The Relationship between Social Support and Self -esteem with the Mediating role of Stigmatization among Obese Individuals

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Abstract

This study Aims to explore the Relationship between social support, self-esteem, and stigmatization within the context of obesity among Pakistani individuals, particularly adolescents. study aims to unravel the intriguing relationship between social support and self-esteem amidst the presence of obesity-related stigma. Employing a cross-sectional design, the study gathered data from a diverse sample of 202 adults residing in both urban and rural areas of Gujranwala. To measure the targeted variables, the researchers employed the esteemed Rosenberg Self-Esteem Scale, the Multidimensional Scale of Perceived Social Support, and the Weight Self-Stigma Questionnaire. The study's findings are nothing short of remarkable and shed light on previously unexplored dimensions. Surprisingly, a negative correlation emerged between self-esteem and social support, challenging long-held assumptions, and prompting a fresh perspective on these intricate dynamics. Additionally, weight stigma

was found to act as a potent mediator between social support and self-esteem, revealing a crucial link in this complex chain. The study's findings are nothing short of remarkable and shed light on previously unexplored dimensions. Surprisingly, a negative correlation emerged between self-esteem and social support, challenging long-held assumptions, and prompting a fresh perspective on these intricate dynamics. Additionally, weight stigma was found to act as a potent mediator between social support and self-esteem, revealing a crucial link in this complex chain., These compelling findings underscore the pivotal role of combating weight stigma in interventions aimed at bolstering self-esteem and social support among the obese population. The implications of this research extend to the realms of clinical and social psychology, emphasizing the urgent need for targeted strategies to alleviate the adverse impacts of stigma within obese communities. This groundbreaking study illuminates the path forward, offering a wealth of knowledge to researchers, clinicians, and policymakers alike. It beckons us to embark on a transformative journey towards creating a society that nurtures self-esteem, fosters social support, and dismantles the shackles of weight stigma in the pursuit of holistic well-being among individuals grappling with obesity.

Keywords: social support, self–esteem, stigmatization, obese individuals

Introduction

Obesity is characterized as an abnormal or excessive build-up of fat that could harm one's health. Body mass index (BMI) is a straightforward measure of weight in relation to height that is frequently used to categorize adult overweight and obesity. Obesity is a condition that is characterized by an excess of body fat and is difficult to control with dieting. It is caused by environmental and hereditary factors. Overweight and obesity are two distinct conditions. The term "overweight" refers to having too much bodily weight .

There are many physical, psychological, and economic effects of obesity. People who are obese may experience bias and discrimination, which frequently starts at a young age. Numerous chronic diseases are brought on by the mechanical and metabolic effects of fat. Obstructive sleep apnea syndrome and orthopedic issues are the two primary mechanical consequences. The expense of direct medical care, which includes prevention, diagnosis, and treatment, falls on obese people. This would cover the price of medical services, hospital and medication prescribed for controlling obesity and its side effects. An obese individual has a stronger stigma, people with poor self-esteem experience emotions of worthlessness, inadequacy, and emotional instability, which can lead to dissatisfaction with life. Additionally, individuals with low self-esteem tend to view many things negatively in general, including other people and their own circumstances .Men and women respond differently to social assistance. Higher levels of perceived social support among teenagers were associated with better overall adjustment, more adaptive behaviors, and a decrease in externalizing problems in women, while a drop in internalizing problems and an increase in adaptive behaviors in men

It is essential to understand the problems obese individuals are facing due to stigma and to overcome them. There is little research in Pakistan about the stigma due to obesity. The extent and gravity of the obesity crisis is, unfortunately, matched only by the neglect and stigma faced by people with obesity It is very important to investigate the relationship between social support, stigmatization, and self-esteem among obese individuals. The study helps how increased self-esteem and social support helps obese individuals to overcome the stigma they are facing due to weight gain. Females can be more prone to face the side effects of obesity. There is much research that are conducted on these variables separately but is no work has been done collectively on these variables till now. Overall, it is very important to study these variables together in Pakistani adolescents as they are future of the society, there is no major research on this topic in Pakistani context. After

studying this relationship, we will be able to make possible changes to their behavior about how to reduce stigmatization and to increase social support and the level of self-esteem.
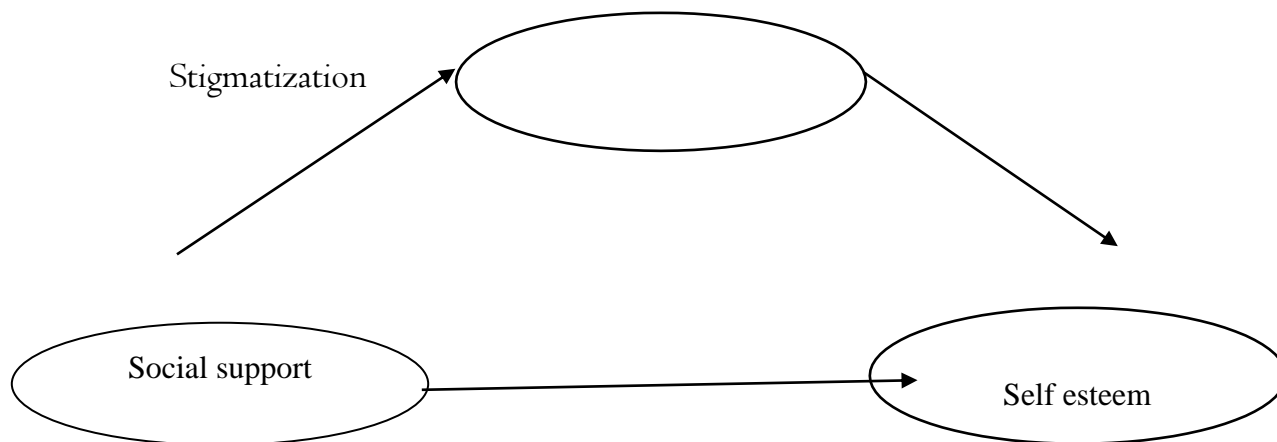
Proposed Model

Figure 1 illustrates the relationship between the independent variable of social support and dependent variable of self- esteem and the stigmatization serving as the mediating variable in this relationship.

Literature Review

Few literatures have explained the importance of presence of perceived social support in managing life's challenges that occur due to stigma. The purpose of this study was to investigate the connection between HIV stigma perceived social support among HIV-positive African Americans. The sample taken for the study was 283 HIV-positive African Americans. HIV stigma was related to perceived social support found from friends. Low perceived HIV stigma was connected with high perceived social support from friends .

The relationship between self-esteem and social support may be more complex. According to the self-esteem antecedent model, social support is affected by self-esteem. The self-esteem consequence model, on the other hand, emphasizes that strong social support can lead to increased self-esteem. Since both of these models were investigated in a longitudinal four-year study with adolescents, which found that greater levels of self-esteem consistently predicted rising levels of both social support network size and quality, the

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outcome model was not supported . Many people who are obese have internalized the weight stigma from society and view themselves as less valuable as a result. The median age was 41.2, the range was 18 to 69, and 3.8% were unaccounted for. They used decision tree analysis to investigate predictors of responses to weight stigma in 931 people who self-identified as higher-weight individuals using a social identity framework. Even in the lack of group membership, perceived illegitimacy of societal weight stigma designated a subgroup of resisters, although in-group identification with the group "Fat" was the dominant predictor of stigma resistance .A qualitative study with 35 participants was designed and carried out. The study's goal was to examine the emotional wellbeing of COVID patients in relation to their symptoms, social support, and stigmatization in social and health services. Long COVID patients reported low levels of self-perceived well-being due to chronic symptoms and constraints in their everyday activities that had persisted for several months .Public stigma and self-stigma differ depending on the type of mental illness. The purpose of the study is to compare self-stigma among patients with schizophrenia, alcohol use disorder, and gambling problems, and to investigate how self-stigma affects their self-esteem. Interviews were conducted with 321 Koreans receiving community mental health treatment for alcohol use disorder (N = 102), gambling issue (N = 103), and schizophrenia (N = 116). Participants were asked about their levels of self-esteem and self-stigma in a survey. Additionally, after adjusting for age and educational background, the effects of stigma against oneself on self-esteem were examined using multilevel regression analysis .

Some studies explained the relationship between self-stigma and self-esteem among individuals with schizophrenia. However, research has only ever included samples of individuals under the age of 65 to look into the connection between self-stigma and self-worth in young and old adults with schizophrenia. A mental health institution conducted personal interviews with 86 schizophrenia patients (mean age: 54; 55% female). Only 20–33% of the individuals reported significant self-stigma, which was low. In comparison to

younger participants, adults experienced less self-stigma. A strong relationship was found between self-stigma and self-esteem . The most important but overlooked public health issue is obesity. A cross-sectional study was carried out in July 2006 at the DHQ Teaching Hospital in D.I. Khan, Pakistan. Using a standard definition of obesity determined by body mass index, obese patients were selected. They interviewed 330 obese individuals using a standardized questionnaire. The data has been examined utilizing descriptive statistics. The age range for the group was 35 to 45. 221 (67%) had most females. 257 people, or 68%, were urban residents. 60% acknowledged having a history of obesity in their families. Women are prone to obesity .

Study Design

The cross-sectional study design will be used to find the relationship between variables. In this design social support served as independent variable and self-esteem served as the dependent variable and stigmatization served as the mediator role in the study.

Objectives

The objectives of the study were.

1. To investigate the relationship between self-esteem and social support in obese individuals.

2. To investigate the meditating role of stigmatization between social support and self-esteem in obese individuals.

3. To explore the role of demographic factors on variables under study.

Sample

It is a correlational study with the sample of 202 adults. In this study targeted population was obese individual that can be both 100 men and 102 women from different areas in Gujranwala in this study the researcher used purposive sampling technique.

Inclusion Criteria

The inclusion criteria were obese individuals aged from 20-30 years. There is no specification for gender, anyone can be involved in this study,

and which are willing to participate in this study.

Exclusion Criteria

The exclusion criteria were the individuals who were thin and aged below 20 and above 30.

Research Instruments:

Rosenberg Self-Esteem Scale is a 10-item scale gauges a person's overall sense of worth by accounting for both positive and negative self-perceptions. Multidimensional Scale of Perceived Social Support is a quick research instrument made to gauge how supportive three people feel friends, family, and significant other. Weight Self-Stigma Questionnaire is 12 item scale and designed for use of only overweight populations. It is a Likert-style assessment of weight-related self-stigma.

Phase I

Phase I involved data collection before the intervention (pre-test). Rosenberg Self-Esteem Scale was used to evaluate a person's overall sense of worth by accounting for both positive and negative self-perceptions. The subjective evaluation of the level of perceived emotional support was measured using the MSPSS.

Phase II

Phase II involved Weight Self-Stigma Questionnaire is designed for use of only overweight populations. It measures the multifaceted character of weight self-stigma, which includes both self-devaluation and fear of being enacted stigma.

Purpose

The primary purpose of Phase II was to understand the multifaceted character of weight self-stigma, which includes both self-devaluation and fear of being enacted stigma.

Sample Description

The same participants from Phase I were contacted to participate in Phase II to maintain continuity. The sample consisted of 200 obese individuals of different ages, gender and regions.

Procedure

A period of exactly one and a half months was required to complete the data collection. In order to get inform consent from the participants, researcher had to make the personal contact with them and used the consent form that included a briefing on the study's rationale, purpose and objectives. The respondents were assumed that any information that was required would be held in the strictest secrecy and would only be used for purpose of the study when they participated in the survey. In addition to the instructions that were printed at the beginning of each booklet, respondents receive verbal instructions on how to respond to various questions that are included in each booklet. The completion of the questionnaire took between 10-15 minutes of time. The target population was both men and women of ages between 20-30 years. The response rate was pretty good (greater than 90 %), and this may be attributed that that respondents show interest and motivated by topic. Participants did not receive any type of reward for their participation in the research, and they contributed time voluntarily.

Result

Table 1

Demographic Characteristics of the sample

Variables	F	%
Gender		
Men	100	49.5
Women	102	50.5
Education		
Matric	1	0.5
Intermediate	31	15.3
Bachelors	144	71.3
Masters	25	12.4
PhD	1	1

Area		
Urban	106	52.5
Rural	96	47.5

Note. f= frequency of the characteristics

Table 1 presents an overview of the sample characteristics. Frequencies and percentages for, gender, education, marital status and area were computed. The sample comprised 100 men (49.5%) and 102 women (50.5%). Among obese individuals, 47.5 % came from   rural area while 52.5% were from urban area. The majority sample was educated till bachelors (71.3%).

Table 2

Psychometric Properties for Study Variables, N = 202

	K	M	SD	Range	α
Social support	12	4.63	1.28	1-6	0.91
Stigma Self-devaluation	6	17.34	4.15	6-30	0.59
Stigma Enacted stigma	6	16.74	5.41	6-30	0.83
Self esteem	10	22.55	3.84	10-36	0.61

Note. M= mean, SD= standard deviation, K=number of items of scale

Table 2 shows Mean, Standard Deviation and Cronbach's Alpha for three scales Multidimensional scale for perceived social support includes 12 items with alpha reliability of 0.91.Weight Stigma Self Questionnaire has 12 items with two subscales with alpha reliability of 0.59 for self-devaluation and 0.83 for enacted stigma. Rosenberg self- esteem is 10 items scale with Cronbach's alpha of 0.61.

Table 3

Pearson Correlation, N =202

	TRSE	TWSSQSD	TWSSQES	TTMSPSS
TRSE		.29**	.36**	-.19**
TWSSQSD			.49**	.07
TWSSQES				-.10
TTMSPSS				

Note. TTMSPSS=Multidimensional scale for perceived social support, TRSE=Rosenberg self-esteem, TWSSQSD =Weight self-stigma questionnaire (self-devaluation), TWSSQES=Weight self-stigma questionnaire (Enacted stigma).

Table 3 shows the relationship between social support, self-esteem and weight stigma. The findings revealed a significant positive association between self-esteem and weight stigma (self -devaluation). Self-esteem has a significant positive relationship with weight stigma (enacted stigma). There is this significant negative relationship between self-esteem and social support. Additionally, there is significantly positive relationship of weight stigma (self-devaluation) with weight stigma (enacted stigma). There is a non-significant relationship between social support and weight stigma (self-devaluation). There is non-significant relationship between social support and weight stigma (enacted stigma).

Table 4

Means Differences of self-esteem, social support and weight stigma among men (100) and women (102)

	Men		Women		t(df)	P	Cohen's d
	M	SD	M	SD			
Self esteem	22.53	3.54	22.58	4.13	-0.10(200)	.91	0.01
Weight stigma	16.68	4.13	18.00	4.09	-	.02*	0.32

(self -devaluation)					2.26(200)		
Weight stigma (enacted stigma)	16.25	5.33	17.23	5.47	-1.29(200)	.19	0.18
Social support	4.61	1.27	4.65	1.29	-0.18(200)	.85	0.03

Note. *** p<0.001, ** p<0.01. * p<0.05

The above table displays the average variations in weight stigma (self – devaluation, enacted -stigma), social support and self-esteem between men and women. The results revealed that there are no statistically significant differences between genders in self -esteem(p = 0.92), weight enacted stigma(p= 0.19) and social support(p= 0.86) as indicated by p-values greater than 0.05. Specifically, the findings demonstrate that there is a significant gender distinction in weight stigma self –devaluation (p=0.02).

Table 5

Means Differences of self-esteem, social support and weight stigma among urban and rural areas

	Rural		Urban		t(df)	P	Cohen's d
	M	SD	M	SD			
Self –esteem	22.24	3.90	22.89	3.16	-1.18(200)	.237	0.16
Weight stigma (self-devaluation)	17.42	4.16	17.25	4.16	.293(200)	.770	0.04
Weight stigma (enacted stigma)	16.49	5.53	17.03	5.28	-.708(200)	.480	0.09
Social support	4.67	1.28	4.58	1.27	.507(200)	.613	0.07

Means Differences of social support, weight stigma and self -esteem among people from urban area (96) and rural area (108) have not any significant value in output. The data displays the average variations in Weight stigma

(self-devaluation, enacted-stigma), social support and self-esteem between the people from urban area and rural area. The results revealed that there are no statistically significant differences between the area (urban and rural) in any of these variables, as indicated by p-values greater than 0.05.

Table 6

Means, standard deviation and one –way Anova analysis across five education groups

	Qualification	M	SD	F	P	η^2	Post hoc
	Matric	22.00	-	2.282	0.06	0.04	1<2>3>4>5
RSE	Intermediate	24.09	4.01				
	Bachelors	22.44	3.81				
	Masters	21.56	3.31				
	PhD	17.00	-				

Table represents the means and standard deviations of self-esteem in accordance with five education groups. The findings showed non-significant difference in self -esteem according to education groups with an F-value of 2.282 and non -significance level as p > 0.05. It was observed that individuals with matric group show low self- esteem (M= 22.00, SD=0) as compared to rest of groups, where SE in intermediate group(M=24,SD=4.01) is greater than bachelors group (M=22.44,SD=3.81)and then masters group (M=21.56,SD=3.31)except PhD group(M=17.00,SD=0) with low SE with a small effect size η^2=0.04.

Role of Stigma as Mediator

In this current study, weight stigma was considered as a potential mediator to examine its role in mediating the connection between social support and self-esteem among obese individuals. To compute mediation, we utilized the software of PROCESS MACRO developed by Hayes. Baron and Kenny (1986) put forward several criteria for exploring a mediating influence, which encompass the following: there should be a statistically significant correlation

between predictor variable and the outcome variable, predictor variable must also have a significant relationship with the mediator, the mediator should predict the outcome variable even when accounting for the predictor variable, and the correlation between the predictor and the outcome variable should be diminished or constrained when the mediator is taken into account. The following summarizes the findings of a current study, which investigated mediating role of stigmatization in relationship between social support and self- esteem among obese individuals.

Table 5

Weight stigma as a mediator between social support and self -esteem

Mediator				Social support
		Effects	R2	F
	Total B	-0.58	.19	.193
Weight stigma	Direct B	-0.54	.42	7.73
	Indirect B	.038		
		95%CL(.05, -		
		.09)		

Table shows mediating role of weight stigma on social support and self -esteem among obese individuals. TTMSPSS has non-significant impact on TWSSQSD and TWSSQES (b= .0726, p> .05) and (b= - .0992, p> .05) respectively. TTMSPSS has significant negative impact on TRSE (b= -.1939, p < .05), hence this is a direct effect. Mediators TWSSQSD and TWSSQES has significant positive impact on TRSE (b= .175, p< .05) and (b= .2612, p< .05) respectively. The result revealed significant indirect impact of TTMSPSS on TRES (b= -.0132, p< .05). Further, effect of social support on self -esteem in the presence of was also found significant (b= -.5427, P < .05). Hence, weight stigma fully mediates the relationship between social support and self- esteem (p value is also less than .05 for

indirect effect and non-significant for direct effect). The mediation model resulted in an additional 3 %explained variance in self -esteem.
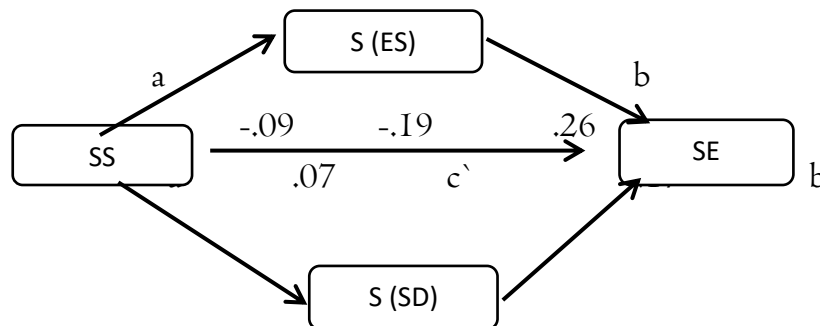

Figure 2 illustrates the mediating role of weight stigma in relationship between social support and self- esteem.

Discussion

The purpose of study was to find relationship between the social support and self -esteem in obese individuals and investigate the meditating role of weight stigma to explain the relationship. The purpose of the study was to investigate the effect of weight stigma on self -esteem and social support of obese individuals. Multidimensional scale for perceived social support (MSPSS), Rosenberg self- esteem scale (RSE) and weight self- stigma questionnaire (WSSQ) were used as self-reported measures. Multidimensional scale for perceived social support (Zimet,1998) was used to assess social support, Rosenberg self- esteem scale (Rosenburg,1965) was used to assess self-esteem and weight self- stigma questionnaire (Lillis,2010) was used to assess the weight stigma. The research was conducted on sample of 202 obese individuals and SPSS 19 was used during the analysis. How three scales fared in their psychometric properties was determined in study. Subscales were also mentioned, and alpha coefficient was calculated for scales and subscales respectively. The multidimensional scale for perceived social support was used to measure social support with alpha coefficient of alpha 0.91. The Rosenberg self -esteem scale was used to measure self- esteem with an alpha coefficient of 0.61. Weight self-stigma questionnaire had two subscales self- devaluation and enacted stigma that was used to measure

weight stigma with an alpha coefficient of 0.59 and 0.83. Factors such as gender, marital status, education and area were taken into consideration. Frequencies and percentages are calculated for each factor. According to findings there are 49.5% men and women 50.5% in sample. A significant proportion such 71.3% of the sample was made up of bachelor students,15.3% of the sample was intermediate students,12.4% was master's students, 1 % of PhD students and 0.5 % of matric students. In the sample 202 participants 106 belong from urban area and 96 belong from the rural area. We computed mean and standard deviation of all the factors.

Being part of a supportive social network and feeling appreciated by others is known as social support, and it has a good impact on one's mental and physical well-being. Self-esteem is how we feel about ourselves. According to research there is a significant positive relationship between social support and self-esteem The findings of this study indicated that self -esteem and social support had significant negative relationship. It can be a possible cultural reason that the present study reports negative relationship between self -esteem and social support. It was hypothesized that there is a negative relationship between self -esteem and stigma. According to research there is a significant negative relationship between self- esteem and stigma The results of the present study showed that there is a positive relationship between self -esteem and stigma. It can be a possible cultural reason that present study reports positive relationship between self -esteem and stigma. The hypothesis showed that there is a negative relationship between social support and stigma. According to the research there is a negative relationship between social support and stigma The findings of present study showed that there is non-significant relationship between social support and stigma. It may be due to some cultural reasons. The study had goal that investigate the role of weight stigma as a mediator between social support and self-esteem is mediated by stigma .It was hypothesized that the relationship between weight stigma and self -esteem will act as mediator in connection between social support and self-esteem .In other words the relationship between the social

support and self -esteem will be mediated by weight stigma .In current study the weight stigma mediate the path between social support and self –esteem. These findings support the existing literature where stigma is an important mediator between the social support and self -esteem .

It was hypothesized that the role of demographics in the variables. The results revealed that there are no statistically significant differences between the area (urban and rural) in any of these variables. The results also revealed that there are no statistically significant differences between genders such as male and female .These findings were according to previous findings of search that shows that there is no significant gender and area differences in social support and self -esteem .

Conclusion

The findings of this study had important repercussions for the research in future in areas of obesity. These types of awareness should be created in obese people that they should work and live a normal life by removing the stigma they faced due to obesity. This can be accomplished by enhancing the social support and self -esteem from family and society. Understanding the relationship between self -esteem, social support and role of weight stigma can be helpful for clinical psychologists, social psychologists, and counsellors. Many medical treatments that are caused due to obesity can be formulated by this research.

Limitations

Due to the shortage of time, the sample was limited because it was only collected from the Gujranwala and cannot be applied to whole Pakistan. Therefore, future studies should collect samples from different regions across the country. Future studies should take meditating effects of various demographic factors into account such as family system and age.

Current research was only conducted among the age range of adults, but it is recommended that future researchers should conduct different age groups to compare results. The current study can be interpreted as an initial step for dealing with stigma and problems due to obesity. However, the results of the

study should be treated with caution due to the small size of sample and lack of details regarding all characteristics of participants. Future research should further examine the role of demographics such as age, family system and income. It could also contribute to a deeper understanding of health controls to avoid obesity in future generations.

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