



Research paper

The Relationship between Neuroticism and Binge Eating Symptoms in Women: The Mediating Role of Body Image Concern and the Moderating Role of Body Appreciation

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Abstract

The purpose of this study was to investigate the mediating role of body image concern in the relationship between neuroticism and binge eating symptoms, considering the moderating role of body appreciation in a non-clinical sample of women. 252 women of Najaf-Abad city, Iran responded to the Five-factor Neo Personality Inventory, Body Image Concern Inventory, Body Appreciation Scale, and Binge Eating Disorder Screening Questionnaire. To test the moderated mediating model, the path analysis method proposed by Hayes was used. The results showed that body image concern as a mediator and body appreciation as a moderator play a role in the research model. These findings show that body appreciation as a protective factor can reduce the indirect effect of neuroticism and the direct effect of body image concern on women's binge eating symptoms.

Keywords: Body appreciation, body image concern, moderated mediating model, neuroticism, symptoms of binge eating.

Introduction

If a person has episodes of binge eating at least once a week for three months, he has binge eating disorder. During a binge eating episode, the person may not be hungry, but continue to overeat to feel full (American Psychiatric Association, 2022). Neuroticism is a personality trait that shows the degree of emotional instability and is related to the symptoms of eating disorders (Solly et al., 2023). Also, neuroticism can lead to a person's dissatisfaction with his body image (da Silva et al., 2023) and thereby increase the symptoms of binge eating. Body appreciation refers to valuing the characteristics, functions and health of the body (Avalos et al., 2005), which can be a protective factor, leading to a reduction in eating disorder symptoms (Engel et al., 2023). Considering that these variables are influenced by cultural factors and the prevalence of eating problems in Iran is high, especially among women as one of the most important elements of the family and society, the present study was conducted with the aim of

investigating the mediating role of body image concern in the relationship between neuroticism and binge eating symptoms, considering the moderating role of body appreciation in a non-clinical sample of women. The hypotheses of the research are as follows:

-body image concern plays a mediating role in the relationship between neuroticism and binge eating symptoms.

-body appreciation has a moderating role in the direct and indirect relationship between neuroticism and binge eating symptoms.

-body appreciation has a moderating role in the direct relationship between body image concerns and binge eating symptoms.

Method

The research design was correlational using path analysis. The statistical population was non-clinical women living in Najaf-Abad city, Iran. 252 of them were selected using the convenience sampling method and answered the research questionnaires, individually. The path analysis method proposed by Hayes and PROCESS-Macro software were used to test the moderated mediation model.

Tools

Body Image Concern Inventory (BICI): This 19-item inventory was designed by Littleton et al. (2005) to measure two subscales of dissatisfaction with appearance and poor personal functioning due to appearance concern. Its reliability was reported using Cronbach's alpha coefficient of 0.93. In the present study, its Cronbach's alpha was 0.90.

NEO Five Factor Inventory (NEO-FFI): This 60-item inventory was developed by Costa and McCrae (1989) to evaluate the five main factors of personality. They reported Cronbach's alpha coefficient of 5 factors in the range of 0.74 to 0.89. In the present study, only the neuroticism subscale was used and its Cronbach's alpha reliability was 0.87.

Body Appréciation Scale (BAS) : Avalos et al. (2005) developed this 13-item scale to measure positive attitude towards the body and reported its Cronbach's alpha coefficient of 0.94. In the present study, its Cronbach's alpha reliability was calculated as 0.86.

Binge Eating Disorder Screening Questionnaire: This 30-item questionnaire was developed by Wever et al. (2018) and its Cronbach's alpha reliability was reported 0.96. In the present study, its Cronbach's alpha reliability was calculated as 0.93.

Results

Table 1 shows the correlation between model variables($\rho < 0.05^{**}$), descriptive statistics and normality of their distributions.

Table 1- Correlation between model variables, descriptive statistics and normality indices

Variables	Pearson bivariate correlation				Descriptive statistics		Normality indices	
	1	2	3	4	Mean	SD	Skewness	Kurtosis
1- Neuroticism	1				24.92	8.53	0.16	-0.73
2- Body Image Concern	0.60**	1			25.73	10.22	0.23	-0.77
3- Binge eating symptoms	0.62**	0.63**	1		67.36	22.37	0.52	-0.20
4- Body Appreciation	-0.51**	-0.52**	-0.58**	1	55.84	7.14	0.98	0.39

Figure 1 shows the results of the test of research moderated mediation model, using the method proposed by Hayes. These results show that among the moderating effects, only the coefficient of body image concern × body appreciation is significant, and as a result, body appreciation has a moderating role in the direct path of body image concern on binge eating symptoms.

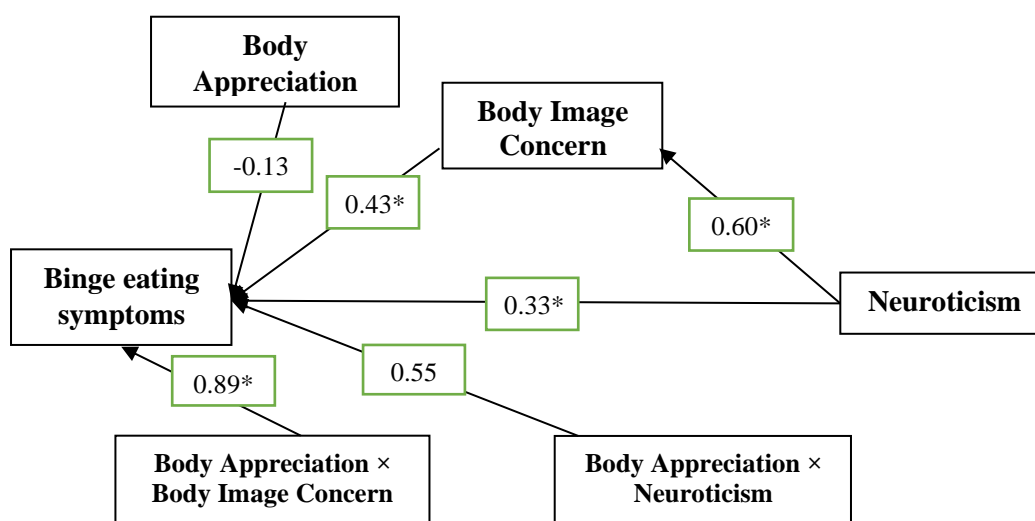


Figure 1 - Standard path coefficients of the moderated mediation model of the research ($\rho < 0.05^*$)

Examining the moderating effect of body appreciation shows that by increasing body appreciation in individuals, the effect of body image concerns on women's binge eating symptoms is reduced. Also, the results show that the indirect effect of neuroticism on binge eating symptoms decreases with increasing body appreciation scores in people due to the mediating role of body image concern.

Discussion and Conclusion

According to the findings of the research, body appreciation can be a protective factor, leading to the reduction of the indirect effect of neuroticism and the direct effect of body image concern on women's binge eating symptoms, in a way that women with high body appreciation, even if they are also neurotic, this neuroticism does not affect their body image concern and binge eating symptoms. Whereas if body appreciation is low, even low levels of neuroticism can lead to significant increases in body image concerns and binge eating symptoms in women.

Considering the protective role of body appreciation, it is possible to reduce the symptoms of eating disorders, especially the symptoms of binge eating disorder, in society by improving people's view of themselves and their appearance as an adaptive coping skill in preventive and intervention programs. The limitation of the research community to normal (non-clinical) women limits the possibility of generalizing the results, and as a result, the generalization of the results to other communities should be done with caution. Therefore, it is suggested that the present research be repeated in other societies, especially in male samples and clinical samples with eating disorders.

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Conflict of Interests

There is no conflict of interest for the authors.



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