

THE IMPACT OF NEGATIVE AFFECT ON BODY IMAGE PERCEPTION IN INDIVIDUALS WITH AND WITHOUT BINGE EATING BEHAVIOUR

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ABSTRACT

Emotional distress is a key factor influencing body image perception and eating behaviours, yet its role varies across individuals with and without binge eating behaviour. Understanding the impact of negative affect on body image perception is essential for developing effective psychological interventions. This study explores the role of negative affect in shaping body image perception among individuals with and without binge eating behaviour. A cross-sectional research design was employed, with data collected from 300 participants (150 with binge eating behaviour and 150 without) aged 18–24 from Hazara Division, including Haripur and Abbottabad. Standardized measures, including the Binge Eating Disorder Screener-7 (BEDS-7), the Positive and Negative Affect Schedule (PANAS), and the Body Image Questionnaire, were used. Results indicated that individuals with binge eating behaviour reported significantly higher levels of negative affect (M = 29.57, SD = 6.40) and body dissatisfaction (M = 66.75, SD = 5.74) compared to those without binge eating behaviour (M = 23.80, SD = 3.70; M = 55.53, SD = 6.25), with large effect sizes (Cohen's d = 1.10 and 1.86, respectively). However, a significant negative correlation between negative affect and body image perception was only observed in individuals without binge eating behaviour (r = -0.388, p < 0.01). Gender differences revealed that females reported significantly higher levels of negative affect (M = 31.68, SD = 7.70) and more negative body image perception (M = 59.75, SD = 6.64) compared to males (M = 25.47, SD = 4.40 and M = 49.21, SD = 4.25, SD = 4.25)respectively), with large to very large effect sizes (Cohen's d = 0.99 and 1.89, respectively). Additionally, regression analysis indicated that negative affect (B = 0.40, p < 0.001) and negative body image perception (B = 0.45, p < 0.01) were significant predictors of binge eating behaviour. These findings highlight the complex interplay between emotional distress and body dissatisfaction, suggesting the need for targeted psychological interventions.

Keywords: Negative Affect, Body Image Perception, Binge Eating Behaviour, Emotional Distress, Psychological Interventions

INTRODUCTION

Binge Eating behaviour (BEB), a well recognized mental health disorder, is defined by consuming a large, unusual amount of food within short period of time. It is related to sensation of helplessness. BEB differs from overeating in that people have no control on their eating behaviours and face distress (American Psychiatric Association, 2020). Binge eating episodes do not cause compensatory



actions like purging which is common in other eating disorders like bulimia nervosa. Multiple physical and psychological issues like obesity, bad image, and distorted body image are caused by BEB. It is considered as part of the eating disorder spectrum.

Research indicates that binge eating behaviour (BEB) impacts individuals across various demographic groups, although its prevalence is influenced by a range of factors, including gender, age, and socioeconomic status. Understanding these demographic variables is crucial for identifying at-risk populations and tailoring interventions effectively. According to Ellie Pike (2024), approximately 3.5% of women and 2.0% of men experience binge eating disorder in their lifetime, almost 2.8% of Adult Americans experience binge eating symptoms at some points in their lives. This indicates a significant prevalence among both genders, but the differences may stem from various sociocultural influences. The prevalence of binge eating behaviour is twice as high among women as among men, which is most common globally (affecting 0.2% to 4.7% of adults) (Kessler et al., 2013). Many individuals with BEB fall within a healthy BMI range. However, eating disorders are now nearly as prevalent among male students in Pakistan as females.

Approximately 1.5% of women and 0.3% of men globally suffer from binge eating, and 0.6% to 1.8% of females and 0.3% to 0.7% of males report having lifetime diagnosis of binge eating. While in adolescence, binge eating behaviour is more common, but it is often short-term. Many adults with BEB experience long-establish symptoms but half or very few and recognize in healthcare. According to a nationwide US-based study, almost all (94%) of those with BEB reported having mental health symptoms throughout their lives, and up to 23% had attempted suicide (Keski-Rahkonen, 2021).

Generally commencing in the late adolescence or early adulthood, binge eating behaviour often starts between the ages of 18 to 24. Adolescents as compared to adults are typically more impetuous, self-conscious, and are particularly vulnerable due to peer pressures, the quest for identity, and heightened sensitivity to body image issues, which can culminate in disordered eating patterns (Levine & Smolak, 2018). The transition into adulthood does not necessarily mitigate these risks; young adults, especially those in college settings, often face similar pressures related to body image, academic performance, and social acceptance.

Further, research indicated that binge eating behavior can occur at any age. Even the return of binge eating behavior can be seen in persons at their middle age due to life burdens such as family responsibilities, economic issues, job pressure etc. (Treasure et al., 2015). It leads to stress and feelings of inadequacy, due to significant hormonal problems that alter mood and appetite problems. It is important to note that binge eating behaviour is not restricted to any age group. Rather it is the permanent issue that is related to social, psychological and biological elements over the period of individual's lifetime. There is need to apply intervention for meeting the needs of varied population and promoting the resilience and healthier coping behaviour.

Problem Statement

The study aims to assess the negative affect and perception of body image in individuals with and without binge eating behaviour.

Research Objectives

- 1) To compare negative affect and perception of body image in individuals with binge eating behaviour and those without binge eating behaviour.
- 2) To assess the relationship between negative affect and perception of body image in individuals with binge eating behaviour and those without binge eating behaviour.
- 3) To examine the gender differences in negative affect and perception of body image among individuals with binge eating behaviour.
- 4) To examine the extent to which negative affect and negative perception of body image predict binge eating behaviour.

Research Hypotheses

- 1. The level of negative affect and negative perception of body image will be higher in individuals with binge eating behavior compared to individuals without binge eating behavior.
- 2. There will be a significant positive relationship between negative affect and negative perception of body image in individuals with binge eating behavior.



- 3. Females with binge eating behavior will show higher level of negative affect and negative perception of body image as compared to males with binge eating behavior.
- 4. Negative affect and negative perception of body image will significantly positively predict binge eating behavior.

Research Design

Quantitative cross sectional research design and purposive sampling technique was utilized in this study

Research Population

The population of the research consisted of male and female young adults (age, 18-24) from Haripur, and Abbottabad.

Sample Of the Study

A sample size of 300 was determined by taking significance (0.95), confidence interval (95%), and power 80% (Raosoft, 2011). Thus, the number of participants of the study was 300 young adults, 150 male (75 with BEB and 75 without BEB) and 150 female (75 with BEB and 75 without BEB), with a chronological age range of 18 to 24 years.

Instruments

The following instruments are used for collection of data:

Demographic Information

Fundamental demographic information including age and gender was considered in the study.

Binge Eating Disorder Screener-7 (Beds-7)

Binge eating disorder screener-7 is a brief sevenitem tool developed by Herman et al. (2016) to screen for symptoms of binge eating disorder based on DSM-5 criteria. The BEDS-7 assesses the frequency of binge eating episodes, feeling of loss of control, and association distress, providing an effective measure for identifying individuals at risk of binge eating disorder.

The English Version Of 19-Item Body Image Questionnaire

The English Version of 19-Item body Image Questionnaire developed by Koleck et al. (2002) is a self-reported instrument. The scale is 5-point Likert scale designed to assess individuals' perception and attitudes towards their body. Two contrasting descriptors, one positive and one negative-reflecting various facets of body image are included in each item of the scale.

Positive And Negative Affect Schedule (Panas)

Positive and Negative Affect Schedule developed by Watson et al. (1988) is a self-reported scale, respondents score the degree to which they have experienced a range of emotions on 20 items, including 10 items for positive affect and 10 items for negative affect. This is a widely used scale in psychological research to assess mood and emotional state. The Positive and Negative Affect Schedule has demonstrated good internal consistency, with a Cronbach's alpha coefficient of 0.86 to 0.90 for Positive Affect and 0.84 to 0.87 for Negative Affect.

Procedure

The research followed ethical guideline while data collection. Participants were reached out and after establishing rapport with the participants their willingness to participate in research was asked and informed consent was taken. The proposed study data was gathered from different institutes including universities and clinics of Abbottabad and Haripur. Before collecting information from the participants, it was ensured that the study was that all an academic investigation, and information gathered will be solely utilized for research purpose ensured and complete confidentiality of their information.

Before distributing the questionnaires, brief introduction was given to clear any difficulty understanding. Binge eating disorder screener-7 (BEDS-7), The English version of the 19-item body image questionnaire, and Positive and affect negative schedule (PANAS) was administered. The researcher helped the participants when they had any understanding issues with certain questions. The questionnaire were verified by the researcher after completion to ensure that no information was missing and no questions had been purposefully or accidentally left blank.

Data was also collected online through google forms. The inform consent and description of purpose for collection of information was mentioned. After completion of data collection, participants were thanked for their cooperation and involvement. In order to conduct data analysis, SPSS (Statistical Package for the Social



Sciences)	was utilized for c	escriptive statistics, t-		
Results	chattori arranysis, arr	regression analysis.		
Table 1	Sociodemographic	characteristics of participants (N	=300)	
Variab	bles	Ν	%	
Gende	er			
	Female	150	50.0	
	Male	150	50.0	
Age				
	18-24	300	100	

Note. n = numbers of participants, %= percentage

Table 1 provides an overview of the sociodemographic characteristics of the study participants (N = 300). The sample consists of an equal distribution of males (n = 150, 50%) and females (n = 150, 50%), ensuring balanced representation across gender groups. Regarding age, all participants fall within the 18–24 age

range, accounting for 100% of the sample. This uniform age distribution allows for a focused examination of binge eating behaviour, negative affect, and body image perception within a specific developmental stage. The balanced gender representation enhances the generalizability of findings across both male and female populations.

Table 2 I sycholitettic I toperties of the institutient	Tabl	le 2	Ps	ycho	metric	Pro	perties	of	the	Instr	ument
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Variables					Range				
	k	М	SD	α	Actual	Potential	Skewness	Kurtosis	
Negative Affect Sch	nedule 10	26.69	5.97	.70	16-46	10-50	.78	.35	
Institute for Excellence in Education & Research									
Body Image Questi	onnaire 19	61.14	8.21	.72	43-80	19-95	.00	66	
Binge Questionnaire	Eating 7	10.86	1.90	.68	7-17	0-17	.63	.80	

Note: k= No. of items, M= Mean and SD= Standard Deviation, α = Cronbach's Alpha

The table presents the psychometric properties of the instruments used in study. For negative affect, the range of score is from 16 to 46, with a mean of 26.69. The standard deviation is 5.97, indicating a moderate level of variability, while a skewness of .78 suggests a slight positive skew. The kurtosis of .35 indicates a distribution that is close to normal, with only a slight peak. The positive affect shows a mean of 29.50, with scores ranging from 13 to 46. The standard deviation is 6.34, reflecting some variation in positive affect. A skewness of -.16 indicates a nearly symmetrical distribution, while the kurtosis of -.32 suggests a flatter distribution with fewer extreme values. For the Body Image Questionnaire, the range of score is from 43 to 80, with a mean of 61.14. The standard deviation is 8.21, reflecting variability in body image perception. The skewness of .00 suggests perfect symmetry, and the kurtosis of .66 indicates a platykurtic distribution, suggesting that data is flatter and has fewer extreme values than a normal distribution. For the Binge Eating Questionnaire, the score range is from 7 to 17, with a mean of 10.86. The standard deviation is 1.90, reflecting a moderate variability in scores. The skewness of .63 suggests a slight positive skew,



and the kurtosis of .80 indicates a leptokurtic distribution, suggesting a more peaked distribution with more extreme values than a normal distribution. The Cronbach's alpha values for the instruments are .70 for the Negative Affect Schedule, .72 for the Body Image Questionnaire, and .68 for the Binge Eating Disorder Questionnaire, indicating good internal consistency for all scales.

Variables	1	2	3	
Negative Affect	-	-	-	
Body Image	38**	-	-	
Binge Eating	.19*	16*	-	

Table illustrates bivariate correlation to see the relationship between Negative Affect, Perception of Body Image, and Binge Eating Behaviour, indicating significant relationship. There is a negative correlation between negative affect and body image (r = .38, p < .01), indicating that higher level of negative affect are associated with negative perception of body image. Furthermore, negative affect is positively correlated with binge eating behaviour (r = .19, p < .05), indicating that individuals with higher level of negative affect

tend to report higher level of binge eating behaviour. Conversely, there is a negative correlation between body image and binge eating behaviour (r = -.16, p < .05), suggesting that individual with higher level of positive body image perception are less likely to engage in binge eating behaviour. These findings highlight the complex relationship between emotional states, body image, and eating behaviour, underlining the need for interventions that address these interconnected factors.

Table 4Correlation Analysis of Negative Affect and Body Image in Individuals with Binge Eating Behaviour(N=150)

Variables	1	2	
Negative Affect	-	-	
Body Image	08	-	
Note. p > 0.05			

Table illustrate bivariate correlation conducted to examine the relationship between negative affect and perception of body image in individuals with binge eating behaviour. Results indicate a weak and non-significant negative correlation between negative affect and perception of body image (r = -

.08, p > 0.05). This suggests that no meaningful relationship exists between these two variables in this sample. Further research with larger samples or alternative methodologies may be needed to better understand potential connections.

Table 5 Mean Comparison of Individuals with and without Binge Eating Behaviour on Study Variables (N=300)

Variables	With (n=150	Binge))	Eating	Without Eating (n=	Binge 150)	t(298)	р	Cohen's d
	М	SD		М	SD			

SO	ERNATION	Vol	lume 3, Issue 3, 2025				
Negative Affect	29.57	6.40	23.80	3.70	9.56	.00	1.10
Negative Body Image	66.75	5.74	55.53	6.25	16.19	.00	1.86

Note. M= Mean, SD= Standard Deviation, p= Level of Significance

This table indicates that on Negative Affect, individuals with binge eating behaviour (n = 150) mean = 29.57 (SD = 6.40) is higher than of individuals without binge eating behaviour (n = 150) mean = 23.80 (SD = 3.70) with a significance t-value of 9.56 (p < .001) and a Cohen's d of 1.10, indicating larger effect size. Similarly, individuals with binge eating behaviour have a mean negative body image score of 66.75 (SD = 5.74) which is higher as compared to individuals without binge eating behaviour with mean score of 55.53 (SD =

6.25), with a significant t-value of 16.19 (p < .001) and a Cohen's d of 1.86, indicating a larger effect size. These results suggest that there is a significant difference between individuals with binge eating behaviour and individuals without binge eating behaviour, showing that negative affect and negative perception of body image is higher in individuals with binge eating behaviour compared to individuals without binge eating behaviour.

Table 6 Mean Comparison of Male and Female Participants with Binge Eating Behaviour on Study Variables

Variables	Male (n	l=(5)	remale (i	Female (n=75)		p	Cohen's a	
	М	SD	М	SD				
Negative Affect	25.47	4.40	31.68	7.70	2.14	.02	.99	
					R			
Negative Body Image	49.21	4.25	59.75 Institute for Excellence	6.64 ce in Education & Rese	2.56	.00	1.89	

Note. M= Mean, SD= Standard Deviation, p= Level of Significance

This table presents the mean comparison of male and female participants with binge eating behaviour on study variables: Negative Affect and Negative Body Image. On Negative Affect, male participants (n = 75) have a mean of 25.47 (SD = 4.40), while female participants (n = 75) have a significantly higher mean of 31.68 (SD = 7.70), with a t-value of 2.14 (p < .05) and a Cohen's d of .99, indicating a large effect size. Similarly, on Negative Body Image, male participants have a mean of 49.21 (SD = 4.25), and female participants show a significantly higher mean of 59.75 (SD = 6.64), with a t-value of 2.56 (p < .001) and a Cohen's d of 1.89, indicating a very large effect size. These results suggest that female participants with binge eating behaviour exhibit higher levels of negative affect and a more negative perception of body image compared to their male counterparts, highlighting the significant gender differences in these psychological factors among individuals with binge eating behaviour.

Table 7 Prediction of Binge Eating Behaviour from Study Variables

Variables	В	95% CI	SE	β	R ²
Constant	10.40***	[8.30, 12.50]	1.61		
Negative Affect	.40***	[.41, .74]	.03	.30	.14
Negative Body Image	.45**	[.43, .61]	.02	.32	.14



Note. B = Unstandardized Beta, β = Standardized Beta, SE= Standard Error, *= Significance level, CI = Confidence Interval

This table presents the results of regression analysis predicting binge eating behaviour from Negative Affect and Body Image. The constant is 10.40 (p \leq .001), indicating the baseline level of binge eating behaviour. Negative affect had a regression coefficient (B) of .40 (p \leq .001), suggesting a significant positive relationship, where higher negative affect predicts increased binge eating behaviour. Negative perception of Body image had a regression coefficient (B) of .45

Discussion

This study aim to explore the relationship between negative affect, perception of body image, and binge eating behaviour, as well as to examine group and gender differences based on binge eating status. The results provide valuable insights on the intricate relationship that exists between emotional states, body image, and disordered eating behaviours.

The results supported the first hypothesis; the level of negative affect will be higher in individuals with binge eating behaviour as compared to individuals without binge eating behaviour, showing significantly higher negative affect in individuals with binge eating behaviour. Participants with binge eating behaviour reported a mean score of 29.57 (SD = 6.40), which was notably higher than those without binge eating behaviour (M = 23.80, SD = 3.70), with large effect size (Cohen's d = 1.10). This aligns with prior research indicating that anger, sadness, and other interpersonal experience related negative emotions are also seemed to play their role in binge eating behaviour, and also the tendency of individuals with binge eating to suppress emotions leads an increase to in psychopathological thoughts and symptoms (Dingemans et al., 2017). Poor emotion regulation also leaded to emotional eating in adolescents, as individual rely on food consumption as a coping mechanism for negative emotions in late adolescence (Shriver et al., 2021). A loop of emotional dysregulation and maladaptive eating behaviour may be sustained by such elevated affect, which can both cause and result from binge eating episodes (Lavender et al., 2015).

Consistent with the first hypothesis, individuals

(p < .01), indicating a significant positive relationship, where higher level of negative perception of body image predicts an increase in binge eating behaviour. The R-squared value of .14 means that 14% of the variance in binge eating behaviour is explained by these predictors. These findings suggest that both negative affect and negative perception of body image are significantly positive predictors of binge eating behaviour.

with binge eating behaviour exhibited more negative body image perception (M = 66.75, SD =5.74), compared to those without binge eating behaviour (M = 55.53, SD = 6.25), with a very large effect size (Cohen's d = 1.86). These findings underscore the role of body dissatisfaction as a key factor in disordered eating behaviours. As supported by studies such as Zainab & Ahmad (2021), in Pakistani teenagers, body dissatisfaction is a leading factor for problematic eating attitudes. Body image dissatisfaction and eating attitudes are related, showing that body image satisfaction is inversely related to disturbed eating attitude. Positive body image impact also leads to appearance fixing resulting in binge eating behaviour (Bianchi et al., 2023). Research also showed that the association between eating pathology and perfectionism was mediated by body dissatisfaction (Hu et al., 2023).

Contrary to the second hypothesis, the correlation analysis within the binge eating group (individual with BEB and without BEB) revealed no significant relationship between negative affect and body image (r = -0.085, p > 0.05). This result differs from the previous research findings that, respondents with higher level of stress showed more dissatisfaction with their body image as compared to those with low level of stress (Egle & Aidas, 2020). Studies shows that fear and discrimination based on appearance, especially in marginalized groups, lead to negative affect and heightened obsession with appearance. This cycle encourages negative habits including obsessing about one's body image and aiming for unrealistic beauty standards (Rodgers et al., 2023). The particulars of the sample or the existence of additional moderating factors, such as self-esteem



or coping strategies, which were not specifically evaluated in this study, could be the cause of disparity. To further understand the connection between emotional states and body image in regard to binge eating behaviour, future studies may examine these mediating or moderating aspects.

The results supported the third hypothesis, data revealed that females (M = 31.68, SD = 7.70) reported significantly higher negative affect than males (M = 25.47, SD = 4.40), with a t-value of 2.14 ($p \le .05$) and a Cohen's d of .99, indicating a large effect size. Similarly, females (M = 59.75, SD = 6.64) exhibited significantly higher negative body image compared to males (M = 49.21, SD = 4.25), with a t-value of 2.56 (p < .001) and a Cohen's d of 1.89, suggesting a very large effect size. These findings are consistent with previous research that suggests females, particularly those with binge eating behavior, often report higher levels of negative affect and body dissatisfaction compared to males (Grabe et al., 2008; Rodgers et al., 2023). The higher levels of negative affect and body dissatisfaction in females could be attributed to societal pressures on women regarding appearance and emotional expression, which are often linked to maladaptive coping strategies such as binge eating (Gremillion, 2003).

The results also supported the fourth hypothesis that negative affect and negative perception of body image will significantly positively predict binge eating behavior. The regression analysis indicated that both negative affect (B = .40, p < .001) and negative body image (B = .45, p < .01) were significant positive predictors of binge eating behavior. The standardized betas (β = .30 for negative affect and β = .32 for body image) further support the strength of these predictors. These findings align with previous studies suggesting that individuals with elevated negative affect and poor body image are more likely to engage in

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binge eating behaviors as a coping mechanism (Lavender et al., 2015). Negative affect, particularly feelings of sadness, anger, and anxiety, can drive emotional eating as individuals attempt to cope with their emotions through food, while negative body image can contribute to binge eating as a way of managing dissatisfaction with one's appearance (Dingemans et al., 2017; Bianchi et al., 2023).

Though, these results are consistent with the hypotheses of study. To further understand the intricate link between emotional and cognitive predictors of binge eating behavior, future research may examine these mediating or moderating components. Furthermore, investigating gender-specific or cultural factors may help clarify how personal coping strategies and social influences contribute to the development of binge eating behaviors.

Conclusion

The study concluded that negative affect and body image perception were present in both binge eaters and non-binge eaters. It discovers that negative emotions have a considerable impact on body image perception in people who do not binge eat, whereas the association is weak and non-significant in those who binge eat, implying the presence of additional emotional and behavioural components. Individuals who binge eat report higher levels of negative affect and body image assessment, with females experiencing more anguish than males. The study also confirms the psychometric qualities of the tools utilized, so increasing their dependability. Furthermore, negative affect and poor body image perception have been discovered as major predictors of binge eating behaviour, indicating that addressing these psychological aspects is critical for effective intervention and therapy development.

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