higher levels of body image shame, guilt and eating-related issues cause of weight increase and depression^{29,30}.

The second hypothesis is that body related shame and guilt, dissatisfaction would likely to predict depression among university students with obesity. Weight-related body shame ($\beta=.34$), weight-related body guilt ($\beta=.28$), general dissatisfaction ($\beta=.81$), head dissatisfaction ($\beta=.30$) and body dissatisfaction ($\beta=.27$) are significant positive predictors of depression. These findings reveal that increase in body shame, guilt and dissatisfaction related to body can cause depression among university students with obesity. Literature suggests that dissatisfaction is a significant predictor of depression. The results of previous study reveal that dissatisfaction from one's own body and body related shame are significant positive predictors of depression among female students¹⁸. People with higher BMI ranges are more likely to engage in the self-hatred form of self-criticism and body shame, which significantly predicts anxious and depressive symptoms among them³¹.

The third hypothesis is that female university students have higher body related shame, guilt, body dissatisfaction and depression as compared to male university students. Female university students scored higher on weight-related body shame ($t=-2.67$, $p=.008$), general dissatisfaction ($t=-4.35$, $p=.001$), head dissatisfaction ($t=-6.62$, $p=.001$), and body dissatisfaction ($t=-3.77$, $p=.001$). These findings suggest that female university students with obesity feel more body related shame, are more dissatisfied from their bodies and head parts as compared to male university students with obesity. Previous researches revealed that women who perceive themselves as overweight have higher shame, guilt and specifically about their body. Women undervalue themselves more and are more conscious about their body and physical appearance than men^{5,32,33}.

CONCLUSION

The findings of the study reveal that there is a positive relationship among all study variables. Weight-related body shame, guilt, general dissatisfaction, head dissatisfaction, and body dissatisfaction ($\beta=.27$) were found to be significant positive predictors of depression among university students with obesity. Female university students with obesity feel more body related shame, are more dissatisfied about their body and head parts as compared to male university students with obesity.

Limitations and Recommendations: The present study was subject to the following limitation:

- Sample size of the study was small.
- Female university students were more than male university students.
- Limited literature was found in the context of Pakistan.
- Future researches should include coping strategies of individuals with obesity.
- Equal representation of both genders should be taken in consideration in future research.
- Qualitative research and mixed method approach is suggested in future study to explore the nature of body-related shame and guilt in Asian culture.

CONCLUSION

The present study has opened the doors for future research to work on the psychological and physical effects of obesity within the Pakistani society. This study highlights the importance of physical and mental health of individuals for the progress of society. The study variables have very limited research in the context of Pakistan. So this study may serve as ground work for future researches. Our research spread awareness on obesity which is the leading cause of many mental health issues among general population. This research finding can be used in awareness

campaigns to promote awareness among people regarding the health living/eating and life style modification. Clinical psychologists may get benefit from this study by devising proper management plans to enhance the mental wellbeing of university students. Furthermore, this research may be helpful for many university students to seek help from professionals for the better mental and physical health.

Conflict of interest: Nil

REFERENCES

1. Friedman, M. A., & Brownell, K. D. (1995). Psychological correlates of obesity: Moving to the next research generation. *Psychological Bulletin*, 117(1), 3–20. <https://doi.org/10.1037/0033-2909.117.1.3>
2. Obesity and overweight. (2021, June 9). World Health Organization. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
3. Balentine, J. R. (2022, February 18). *Obesity: risks, symptoms, charts, BMI, causes & treatment*. MedicineNet. https://www.medicinenet.com/obesity_weight_loss/article.htm
4. Mensinger, J. L., Tylka, T. L., & Calamari, M. E. (2018). Mechanisms underlying weight status and healthcare avoidance in women: A study of weight stigma, body-related shame and guilt, and healthcare stress. *Body Image*, 25, 139–147. <https://doi.org/10.1016/j.bodyim.2018.03.001>
5. Lucibello, K. M., Nesbitt, A. E., Solomon-Krakus, S., & Sabiston, C. M. (2021). Internalized weight stigma and the relationship between weight perception and negative body-related self-conscious emotions. *Body Image*, 37, 84–88. <https://doi.org/10.1016/j.bodyim.2021.01.010>
6. Pila, E., Brunet, J., Crocker, P. R., Kowalski, K. C., & Sabiston, C. M. (2016). Intrapersonal characteristics of body-related guilt, shame, pride, and envy in Canadian adults. *Body Image*, 16, 100–106. <https://doi.org/10.1016/j.bodyim.2016.01.001>
7. Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *British Journal of Clinical Psychology*, 41(1), 29–42. <https://doi.org/10.1348/014466502163778>
8. Santos, I., Sniehotka, F. F., Marques, M. M., Carraça, E. V., & Teixeira, P. J. (2016). Prevalence of personal weight control attempts in adults: a systematic review and meta-analysis. *Obesity Reviews*, 18(1), 32–50. <https://doi.org/10.1111/obr.12466>
9. Winwood, M. (2018, February 15). *What Causes Guilt & How to Overcome It*. AXA Health. <https://www.axahealth.co.uk/health-information/mental-health/resilience/what-causes-guilt-and-how-to-overcome-it/>
10. Kämmerer, A. (2019, August 9). *The Scientific Underpinnings and Impacts of Shame*. Scientific American. <https://www.scientificamerican.com/article/the-scientific-underpinnings-and-impacts-of-shame/>
11. Cherry, K. (2021, May 2). *What Is a Guilt Complex?* Very Well Mind. <https://www.verywellmind.com/guilt-complex-definition-symptoms-traits-causes-treatment-5115946>
12. Cerna, A., Malinakova, K., van Dijk, J. P., Zidkova, R., & Tavel, P. (2021). Guilt, shame and their associations with chronic diseases in Czech adults. *Psychology, Health & Medicine*, 27(2), 503–512. <https://doi.org/10.1080/13548506.2021.1903058>
13. Liang, Z. (2021). Focus on the Beauty of Body: The Mediation Role of Body Appreciation Between Perfectionism and Body-Related Shame and Body-Related Guilt. *Frontiers*. <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.638641/full>
14. Brdaric, D., Jovanovic, V., & Gavrilov-Jerkovic, V. (2015). The relationship between body mass index and subjective well-being - the moderating role of body dissatisfaction. *Medical Review*, 68(9–10), 316–323. <https://doi.org/10.2298/mpns1510316b>
15. Albeeybe, J., Alomer, A., Alahmari, T., Asiri, N., Alajaji, R., Almassoud, R., & Al-Hazzaa, H. M. (2018). Body size misperception and overweight or obesity among Saudi college-aged females. *Journal of Obesity*, 2018, 1–9. <https://doi.org/10.1155/2018/5246915>
16. Gall, K., van Zutven, K., Lindstrom, J., Bentley, C., Gratwick-Sarll, K., Harrison, C., Lewis, V., & Mond, J. (2016). Obesity and emotional well-being in adolescents: Roles of body dissatisfaction, loss of control eating, and self-rated health. *Obesity*, 24(4), 837–842. <https://doi.org/10.1002/oby.21428>
17. Griffiths, S., Hay, P., Mitchison, D., Mond, J. M., McLean, S. A., Rodgers, B., Massey, R., & Paxton, S. J. (2016). Sex differences in the relationships between body dissatisfaction, quality of life and psychological distress. *Australian and New Zealand Journal of Public Health*, 40(6), 518–522. <https://doi.org/10.1111/1753-6405.12538>

18. Brewis, A., & Bruening, M. (2018). Weight shame, social connection, and depressive symptoms in late adolescence. *International Journal of Environmental Research and Public Health*, 15(5), 891. <https://doi.org/10.3390/ijerph15050891>
19. Goldman, L. (2022, June 30). *What is depression and what can I do about it?* Medical News Today. <https://www.medicalnewstoday.com/articles/8933>
20. Pedersen, T., & Arthur, S. (2021, June 2). *What Are the Risk Factors for Depression?* Psych Central. <https://psychcentral.com/depression/what-are-the-risk-factors-for-depression>
21. Blasco, B. V., García-Jiménez, J., Bodoano, I., & Gutiérrez-Rojas, L. (2020b). Obesity and depression: Its prevalence and influence as a prognostic factor: A systematic review. *Psychiatry Investigation*, 17(8), 715–724. <https://doi.org/10.30773/pi.2020.0099>
22. Ebrahim, M., Alkazemi, D., Zafar, T. A., & Kubow, S. (2019). Disordered eating attitudes correlate with body dissatisfaction among Kuwaiti male college students. *Journal of Eating Disorders*, 7(1). <https://doi.org/10.1186/s40337-019-0265-z>
23. Conradt, M., Dierk, J. M., Schlumberger, P., Rauh, E., Hebebrand, J., & Rief, W. (2007). Development of the weight- and body-related shame and guilt scale (WEB-SG) in a nonclinical sample of obese individuals. *Journal of Personality Assessment*, 88(3), 317–327. <https://doi.org/10.1080/00223890701331856>
24. Slade, P. D., Dewey, M. E., Newton, T., Brodie, D., & Kiemle, G. (1990). Development and preliminary validation of the body satisfaction scale (BSS). *Psychology & Health*, 4(3), 213–220. <https://doi.org/10.1080/08870449008400391>
25. Lovibond, S. H., & Lovibond, P. F. (1995). *Manual For The Depression Anxiety Stress Scale* (2 ed.). Sydney: psychology foundation
26. Lucibello, K. M., Sabiston, C. M., O'Loughlin, E. K., & O'Loughlin, J. L. (2020). Mediating role of body-related shame and guilt in the relationship between weight perceptions and lifestyle behaviours. *Obesity Science & Practice*, 6(4), 365–372. <https://doi.org/10.1002/osp4.415>
27. Pila, E., Sabiston, C. M., Brunet, J., Castonguay, A. L., & O'Loughlin, J. (2015). Do body-related shame and guilt mediate the association between weight status and self-esteem? *Journal of Health Psychology*, 20(5), 659–669. <https://doi.org/10.1177/1359105315573449>
28. Pila, E., Brunet, J., Crocker, P. R., Kowalski, K. C., & Sabiston, C. M. (2016). Intrapersonal characteristics of body-related guilt, shame, pride, and envy in Canadian adults. *Body Image*, 16, 100–106. <https://doi.org/10.1016/j.bodyim.2016.01.001>
29. Craven, M. P., & Fekete, E. M. (2019). Weight-related shame and guilt, intuitive eating, and binge eating in female college students. *Eating Behaviors*, 33, 44–48. <https://doi.org/10.1016/j.eatbeh.2019.03.002>
30. Mendes, C. B., & Ferreira, C. (2019). A social rank approach to disordered eating: Exploring relationships between shame, fears of compassion, striving, and body shame. *Psychology and Psychotherapy: Theory, Research and Practice*, 93(3), 490–502. <https://doi.org/10.1111/papt.12241>
31. Carter, A., Hoang, N., Gilbert, P., & Kirby, J. N. (2021). Body weight perception outweighs body weight when predicting shame, criticism, depression and anxiety for lower BMI range and higher BMI
32. Purton, T., Mond, J., Cicero, D., Wagner, A., Stefano, E., Rand-Giovannetti, D., & Latner, J. (2019). Body dissatisfaction, internalized weight bias and quality of life in young men and women. *Quality of Life Research*, 28(7), 1825–1833. <https://doi.org/10.1007/s11136-019-02140-w>
33. Şanlıer, N., Türközü, D., & Toka, O. (2016). Body image, food addiction, depression, and body mass index in university students. *Ecology of Food and Nutrition*, 55(6), 491–507. <https://doi.org/10.1080/03670244.2016.1219951>