

A Comparative Study on Social and Psychological Consequences of Obesity in Working and Non Working Women

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Abstract

Objective: To compare the social and psychological consequences of obesity and overweight on well being of working and non working women. **Study Design:** It was a community based descriptive study, conducted through cross-sectional approach with comparative characteristics. **Place and Duration of Study:** The study was conducted in the Federal Government Schools and residential areas of Rawalpindi cantonment from 02nd April to 27th May, 2009. **Subjects & Methods:** The study population comprised 200 obese and overweight women of age group 30-45 years: 100 women working in Federal Government Schools and 100 obese non working women residing in Rawalpindi cantonment area. This study sample of 200 obese women was selected through purposive sampling technique. Data was collected through interview on structured and pretested questionnaire and anthropometric measurements (height, weight, waist and hip circumferences and forearm and wrist measurements) were taken by the researchers themselves for the purpose of working out Body Mass Index (BMI), Waist Hip Ratio (WHR) and Total Body Fat (TBF). Chi squared test was employed to determine the association between different variables. P value ≤ 0.05 was considered significant. Results: The mean total family income of working women was Rs.80381 \pm 43.6,

whereas that of non working women was Rs.52431 \pm 39.8. The mean number of children of working women was 2.8 \pm 1.4 and that of non working women was 4.14 6.9 \pm 1.4. The anthropometric data for BMI was 35.7 \pm 2.7 for non working women, while the same for working women was 33.4 \pm 2.8. Psychological data showed that 49% employed female never thought they have something to be proud of. 22% working women and 24% non working women were self conscious, 17% working women and 47% non working women were preoccupied with a desire to be thinner. 89% working women and 81% non working women did not go out on social occasion merely because they felt bad about their shape. 64% of working and 51% of non working women had a desire to have weight within normal limits. Conclusion: Significant differences in the prevalence of image dissatisfaction and self esteem were observed among the two groups. Employment status was found to be a protective factor for psychological wellbeing and especially body image in obese females. There is dire need for halting and reversing the upward trends of obesity. Key Words: Body Image, Body Mass Index, Non Working Women, Obesity, Overweight, Waist Hip Ratio, Working Women, Body Image Satisfaction.

INTRODUCTION

Obesity means having an abnormally high proportion of total body fat against the set

standard i.e. BMI $>30^1$. Obesity is amongst the most prevalent chronic medical conditions, both in

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developing and developed nations². Obesity is both a psychological and a physical problem and poses a real threat to both mental and physical health^{3,4}. A significantly high prevalence of obesity has been reported in females as compared to males. In Pakistan's population, prevalence of obesity (BMI > 30) in adults was consistently higher in women versus men. About 40% of women 25-64 years in urban areas were found obese compared to approximately 20% of men⁵. It was found in a study conducted in Saudi Arabia that in females 30-45 years, the prevalence of obesity was 36.36% and of morbid obesity was 7.27%⁶. It is well established that directly or indirectly, the obesity is associated with a wide variety of diseases such as non-insulin-dependent diabetes mellitus (NIDDM), cardiovascular diseases (CAD), hypertension, gall bladder diseases and certain types of cancer^{7,8}. Association of obesity, particularly in female has serious psychological and social repercussions that range from lowered self esteem to clinical depression,⁹ Because women experience more stigma teasing, unfair treatment, and discrimination in relation to obesity & are under greater pressure to be slim¹⁰.

Despite worldwide increases in obesity, there are negative attitudes and behaviors towards obese individuals¹¹. Obese females are in particular subjected to disapproval from family and friends and have to sneer remarks from strangers as well. Such behavior is propagated by the general societal belief that obesity is caused by a lack of self-discipline or moral weakness. Job or promotion is often denied simply because of how

much one weighs¹². Negative attitudes and behaviors like the prejudice and discrimination towards obese individuals contribute to depression and other adverse emotions in obese individual¹¹. Prejudice and discrimination can be conceptualized as chronic stressors that could have deleterious effects on emotional well-being. Obese individuals might be expected to experience more psychological distress than their average-weight peers. This perceived discrimination and stigmatization leads to worsen outcomes in obese individuals¹³.

MATERIALS AND METHODS

100 obese working females, aged 30-45 years were selected from amongst 627 employees of Federal Government schools of Rawalpindi Cantonment –and– 100 obese working females of same age group residing in Rawalpindi cantonment area were selected through purposive sampling technique and included in study sample after seeking their consent. Data was collected on a structured and pretested questionnaire. Socio-demographic and economic data (name, marital status, occupation, working respondents' monthly income, husband's occupation and monthly income, family's total income, number of children) was reduced to writing. Anthropometric measurements (height, weight, waist and hip circumferences and forearm and wrist measurements) were taken by using measuring tape and weighing machine by the researchers themselves for the purpose of determining Body Mass Index (BMI), Waist Hip Ratio (WHR) and Total Body Fat (TBF). Body Mass Index (BMI) was determined by using the formula $\text{weight (kg)} / \text{height}^2 \text{ (m)}$. Waist Hip Ratio (WHR) was worked out by using the ratio of waist circumference (cm) / Hip circumference (cm) –and– Total Body Fat (TBF) was calculated by using the formula $\text{weight} \times 0.732 - \text{waist circumference (cm)} \times 0.157 + \text{forearm circumference} \times 0.434 + \text{wrist measurement} / 3.14 - \text{hip measurement} \times 0.249$.

For statistical analysis, chi squared test was employed to determine the association between different variables. P value ≤ 0.05 was considered significant. Calculation was carried out with statistical package of social sciences (SPSS) version 17.0.

Body image perception & psychological & social factors: Body image is defined as the perception of one's own body size and appearance and the emotional response to this perception (O'Neil and Jarrel, 1992). Psychological and social well being were assessed through structured questionnaire.

RESULTS

This study investigates and compares the physiological & psychological repercussions & body image dissatisfaction in obese working & non working women

Table-1
Socioeconomic Profile of the Sample

S. No.	Variables	Working Respondents Mean \pm SD	Non working Respondents Mean \pm SD
1	Personal monthly income	Rs.37230 \pm 49.4	Rs.00000 \pm 00
2	Husband's monthly income	Rs.43151 \pm 35.2	Rs.52431 \pm 24
3	Total family monthly income	Rs.80381 \pm 43.6	Rs.52431 \pm 39.80
4	Parity	2.8 \pm 01.4	4.14 \pm 01.4

Table-1 compares the socioeconomic status of both groups of respondents amongst the sample. Data indicates that the mean personal income of working women was Rs.37230 \pm 49.4 and non working women obviously had no income. Mean monthly income of working women's husbands was Rs.43151 \pm 35 and the mean monthly income of non working women's husband was Rs.52431 \pm 24 with a difference of Rs.9280 \pm 11.1. Mean total family's monthly income of working women was Rs.80381 \pm 43.6, whereas mean total

family's monthly income of non working women was Rs. 52431 \pm 23.8 with a mean difference of Rs27950 \pm 3.8. The mean number of children of working women was 2.79 \pm 1.4 and that of non working women was 4.14 \pm 1.4 with a mean difference of 1.35 \pm .3. It can be concluded from the data that working women generally have more personal and total family income. On the average, working women also have less children than non working women.

There is a seasonal variation which showed fewer cases in the month of August and September. This time is for school holidays and many people traveled abroad. (This is shown in the table 2.)

Table-2
Anthropometric Measurements of the Sample

S. No.	Variables	Working Respondents Mean \pm SD	Non working Respondents Mean \pm SD
1	Weight (kg)	82.46 \pm 7.0	88.54 \pm 5.9
2	Height (cm)	157.8 \pm 7.5	159.8 \pm 3.9
3	Body Mass Index (kg/m ²)	33.4 \pm 2.4	35.7 \pm 2.7
4	Waist circumference(cm)	113.7 \pm 8.1	117.0 \pm 8.5
5	Hip measurement(cm)	120.1 \pm 14.2	122.4 \pm 8.4
6	Total body fat (%)	27.7 \pm .6.0	27.8 \pm 1.3

Table-2 compares the anthropometric measurements of obese working and non working women. The mean weight of working women was 82.4 \pm 7kg, and that of non working women was 88.54 \pm 5.9 kg with a difference of 6.1 \pm 1.1kg .The mean height of obese working women was 157.8986 \pm 7.5 cm and that of obese non working women was 159.837 \pm 2.1 cm with a difference of 2 \pm 1.6 cm .The mean BMI of the obese working women worked out on the basis of these figures was 33.4 \pm 2.4, whereas that of obese non working women was 35.71 \pm 2.7 with a difference of 2.3 \pm .3 .The mean waist circumference of obese working women was 113.792 \pm 8.7 cm, whereas that of non working

women was 117.6±8.5 cm with the mean difference of 3.3±.4 cm. The mean hip circumference of working women was 120.1±14.2 cm and that of non working women was 122.4±8.4 cm with a difference of 2.3±5.8 cm.

The mean total body fat of obese working women was worked out at 27.706±6% and the same of non working women at 27.818±1.3% with a difference of .1±.7%.

Table-3
Desired Figure Preference of the Sample

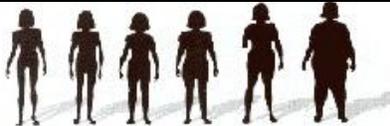
Respondent's Status	Which Figure Did the Respondents Prefer		
	Thin	Normal	Obese
Working women	29%	64%	07%
			
Non- working women	17%	51%	32%

Table-3 shows that 29% of working women and 17% non working wanted to be slim. 64% working and 51% non working women wanted to have weight within normal limits, whereas 7% and 32% working and non working women respectively were satisfied with their present weight and had no desire to lose weight (p>.005). Working women had more desire to lose weight.

Table-4
Self Esteem, Anxiety and Image Dissatisfaction Profile of the Sample

Variables	Never		Sometimes		Always		P value (Chi-squared)
	Working %	Non working %	Working %	Non working %	Working %	Non working %	
Do you feel that you do not have much to be proud of?	49	6	26	78	33	16	.05
Has been with thin women made you feel self conscious about your shape?	22	35	56	41	22	24	.299
Has thinking about your shape interfered with your ability to concentrate?	52	38	38	42	10	20	.032
Have you not gone out to social occasions because you have felt bad about your shape?	89	81	10	11	01	08	.364
Have you worried about other people seeing rolls of fat around your waist or stomach?	43	21	48	51	09	28	.000
Have you felt that it is not fair that other woman are thinner than you?	17	35	65	25	17	40	.000
When in company have you worried about taking too much room(in a sofa or bus seat)	02	06	57	46	41	48	.155
Have seeing your reflection (in a mirror) made you feel bad about your shape?	06	30	74	30	20	40	.000

If married does your spouse consider you smart and healthy?	36	68	30	24	34	08	.006
Do you find yourself pre-occupied with the desire to be thinner?	57	49	28	26	15	25	.092
Do you feel guilty after eating?	17	32	75	62	08	06	.047

Table-4 depicts psychological data for anxiety, self esteem and body image dissatisfaction. 49% of the working women never felt proud of themselves, while 78% of the non working women responded about self pride occasionally. 89% of working and 81% of non working women never stopped going to social occasions because they felt bad about their shape. 52% of the working women's and 38% of the non working women's concentration was never effected by thinking about their shape. 17% of the working women and 35% of non working women were never self conscious while being with thin women. 57 % of working women and 49 % non working women were never found pre-occupied with the desire to be thinner. 17% of working and 32% of non working women were never guilty after eating. 43% of working & 21% of non working women were not worried about their appearance in public, 6% of working & 30% of non working women were not dissatisfied about their body image. 68% of working women and 34% of non working women's spouse consider them smart and healthy

DISCUSSION

Considering the role of women in family and social health and our specific cultural characteristics, psychological & social impacts / consequences of obesity and overweight of obese working women were compared with obese non working women. Being obese has serious psychological and social repercussions. In this study, it was observed that Psychological consequences of obesity range from dissatisfaction of body image to anxiety, lowered

self esteem and social isolation. Almost all of these were more severe in non working obese women than working ones. According to the findings of a study conducted by Kelli et al in a residential weight control facility on Hispanic Asian, Black & white women, body-image satisfaction partially mediated the relationship between the degree of overweight and depression / self-esteem. Asian women in the above study were reported having less body dissatisfaction than the other groups¹⁴. William et al conducted a cross-sectional comparison of 179 women and concluded that obese women (house wives and working) expressed greatest dissatisfaction with their body weight, shape and appearance, and had the lowest self-esteem. Self-esteem and peer relationships, not directly body weight, were highly significant negative predictors of poor mental health¹⁵.

Ferry et al concluded from his study that obese women irrespective of their working status were more dissatisfied with their size and chose thinner figures as attractive and acceptable¹⁶. These attitudes carry over into the work world, where a job or a promotion is often denied simply because of how much one weighs.¹² In another study conducted by Magdalena et al on 173 obese subjects aged 47.0 ± 16.5 years BMI 36.1 ± 6.3 , weight 96.2 ± 18.3 kg, correlations between weight, BMI and depression was found in all subjects¹⁷.

In one study, severely obese persons were asked to choose between being obese or having some other infirmity. The results were astounding. By and large, the respondents said that they would rather be blind or have one leg amputated than be at their present weight. Most interestingly, everyone said they would rather be poor and thin

than rich and overweight. Obesity can cause poor self-image, Low self esteem and social isolation, all known contributors to depression. Those who are obese can also find themselves ostracized, stereotyped, and discriminated against. The extra weight carried around by obese people can result in chronic joint pain as well as serious diseases like diabetes and hypertension, all of which have been linked to depression¹⁸.

Not surprising, many obese people prefer not to go out in public because they feel self-conscious or they simply cannot enjoy activities that most people take for granted, like going to the movies, taking the subway, or going on vacation .There is clear evidence that obesity is linked with poor body image, but not all obese persons suffer from this problem or are equally vulnerable¹⁹. In fact, employment status provided a better psychological health for women, when it was compared to non-employed women²⁰. In a recent study, 710 working mothers and 350 non-working women from Iran were assessed to see the impact of employment on women's health status. It was found that after adjustment for three main explanatory factors (socio-demographic, work and work-related, and social-life context variables), there were no statistically significant differences between working and non-working women in a range of mental and physical health outcome variables²¹. The present study suggests positive impacts on women's working status, which probably is achieved through increased self esteem, higher income and wider social support.

CONCLUSION

The findings suggest that there exists an association between some aspects of psychological health and employment status in obese females. Obese non working women fare less on psychological and social variables than working ones. These results suggest that it would be valuable to address psychological well-being, and especially body image, as part of the management of obesity. Non working women should have the opportunity to perform work, not

necessarily outside the home, that is important and satisfying. This will give them self-confidence and will decrease their vulnerability to psychological distress. Halting and reversing the upward propensities of obesity is the need of hour.

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