



OBESITY AND MARITAL RELATIONSHIP: THE MEDIATING ROLE OF COPING

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ABSTRACT

OBJECTIVE: To find out the mediating role of coping between factors of obesity and marital relationship in women with obesity.

METHODS: This analytical cross-sectional study was conducted from May to November 2019 at various universities (Lahore College for Women University, Riphah International University, and University of Central Punjab) and hospitals (Services Hospital, Jinnah Hospital and Shalimar Hospital) of Lahore, Pakistan. Sample (n=400) was collected through purposive sampling technique. Overeating Situations Scale, Big Five Personality Inventory, Relationship Satisfaction Inventory, Brief Coping Response Inventory along demographic form were administered on the sample. Data was analyzed through Path analysis using AMOS-20

RESULTS: Majority (n=213/400; 53.25%) of participants were working in private-sector, 216/400 (54%) were teachers and 46% (n=184/400) were doctors. Participants ranged in age from 25-50 years. Forty-five percent (n=180) had 1-5 years' duration of marriage. Path analysis revealed that the structural path from reappraisal coping to openness to experience and from extraversion to the marital relationship has a positive direct effect. It can also be seen that the structural path from emotional, psychological, and cognitive factors to marital relationship and from disengagement coping to the marital relationship have direct significant negative, whereas from reappraisal coping to marital relationship show a direct positive effect. Coping showed two indirect paths to marital relationship: the path mediated by reappraisal coping to marital relationship and disengagement coping marital relationship.

CONCLUSION: Mediating effect of coping revealed that women who use reappraisal coping enjoy better marital life as compared to the women who use disengagement type of coping.

KEYWORDS: Obesity (MeSH); Employed women (Non-MeSH); Women, Working (MeSH); Reappraisal coping (Non-MeSH); Disengagement coping (Non-MeSH); Marital Relationship (MeSH); Marriage (MeSH)

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Harrington and Loffredo⁵ found that extroverts are more satisfied with their marital life. A spouse with low openness to experience, low agreeableness, low conscientiousness and low emotional stability puts heavy cost on their partner.

The relations between marital quality and coping mechanisms have been explored and it is found that coping mechanisms have positive outcomes for the couples.⁶ In this relation a direct relationship has also been observed by Sarma, et al (2016)⁷ between marital relationship and coping strategies. Most of women use reappraisal coping (including problem-focused coping and some forms of emotion-focused coping: support seeking, emotion regulation, acceptance, and cognitive restructurings) and disengagement coping (including emotion focused, because it involves an attempt to escape feelings of distress, also involve avoidance behavior) with a mixture and strategies are changed with respect to situation and time. But it is found that women who use reappraisal coping are well adjusted to their marital life. In this context important relationship has also been noticed among obesity, personality traits, coping and marital relationship. Penley and Tomaka⁸ examined personality dimensions and found that it was related with coping strategies and personal reaction. Martyn-Nemeth, et al⁹ found that obesity, unhealthy eating and over eating has been linked with disengagement coping (e.g. wishful thinking, worrying, ignoring the problem, not coping, and keeping one self-blaming and tension reduction).

In Pakistan, more than half (52%) of the

INTRODUCTION

Obesity is a state that is associated with having overindulgence of body fat, defined by genetic and environmental factors that are hard to control with dieting. By definition, obesity is classified according to body mass index (BMI), with levels greater than 30 being obese (class I), with level greater than 35 (class II) and with level greater than or equal to 40 (class III).¹ The association of obesity with marriage has been an important topic of interest in studies to date. Marital

relationship its quality and relation to health and wellbeing is important. Satisfaction of the couples in their marital life is very much linked with physical health, including decreased physical illness, decreased cortisol level and increased recovery after illness.² Liao, et al (2018)³ suggests that marital status is closely associated with weight changes, with married individuals reported to gain more bodyweight than never-married individuals. When people with different personality traits marry, their marital relationships can be affected by their personality traits.⁴

TABLE I: RELIABILITY COEFFICIENT AND DESCRIPTIVE STATISTICS OF STUDY SCALES (N=400)

Variables	No of items	Mean	SD	A
Overeating Situations Scale (OSS)	23	71.72	18.14	.86
Relationship Satisfaction	10	27.38	6.59	.94
Ten Item Personality Inventory (TIPI)	10			.78
Extraversion	2	6.67	4.27	.66
Agreeableness	2	7.42	4.12	.56
Conscientiousness	2	6.13	1.90	.54
Emotional stability	2	7.10	4.45	.65
Openness to experience	2	7.50	4.00	.60
Brief Coping Response Inventory(BCRI)	10	16.20	1.45	.89

TABLE II: FIT INDICES FOR FACTORS OF OVEREATING, PERSONALITY TRAITS, MARITAL RELATIONSHIP AND COPING

Model	χ^2	df	χ^2/df	GFI	CFI	NNFI	RMSEA	SRMR
Model fit	72.45	30	2.42	.98	.99	.96	.06	.04
$\Delta\chi^2$	1342.12*							

Note. N=400, All change in chi square values are computed relative to model, $\chi^2 > .05$, GFI= Goodness of fit index, CFI=comparative fit index, NNFI = non-normed fit index; RMSEA=root mean square error of approximation, SRMR=Standardized root mean square, $\Delta\chi^2$ = chi square change.

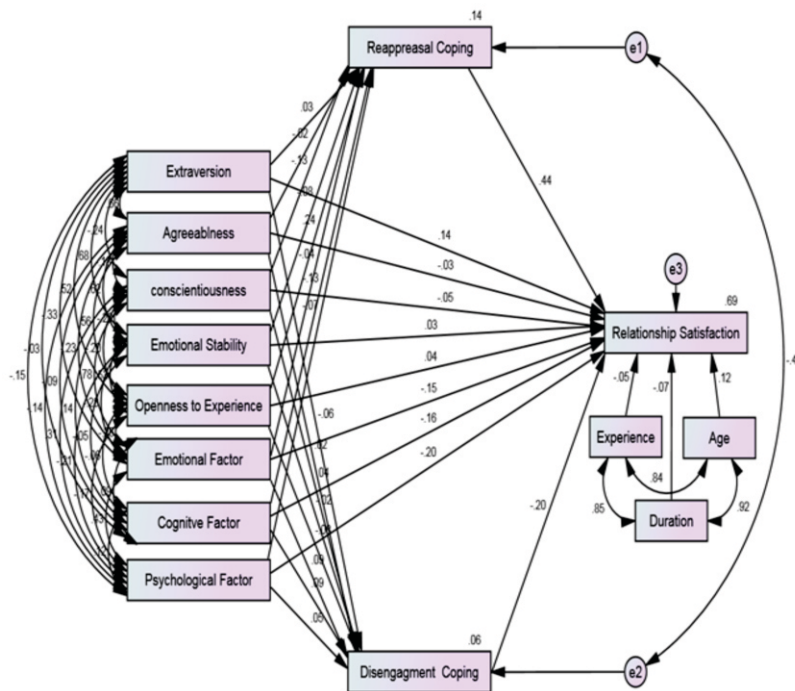


Figure 1: Empirical results from a complex multivariate model representing standardized regression coefficients (Note: A complex multivariate model of three endogenous variables and eleven exogenous variables. Completely standardized maximum likelihood parameter estimates.)

women are either overweight or obese.¹⁰ After getting married and producing children, Pakistani women lose interest in their physical appearance and healthy life style, leading to increased weight gain.¹¹ These married women face

discrimination both at home and workplace. However, no literature has been found with reference to Pakistan regarding factors affecting the marital satisfaction in obese women and mediating role of coping between factors of obesity and marital

relationship. This study was planned to find out the mediating role of coping between factors of obesity and marital relationship in women with obesity.

METHODS

This cross-sectional analytical study was conducted at various public and private universities (Lahore College for Women University, Riphah International University, and University of Central Punjab) and hospitals (Services Hospital, Jinnah Hospital and Shalimar Hospital, Lahore) after approval of Ethics and Research Committee of Lahore College for Women University from May 2019 to November 2019. Purposive sampling technique was used to collect the sample. The criterion given by Francis et al. (2010)¹² was used to select the sample size. A sample of 400 obese (BMI > 30), working, married women who meet the criteria of obesity given by WHO¹ was included in the study with age range of 25-50 years. The mean age of the sample was 32.28(SD = 6.89). Only diagnosed women with obesity were included in the sample. Women with any clinical problem e.g. diabetes, hypertension, heart disease, lungs disease etc. were not included in the sample. Pregnant women were also excluded from the study. To gather sample demographic information, a form was prepared including age, height and weight etc.

Four different tools were used in the current study. Overeating Situations Scale¹³ was used to identify the factors involved in the development of obesity. It is a self-report measure consisted of 23 items with options ranges from “never” (1) to “always” (3). It has Cronbach alpha of 0.86. Ten Item Personality Inventory¹⁴ was used to assess correlation between personality trait and obesity. This is a ten-item scale. The scale uses seven-point scale ranging from disagree strongly (1) to agree strongly (7). Cronbach alpha of personality trait scale is 0.78. Relationship Satisfaction Scale¹⁵ was used to measure the marital satisfaction of obese employed women. It's a unidimensional 10 item scale. This scale uses six point response format ranging from strongly disagree (0) to strongly agree (5). The value of Alpha coefficient for this scale is 0.94. Brief coping

TABLE III: STANDERDIZED ESTIMATES OF DIRECT EFFECT FOR FACTORS OF OVEREATING, PERSONALITY TRAITS, MARITAL RELATIONSHIP AND COPING (N = 400)

Variables	Disengagement		Reappraisal		Marital Relationship	
	B	SE	β	SE	B	SE
Agreeableness	0.02	0.08	-0.02	0.07	-0.03	0.05
Conscientiousness	0.04	0.08	-0.13	0.09	-0.05	0.04
Emotional stability	-0.02	0.07	-0.08	0.08	0.03	0.05
Openness to Experience	-0.08	0.06	0.24***	0.07	0.05	0.04
Extraversion	-0.06	0.06	0.03	0.07	0.14**	0.04
Emotional Factor	0.09	0.08	-0.04	0.09	-0.15**	0.04
Psychological Factor	0.05	0.06	-0.07	0.06	-0.20***	0.04
Cognitive Factor	0.09	0.06	-0.13**	0.05	-0.16***	0.04
Disengagement Coping					-0.20**	0.07
Reappraisal Coping					0.44***	0.07
Total R ²	.065		.135		.687	

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

TABLE IV: STANDERDIZED ESTIMATES OF INDIRECT EFFCT THROUGH REAPPRAISAL COPING BETWEEN FACTORS OF OVEREATING, PERSONALITY TRAITS AND MARITAL RELATIONSHIP (N = 400)

Predictors	Marital Relationship		
	β	95%CI	
		LL	UL
Agreeableness	-0.008	-0.096	0.074
Conscientiousness	-0.058	-0.426	0.018
Emotional stability	-0.034	-0.142	0.031
Openness to Experience	0.108***	0.103	0.284
Extraversion	0.015	-0.052	0.102
Emotional Factor	-0.019	-0.064	0.028
Psychological Factor	-0.031	-0.050	0.004
Cognitive Factor	-0.059**	-0.192	-0.036

Note. CI = Confidence Interval, LL= Lower Limit, UL = Upper Limit. *p<.05, **p<.01, ***p<.001

TABLE V: STANDERDIZED ESTIMATES OF INDIRECT EFFECTS THROUGH DISENGAGEMNT COPING BETWEEN FACTORS OF OVEREATING PESONALITY TRAITS, AND MARITAL RELATIONSHIP (N = 400)

Predictors	Marital Relationship		
	β	95%CI	
		LL	UL
Agreeableness	-0.003	-0.045	0.045
Conscientiousness	-0.008	-0.127	0.083
Emotional stability	0.003	-0.028	0.048
Openness to Experience	0.015	-0.001	0.086
Extraversion	0.013	-0.005	0.063
Emotional Factor	-0.018	-0.042	0.003
Psychological Factor	-0.010	-0.028	0.003
Cognitive Factor	-0.017	-0.083	0.000

Note. CI = Confidence Interval, LL= Lower Limit, UL = Upper Limit. *p<.05, **p<.01, ***p<.001

Response Inventory¹⁶ was used to explore the type of coping strategies used by obese employed women. It is a self-report measure comprising of 10 items. This inventory is comprised of two subscales namely Reappraisal

Coping and Disengagement coping. Each subscale has five items. This inventory uses five point rating scale ranging from Never (0) to always (4). The scale has a good reliability of 0.89.

After the permission from Advanced

studies Board of Research of Lahore College for Women University, Lahore the process of data collection was started. Participants were briefly informed about the objectives of the study. A consent form was signed by the participants to show the willingness to be the part of the study. Confidentiality of the information was assured by the researcher to the participants. Participants were provided with the final protocol comprising demographic form along with Overeating Situations Scale, Relationship Satisfaction Scale, Ten Item Personality Inventory and Brief Coping Response Inventory. All the scales were translated in Urdu using the standard procedure given by Sousa and Rojjanasirat (2011)¹⁷ to ensure fair participation. The descriptive statistics including Pearson's correlation coefficients and alpha coefficients of reliability were computed through SPSS version 22. Path analysis was employed for examining the mediating role of coping between factors of obesity, marital satisfaction and personality traits was undertaken in Amos 20.0.

RESULTS

Out of 400 study participants, 205 (51.25%) fall in the period of early adulthood and 195 (48.75%) were in middle adulthood. The age range of participants was 25-50 years. Duration of marriage was 1-5 years in 180 (45%) cases, 6-10 years in 120 (30%) cases, 11-20 years in 76 (19%) cases and 21-30 years in 24 (6%) cases.

Majority (n=213/400; 53.25%) of study participants were working in private sector and 187 (46.75%) were government employees. Fifty-four percent (n=216/400) were teachers and 46% (n=184/400) were doctors. Most (n=190; 47.5%) of the participants had 1-5 years, 123 (30.75%) had 6-10 years and 87 (21.75%) had more than 10 years of job experience. Majority (n=255; 63.75%) had class-2, 88 (22%) had class-3 and 57 (14.25%) had class-I obesity.

Internal consistency of all the scales and subscales used in the current study was found excellent as shown in Table I.

Table II shows the results of fit indices indicated for obesity, personality trait, coping strategies and marital

relationship after controlling the effect for age, marital duration and job experience. The final structural model diagram after model fit is demonstrated in Figure 1. Table III indicates that results of the direct effect show the structural path from reappraisal coping to openness to experience ($\beta = 0.24$, $p < 0.001$) as positive and significant. It is further evident that structural path from extraversion to marital relationship ($\beta = 0.14$, $p < 0.01$) is significant and positive. It can also be seen that path structure from emotional factor ($\beta = -0.15$, $p < 0.01$), Psychological factor ($\beta = -0.20$, $p < 0.001$), and cognitive factor ($\beta = -0.16$, $p < 0.001$) is significant and negative. From direct effect it can also be seen that structure path from disengagement coping to marital relationship ($\beta = -0.20$, $p < 0.01$) is significant and negative and from reappraisal coping to marital relationship ($\beta = 0.44$, $p < 0.001$) was significant and positive. Table IV shows the results of indirect effect through reappraisal coping is found to be significant mediator between openness to experience and marital relationship ($\beta = 0.10$, $p < 0.001$). Whereas reappraisal coping is also found to be a significant mediator between cognitive factor of obesity and marital relationship ($\beta = -0.05$, $p < 0.01$). The results of indirect effect show that disengagement coping is found to be non-significant mediator between factors of obesity (psychological, emotional and cognitive), personality traits (extraversion, agreeableness, emotional stability, conscientiousness and openness to experience) and marital relationship as shown in Table V.

DISCUSSION

The main objective of this study was to find out the role of coping as mediator between factors of obesity and marital relationship in obese employed women of Lahore, Pakistan. The result of the study showed the relationship between openness to experience and reappraisal coping shows significant effect size. This suggests that openness to experience is more important predictor in comparison with other personality traits in marital relationship. Openness to experience was found significant (direct effect) in mediation model. This

finding is relevant as openness to experience involves tendency to be curious, creative, inclined towards new ideas and activities, and are flexible. Openness to experience and extraversion were found to be positively correlated with reappraisal type of coping.¹⁸ Results are also consistent with the studies conducted in past.^{19,20} In order to deal with the stressful life situation, openness to experience lead an individual to restructure the stressful life situation. It is directly associated with reappraisal style of coping.²¹ Extraversion was found to be the positive predictor of marital relationship.²² The results of the study also revealed that women's extraversion is one of the important predictors of healthy marital relationship. This means that women who have extravert qualities more likely to have better marital relationship as compared to others.²³ The results are also consistent with the studies conducted in past.^{24,25} These studies support that the women who have aspects of sociality prefer gatherings and large groups. These tendencies facilitate reappraisal style of coping such as problem solving and cognitive restructuring.²⁶ Canzi, et al.²⁷ found that there is a significant positive relationship between marital satisfaction and coping styles. The individual who use more convenient and positive coping strategies enjoy better marital relations. The results are consistent with the previously conducted significant study.²⁸ These findings state that the women who are more satisfied with their marital life use more convenient positive strategies of coping. They enjoy and experience deeper emotions. They enjoy and try to adjust in their marital life. By using reappraisal coping techniques women become more compatible and satisfied with their marital life.

Furthermore, the path from disengagement coping to marital relationship is also significantly negative. Tegegne et al.²⁹ found interesting relationship between disengagement coping and marital relationship. Findings of the Richter et al.³⁰ show that disengagement coping strategies such as escape, avoidance, and denial increase conflict and reduce effective

communication. As a result of this reduced communication women do not share their problems and did not get the solution either. These women use disengagement style of coping that is less effective way of coping

LIMITATIONS OF THE STUDY

The present study was conducted with employed women only future research with the sample including unemployed would provide a better comparison and more generalizability of the results. With better control and larger sample, longitudinal study would provide a better understanding of the relationship between obesity and marital relationship. In studies, where the subjects know that their experiences are evaluated and read, they usually give less private, less intense, accepted and approved responses

CONCLUSION

The study concludes obesity is a major health problem that is affecting marriage and marital life. It is observed that people with different personality traits show different quality of marital relationship. Further it is observed that two different styles of coping are used by women having different kinds of personality traits. Mediation effect of coping revealed women who use reappraisal coping enjoy better marital life as compared to the women who use disengagement type of coping. The study also proposes that there is a strong need to educate general public about causes of obesity so that prevalence of obesity can be controlled. This would help women and men to lead a healthy and happy life and would prevent them from complications that arise as a result of obesity.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

SA: Concept and study design, acquisition of data, drafting the manuscript, approval of the final version to be published.

AM: Analysis and interpretation of data, drafting the manuscript, critical review, approval of the final version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest

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