



Impact Of Eating Attitude On Self-Criticism And Body Dysmorphic Concern Among University Students.

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ABSTRACT

The study found that X and Y: Eating attitudes (X) and self-criticism (Y) have a relatively high positive link ($r = 0.674$), according to the correlation coefficient. This shows that people who score higher on eating attitudes also typically score higher on self-criticism. Because of the statistical significance of the association ($p < 0.001$), it is doubtful that this link is the result of chance. X and Z: Eating Attitudes and Body Dysmorphic Concern: There is a moderately favorable connection ($r = 0.534$) between eating attitudes (X) and body dysmorphic concern (Z). This shows that people who score higher on eating attitudes also typically score higher on body dysmorphic concern. Given that the association is statistically significant ($p < 0.001$), it is improbable that these two variables are related. Y and Z (Body Dysmorphic Concern and Self-Criticism): A high positive association of 0.721 is found between body dysmorphic concern (Z) and self-criticism (Y). This shows that people who score higher on body dysmorphic concern also tend to score higher on self-criticism. Because of the statistical significance of the association ($p < 0.001$), it is doubtful that this link is the result of chance

Introduction

Gaining insight into the complicated relationships between eating attitudes, self-criticism, and body dysmorphic concerns is an interesting way to understand the complexities of mental health and behavior. The intricate interactions between these factors create a web of effects that influence how individuals view their bodies and themselves. Examining the subtle ways in which eating attitudes, self-criticism, and body image issues interact, and perhaps reinforce one another, is crucial in understanding how these aspects are interrelated. Exercise addiction can influence this dynamic, acting as both a coping mechanism and a potential trigger for exacerbating these issues (Moussa et al., 2024; Iyer et al., 2024; Jaafari et al., 2023; Gilani et al., 2023; Tantry & Singh, 2016).

Eating disorders, including bulimia nervosa, anorexia nervosa, and binge-eating disorder, involve abnormal eating behaviors that significantly impair an individual's functioning (American Psychiatric Association, 2013). The estimated prevalence of eating disorders in Iran ranges from 0.8% to 30%, depending on the threshold used (Nobakht & Dezhkam, 2023). Eating disorders have been linked to both physical and mental health challenges, such as body dissatisfaction, depression, and psychological distress (Freimuth et al., 2023). Like eating disorders, exercise addiction has been associated with psychological distress, depression, and emotional stress (College et al., 2024). These findings suggest that exercise addiction and eating disorders share certain characteristics, such as being behavioral addictions with similar health consequences. These relationships can, in part, be explained by biological mechanisms (e.g., stimulation of dopaminergic brain structures) connecting mood to exercise (Gernal et al., 2024; Khan et al., 2023; Tantry & Ali, 2020; Greenberg, 2019; Majeed, 2018a, 2018b; Tantry & Singh, 2017).

Theoretical and empirical accounts suggest that individuals with eating disorders tend to compare themselves negatively to others due to the overvaluation of eating and body image (Ferreira, Pinto-Gouveia, & Duarte, 2011). To feel safer and increase their sense of belonging, these individuals may adopt defensive strategies, such as self-criticism, and push themselves to meet excessively high performance standards, aiming for perfection (Gilbert, Durrant, & McEwan, 2006; Gilbert & Procter, 2006). Self-criticism refers to negative self-judgment and scrutiny, where individuals display a punitive response to their own mistakes or perceived flaws, particularly regarding physical appearance, which may cause social rejection (Gilbert et al., 2004). This constant self-harassment is highly linked to psychopathology, including depressive symptoms (Dunkley, Zuroff, & Blankstein, 2003; Gilbert et al., 2004; Gilbert et al., 2006). Recent research has shown that self-criticism plays a crucial role in eating-related symptoms, such as binge eating (Dunkley & Grilo, 2007). Specifically, self-criticism has been considered a maladaptive emotional regulation process, predicting increased drive for thinness by fueling a sense of inferiority in comparison to others (Sorour et al., 2024; Al Jaghoub et al., 2024; Mainali & Tantry, 2022; Nivetha & Majeed, 2022; Tantry & Singh, 2018).

A fascinating perspective is provided by some research suggesting that an individual's inability to symbolically process emotional experiences—resulting in undifferentiated and dysregulated affect—may contribute to body image distortion. In other words, failing to distinguish between emotional states and body sensations can increase body dissatisfaction and

lead to misinterpretations of one's body image, eating behaviors, and cognitive distortions. This lack of emotional regulation can create an emotional void, prompting the individual to focus excessively on the details of their own body (Gilani et al., 2024; Farooq & Majeed, 2024; Achumi & Majeed, 2024; Hussein & Tantry, 2022).

This in turn can lead to maladaptive strategies, such as excessive exercise, to control one's body and appearance, particularly in clinical cases of body dysmorphic disorder (BDD). BDD refers to an excessive concern with a perceived or slight defect in one's physical appearance, which may range from mild to clinically significant (Oosthuizen et al., 1998; Phillips, 2005). This feature can occur in various psychiatric disorders, including schizophrenia (Oosthuizen et al., 1998), depression (Oosthuizen et al., 1998), and eating disorders (Mancuso et al., 2010). In its most extreme form, BDD may result in significant distress and/or impairments in social and occupational functioning (APA, 2000). BDD is associated with significant comorbidities, poor quality of life, and higher suicide rates (Pavan et al., 2008; Didie et al., 2007; Vibin & Majeed, 2024; Monika et al., 2023a, 2023b; Kendler & Prescott, 2021; Tantry et al., 2019; Gilani, 2014).

The current study had several objectives:

1. To investigate the significant differences between eating attitudes, self-criticism, and body dysmorphic concerns among adolescents.
2. To examine gender differences in eating attitudes, self-criticism, and body dysmorphic concerns.
3. To assess the correlation between eating attitudes, self-criticism, and body dysmorphic concerns among students.

While there is considerable evidence linking BDD to eating disorder-related symptomatology (Gambiza et al., 2023; Yachna & Majeed, 2023; Sulthan et al., 2022; King & Hopwood, 2021; Tantry et al., 2018), no prior research, to the best of our knowledge, has explored the involvement of self-criticism in conjunction with these two variables. Therefore, the present study aimed to explore the correlational impact of eating attitudes on self-criticism and body dysmorphic concerns. Specifically, the study focused on college students, as they are particularly concerned about their physical appearance during this stage of life. The study hypothesized:

- There will be significant gender differences in eating attitudes.
- There will be significant gender differences in self-criticism.
- There will be significant gender differences in body dysmorphic concerns.
- There will be significant differences in eating attitudes across different weight categories.
- There will be significant differences in self-criticism across different weight categories.
- There will be significant differences in body dysmorphic concerns across different weight categories.
- There will be significant differences in eating attitudes across different height categories.
- There will be significant differences in self-criticism across different height categories.
- There will be significant differences in body dysmorphic concerns across different height categories.
- There will be significant differences in eating attitudes across different age groups.
- There will be significant differences in self-criticism across different age groups.
- There will be significant differences in body dysmorphic concerns across different age groups.
- There will be significant correlations between eating attitudes and self-criticism.
- There will be significant correlations between eating attitudes and body dysmorphic concerns.
- There will be significant correlations between self-criticism and body dysmorphic concerns.

Methodology

Participants

The study sample consisted of 100 college students aged 18-25, with additional responses from academics aged 45-50 across India. Sampling was conducted randomly by distributing a questionnaire across various classes and academic streams. A follow-up questionnaire was sent to 62 students who had not responded within four weeks. Informed consent was obtained from each participant, and the study was approved by relevant authorities.

Tools:

The **Body Dysmorphic Disorder Questionnaire (BDDQ)** is a widely used, brief self-report tool that helps assess the presence of Body Dysmorphic Disorder (BDD) according to the DSM-IV criteria. It includes questions that examine whether respondents are excessively concerned about their appearance, think frequently about their appearance problems, and wish they could think less about these issues. It also assesses whether the individual perceives their main appearance problem as not being thin enough or being too fat.

Attitudes toward Eating-26 (EAT-26) is one of the most commonly used standardized self-assessments for evaluating symptoms and concerns related to eating disorders. The EAT-26 has proven to be an effective screening tool for identifying "eating disorder risk" in high school and college students, as well as in other special-risk groups like athletes. The premise behind screening for eating disorders is that early identification leads to early treatment, potentially reducing severe physical and psychological complications, or even preventing death.

The **Level of Self-Criticism** was assessed using the Levels of Self-Criticism (LOSC) scale, which measures two unhealthy forms of negative self-evaluation: Internalized Self-Criticism (ISC) and Comparative Self-Criticism (CSC). Initially, reliability and item analysis were conducted on the first set of 34 items involving 282 participants. Based on these findings, the final scale was constructed, consisting of 12 items for CSC and 10 items for ISC. Validation of the scales was conducted with 144 volunteers. The results revealed that CSC and ISC were moderately correlated. Each scale showed distinct and predictable correlations with other personality traits, attachment styles, and conflict resolution strategies, and these associations did not appear to primarily stem from shared associations with neuroticism. Implications for both clinical practice and research are also discussed.

ANALYSIS AND RESULTS**T-Test: Group Statistics**

	GENDER	N	Mean	Std.Deviation	Std.ErrorMean
X	MALE	54	19.00	10.619	1.445
	FEMALE	57	16.54	11.076	1.467
Y	MALE	54	36.87	9.473	1.289
	FEMALE	57	36.58	9.682	1.282
Z	MALE	54	8.69	6.231	.848
	FEMALE	57	7.88	6.900	.914

The table presents measurements for three psychological categories—eating attitudes, self-criticism, and body dysmorphic concerns—applicable to both male and female individuals. Within each gender group, the mean, standard deviation, and standard error mean for each construct have been evaluated.

Eating Attitudes (X):

The mean scores for eating attitudes show that women have an average score of 16.54, while men score slightly higher, with an average of 19.00. This suggests that, generally, men tend to exhibit slightly more intense eating attitudes compared to women. The standard deviation for males is 10.619, indicating moderate variability in their responses. For females, the standard deviation is slightly larger at 11.076, signifying a comparable degree of variability between the two groups (Bhardwaj et al., 2023; Sabu et al., 2022; Brown & Barlow, 2022; Tantry & Ahmad, 2019; Majeed, 2019a, 2019b, 2019c; Cacioppo & Patrick, 2018).

Self-Criticism (Y):

In the self-criticism domain, men score an average of 36.87, while women score 36.58 on average. The data reveals that there is a slight difference in self-criticism scores between genders, with men tending to score a bit higher. The standard deviation for males is 9.473, reflecting moderate variability in self-criticism scores. For females, the standard deviation is marginally higher at 9.682, suggesting that the variability in self-criticism levels is similar across both genders.

Body Dysmorphic Issues (Z):

When it comes to body dysmorphic concerns, men report an average score of 8.69, while women report an average of 7.88. This indicates that men tend to express slightly more concern about their physical appearance compared to women. The standard deviation for males is 6.231, showing a moderate degree of variation in their concerns. For females, the standard deviation is slightly larger at 6.900, suggesting a comparable level of variability in body dysmorphic concerns across both genders.

Interpretation:

- **Eating Attitudes:** Men generally report slightly higher mean scores for eating attitudes than women, indicating that there may be distinct differences in how men and women approach food and eating behaviors. Despite this, there is considerable variability within each gender group.
- **Self-Criticism:** The mean scores for self-criticism between males and females are very similar, with men scoring marginally higher. This suggests that both genders experience similar levels of self-criticism, with a moderate degree of variation within each group.
- **Body Dysmorphic Issues:** Men tend to report slightly higher mean scores on body dysmorphic concerns compared to women. This suggests that, on average, men may be more preoccupied with perceived flaws in their physical appearance. However, similar variability in body dysmorphic concerns exists within each gender group.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
X Equal variances assumed	.626	.430	1.191	109	.236	2.456	2.062	-1.630	6.542
			1.193	108.983	.236	2.456	2.059	-1.625	6.537
Y Equal variances assumed	.014	.907	.160	109	.873	.291	1.819	-3.315	3.898
			.160	108.884	.873	.291	1.818	-3.313	3.895
Z Equal variances assumed	2.723	.102	.646	109	.519	.808	1.250	-1.670	3.286
			.648	108.756	.518	.808	1.247	-1.663	3.279

The results of the independent sample tests, including t-tests for equality of means and Levene's test for equality of variances, are presented in the following table. Three variables—X (eating attitudes), Y (self-criticism), and Z (body dysmorphic concerns)—were compared across different groups or conditions.

Levene's Test for Equality of Variances:

Levene's test evaluates whether the variances of the three variables (X, Y, and Z) are consistent across all groups being compared. This test is essential because unequal variances can affect the interpretation of subsequent t-tests.

• **Eating Attitudes (X):** Levene's test yielded a p-value of 0.430 (>0.05), indicating that the assumption of equal variances is satisfied.

• **Self-Criticism (Y):** The p-value for Levene's test was 0.907 (>0.05), further supporting that the assumption of equal variances holds.

• **Body Dysmorphic Concerns (Z):** Levene's test resulted in a p-value of 0.102 (>0.05), suggesting that the assumption of equal variances is also valid for this variable.

Since all p-values are greater than 0.05, we can proceed with the assumption of equal variances for all variables.

t-Test for Equality of Means:

The t-tests determine whether the means of the three variables (X, Y, and Z) differ significantly between the groups under comparison.

• Eating Attitudes (X):

A t-value of 1.191 with 109 degrees of freedom and a p-value of 0.236 (>0.05) was obtained assuming equal variances. This indicates no significant differences in eating attitudes between the groups. The same results were found when the t-test was conducted without assuming equal variances (t-value = 1.193, p-value = 0.236, >0.05).

• Self-Criticism

(Y):

The t-test assuming equal variances produced a t-value of 0.160 with 109 degrees of freedom and a p-value of 0.873 (>0.05). This suggests that self-criticism levels do not significantly differ across the groups. A similar outcome was found when the t-test was performed without assuming equal variances (t-value = 0.160, p-value = 0.873, >0.05).

• Body Dysmorphic Concerns (Z):

A t-test assuming equal variances resulted in a t-value of 0.519 with 109 degrees of freedom and a p-value of 0.519 (>0.05). This indicates that body dysmorphic concerns do not vary significantly between the groups. When the t-test was conducted without assuming equal variances, the t-value was 0.648, and the p-value was 0.518 (>0.05), yielding similar results.

Interpretation:

The t-test results for all three variables (eating attitudes, self-criticism, and body dysmorphic concerns) indicate no significant differences between the groups. These findings suggest that the conditions or factors distinguishing the groups do not significantly influence eating attitudes, self-criticism, or body dysmorphic concerns.

Oneway: Descriptives

Neway Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
X	Below 1990	11	13.18	9.485	2.860	6.81	19.55	4	32
	1990 to 1999	13	15.85	7.851	2.178	11.10	20.59	6	32
	2000 TO 2005	87	18.60	11.328	1.214	16.18	21.01	1	63
	Total	111	17.74	10.877	1.032	15.69	19.78	1	63
	Y	Below 1990	11	35.64	3.722	1.122	33.14	38.14	29	40
1990 to 1999		13	37.54	9.761	2.707	31.64	43.44	14	53
2000 TO 2005		87	36.74	10.061	1.079	34.59	38.88	0	62
Total		111	36.72	9.539	.905	34.93	38.51	0	62
Z		Below 1990	11	2.55	3.328	1.003	.31	4.78	0	10
	1990 to 1999	13	7.62	7.042	1.953	3.36	11.87	0	20
	2000 TO 2005	87	9.09	6.480	.695	7.71	10.47	0	24
	Total	111	8.27	6.566	.623	7.04	9.51	0	24

The table sheds light on the historical variations in eating behaviors, self-criticism, and body dysmorphic issues. It shows patterns in various psychological conceptions throughout time, emphasizing possible shifts or stability in the population's views and behaviors.

Variable X: Eating Attitudes

• **Mean Scores:** The mean scores for eating attitudes show a general increase over time: from below 1990 (13.18) to 1990-1999 (15.85) and then to 2000-2005 (18.60).

• **Standard Deviations:** Standard deviations also rise over time, indicating greater variability in eating attitude scores in the later periods.

• **95% Confidence Intervals:** The 95% confidence intervals provide the range within which the true population mean for eating attitudes likely lies in each time period.

- **Range of Scores:** The minimum and maximum values show the range of eating attitude scores for each time period.

Variable Y: Self-Criticism

- **Mean Scores:** The mean self-criticism scores range from 35.64 to 37.54, and they remain relatively stable over the three time periods.
- **Standard Deviations & Confidence Intervals:** There is minimal difference in the 95% confidence intervals and standard deviations of the mean across periods, suggesting stability in self-criticism levels.
- **Range of Scores:** The minimum and maximum values represent the range of self-criticism scores observed during each time period.

Variable Z: Concerns about Body Dysmorphia

- **Mean Scores:** Average scores for body dysmorphic concerns rose significantly: from below 2.55 in 1990 to 7.62 in 1999, and further to 9.09 in 2000-2005.
- **Standard Deviations:** Similar to eating attitudes, the standard deviations increase over time, suggesting more variability in body dysmorphic concern scores in later years.
- **95% Confidence Intervals:** The 95% confidence intervals show the range within which the true population mean for body dysmorphic concerns lies in each time period.
- **Range of Scores:** The minimum and maximum values illustrate the range of body dysmorphic concern scores for each time period.

ANOVA

	SumofSquares	df	MeanSquare	F	Sig.
BetweenGroups	339.175	2	169.588	1.445	.240
WithinGroups	12674.248	108	117.354		
Total	13013.423	110			
BetweenGroups	21.647	2	10.823	.117	.890
WithinGroups	9986.696	108	92.469		
Total	10008.342	110			
BetweenGroups	424.823	2	212.412	5.314	.006
WithinGroups	4317.069	108	39.973		
Total	4741.892	110			

ANOVA Findings: Differences Across Groups in Eating Behaviors, Self-Criticism, and Body Dysmorphic Concerns

The results of the ANOVA analysis examine the differences across groups in three key variables: eating attitudes, self-criticism, and body dysmorphic concerns.

Variable X: Eating Attitudes

- **ANOVA Results:** The ANOVA indicates no significant difference in eating attitudes across groups, with a p-value of 0.240 (greater than the significance level of 0.05).
- **Sum of Squares:** The sum of squares between groups is 339.175, and within groups, it is 12,674.248.
- **F-Value:** The F-value of 1.445 suggests a marginal difference in variability between group means and within-group variability, but this difference is not statistically significant.

Variable Y: Self-Criticism

- **ANOVA Results:** The p-value for self-criticism is 0.890, which is greater than 0.05, indicating no significant difference between groups, similar to the findings for eating attitudes.
- **Sum of Squares:** The sum of squares within groups is 9,986.696, and between groups is 21.647.
- **F-Value:** The F-value of 0.117 reflects a much higher within-group variability compared to between-group variability, reinforcing that the difference is not statistically significant.

Variable Z: Body Dysmorphic Concerns

- **ANOVA Results:** Unlike the previous two variables, body dysmorphic concerns show a significant difference between groups, with a p-value of 0.006 (less than 0.05).
- **Sum of Squares:** The sum of squares between groups is 424.823, and within groups, it is 4,317.069.
- **F-Value:** The F-value of 5.314 indicates a statistically significant difference between the variability within groups and the variability between group means, confirming that the group differences for body dysmorphic concerns are significant.

Oneway: Descriptives

	N	Mean	Std.Deviation	Std.Error	95%ConfidenceIntervalforMean		Minimum	Maximum
					LowerBound	UpperBound		
X 4.0TO5.0	4	14.25	8.846	4.423	.17	28.33	7	27
5.1TO5.5	34	15.53	9.665	1.657	12.16	18.90	2	37
ABOVE 5.5	70	18.50	11.399	1.362	15.78	21.22	1	63
4	3	29.67	4.933	2.848	17.41	41.92	24	33
Total	111	17.74	10.877	1.032	15.69	19.78	1	63
Y 4.0TO5.0	4	41.00	10.614	5.307	24.11	57.89	29	53
5.1TO5.5	34	37.00	9.287	1.593	33.76	40.24	7	62
ABOVE 5.5	70	36.16	9.778	1.169	33.83	38.49	0	53
4	3	41.00	6.083	3.512	25.89	56.11	34	45
Total	111	36.72	9.539	.905	34.93	38.51	0	62
Z 4.0TO5.0	4	1.25	2.500	1.250	-2.73	5.23	0	5
5.1TO5.5	34	8.15	6.858	1.176	5.75	10.54	0	23
ABOVE 5.5	70	8.56	6.498	.777	7.01	10.11	0	24
4	3	12.33	1.528	.882	8.54	16.13	11	14
Total	111	8.27	6.566	.623	7.04	9.51	0	24

Descriptive Statistics for Body Dysmorphic Worries, Self-Criticism, and Eating Attitudes Across Height Categories

The table provides descriptive statistics for three variables: **body dysmorphic worries (Z)**, **self-criticism (Y)**, and **eating attitudes (X)**, categorized by three height ranges: **Above 5.5**, **5.1 to 5.5**, and **4.0 to 5.0**.

Variable X: Eating Attitudes

• **Trend Across Height Categories:** The mean scores for eating attitudes increase as the height categories progress from lower to higher ranges:

- **4.0 to 5.0:** Mean = 14.25
- **5.1 to 5.5:** Mean = 15.53
- **Above 5.5:** Mean = 18.50

• **Variability:** The standard deviations and 95% confidence intervals indicate varying precision and variability in the estimation of the mean across categories. Higher height categories show more spread in scores, suggesting more diverse eating attitudes.

• **Range:** The minimum and maximum scores in each height category demonstrate the spread of eating attitudes within each group.

Variable Y: Self-Criticism

• **Trend Across Height Categories:** The mean scores for self-criticism show some variability across height categories, though the difference is less pronounced compared to eating attitudes.

• **Variability:** Similar to eating attitudes, the standard deviations and 95% confidence intervals differ across the height categories, indicating some variation in self-criticism within each category.

• **Range:** The range of self-criticism scores within each height category is shown by the minimum and maximum values.

Variable Z: Body Dysmorphic Concerns

• **Trend Across Height Categories:** The mean scores for body dysmorphic concerns increase as the height categories progress, similar to eating attitudes:

- **4.0 to 5.0:** Lower mean scores
- **5.1 to 5.5:** Moderate mean scores
- **Above 5.5:** Higher mean scores

• **Variability:** The standard deviations and 95% confidence intervals for body dysmorphic concerns also vary across height categories, with the higher categories demonstrating more variability in concerns.

• **Range:** The minimum and maximum scores for body dysmorphic concerns are displayed for each height category, highlighting the distribution of concerns.

ANOVA

	SumofSquares	df	MeanSquare	F	Sig.
X BetweenGroups	682.036	3	227.345	1.973	.122
WithinGroups	12331.387	107	115.247		
Total	13013.423	110			
Y BetweenGroups	153.071	3	51.024	.554	.647
WithinGroups	9855.271	107	92.105		
Total	10008.342	110			
Z BetweenGroups	252.939	3	84.313	2.010	.117
WithinGroups	4488.953	107	41.953		
Total	4741.892	110			

ANOVA Findings on Eating Behaviors, Self-Criticism, and Body Dysmorphic Concerns

The ANOVA analysis examines the differences between groups in terms of **eating behaviors**, **self-criticism**, and **body dysmorphic concerns**. Here's a summary of the key findings:

Variable X: Attitudes Towards Eating

• **P-Value:** The p-value for the F-statistic is **0.122**, which is higher than the significance level of **0.05**. This means that the differences between groups in terms of eating attitudes are **not statistically significant**.

• **Sum of Squares:**

○ Between Groups: **682.036**

○ Within Groups: **12,331.387**

• **F-Value:** The F-value of **1.973** suggests that there is some variability between group means compared to the variability within the groups, but this difference is **not significant**.

Variable Y: Self-Criticism

• **P-Value:** The p-value for self-criticism is **0.647**, which is significantly greater than **0.05**, indicating **no significant difference** between groups regarding self-criticism.

• **Sum of Squares:**

○ Between Groups: **153.071**

○ Within Groups: **9,855.271**

• **F-Value:** The F-value of **0.554** shows that the variability between the group means is much smaller than the variability within the groups, further confirming the **lack of a statistically significant difference**.

Variable Z: Concerns About Dysmorphic Bodies

• **P-Value:** The p-value for body dysmorphic concerns is **0.117**, which is slightly higher than **0.05** but still close. This suggests a **marginally significant difference** between groups.

• **Sum of Squares:**

○ Between Groups: **252.939**

○ Within Groups: **4,488.953**

• **F-Value:** The F-value of **2.010** indicates that the variability between the group means is somewhat greater than the variability within the groups. However, because the p-value is above the standard **0.05** threshold, the difference is **not statistically significant** at the conventional level.

Oneway: Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
X 30TO60KGS	26	15.85	10.464	2.052	11.62	20.07	1	37
61-90KGS	80	18.28	10.733	1.200	15.89	20.66	2	63
ABOVE90	4	22.25	16.741	8.370	-4.39	48.89	2	42
4	1	6.00	.	.	.	.	6	6
Total	111	17.74	10.877	1.032	15.69	19.78	1	63
Y 30TO60KGS	26	37.35	10.178	1.996	33.24	41.46	7	62
61-90KGS	80	36.71	9.559	1.069	34.59	38.84	0	53
ABOVE90	4	32.00	5.477	2.739	23.28	40.72	26	38
4	1	40.00	.	.	.	.	40	40
Total	111	36.72	9.539	.905	34.93	38.51	0	62
Z 30TO60KGS	26	9.00	6.705	1.315	6.29	11.71	0	23
61-90KGS	80	8.21	6.667	.745	6.73	9.70	0	24
ABOVE90	4	4.50	3.416	1.708	-.94	9.94	1	9
4	1	9.00	.	.	.	.	9	9
Total	111	8.27	6.566	.623	7.04	9.51	0	24

Descriptive Statistics for Variables by Weight Range Categories

The table presents descriptive statistics for three variables—**body dysmorphic concern (Z)**, **self-criticism (Y)**, and **eating attitudes (X)**—across three weight range categories: **30 to 60 kg**, **61 to 90 kg**, and **above 90 kg**. Here's a summary of the findings:

Variable X: Attitudes Towards Eating

• **General Trends:** Across all weight categories, the **mean scores for eating attitudes increase** as the weight range increases. This indicates that individuals in higher weight categories tend to report more extreme attitudes towards eating.

• **Standard Deviation:** The **standard deviations** show variability in the eating attitudes within each weight range. As weight increases, variability in eating attitudes also appears to increase, suggesting that the relationship between weight and eating attitudes is not uniform within each category.

• **95% Confidence Intervals:** The **95% confidence intervals** offer a range where we can be 95% confident that the true population mean of eating attitudes lies. These intervals give insight into the precision of the estimated mean scores for each weight range.

• **Range of Scores:** The **minimum and maximum values** for each weight category represent the full spread of eating attitude scores within each group, showing the extent of variation within each weight range.

Variable Y: Self-Criticism

• **General Trends:** There is **considerable variation in the mean scores for self-criticism** across the weight categories, but the changes are **less pronounced** compared to the changes observed in eating attitudes.

• **Standard Deviation:** The **standard deviations** reveal variability in self-criticism scores across weight categories. However, this variation is not as marked as in eating attitudes.

• **95% Confidence Intervals:** Like with eating attitudes, the **95% confidence intervals** for self-criticism indicate the range within which we are 95% confident the true mean falls for each weight range category.

• **Range of Scores:** The **minimum and maximum values** for self-criticism scores within each category show the spread of self-criticism scores across different weight ranges, illustrating the diversity of experiences within each group.

Variable Z: Concerns About Dysmorphic Bodies

• **General Trends:** **Lower weight categories** exhibit **higher mean scores for body dysmorphic concerns**. This suggests that individuals in the lighter weight categories may have more pronounced concerns about body dysmorphia compared to those in higher weight categories.

• **Standard Deviation and Confidence Intervals:** Both the **standard deviations** and **95% confidence intervals** for body dysmorphic concerns vary across weight categories. The spread of the data indicates differing levels of concern within each weight range, with more variability present in the higher weight categories.

• **Range of Scores:** The **minimum and maximum values** for body dysmorphic concerns highlight the range of scores within each weight category, illustrating how concerns about body image can differ substantially within each weight range.

Conclusion

The analysis reveals that:

• **Eating attitudes** show a clear trend of higher scores in the heavier weight categories, with increased variability as weight increases.

• **Self-criticism** exhibits variability, but changes across weight categories are less pronounced compared to eating attitudes.

• **Concerns about dysmorphic bodies** are more pronounced in lower weight categories, with greater variability observed in the higher weight categories.

These patterns suggest that body dysmorphic concerns are inversely related to weight, while eating attitudes tend to intensify as weight increases. Self-criticism appears to be less influenced by weight than the other two variables.

ANOVA

	SumofSquares	df	MeanSquare	F	Sig.
X BetweenGroups	335.339	3	111.780	.943	.422
WithinGroups	12678.085	107	118.487		
Total	13013.423	110			
BetweenGroups	110.070	3	36.690	.397	.756
WithinGroups	9898.272	107	92.507		
Total	10008.342	110			
Z BetweenGroups	71.504	3	23.835	.546	.652
WithinGroups	4670.388	107	43.648		
Total	4741.892	110			

ANOVA Results for Eating Attitudes, Self-Criticism, and Body Dysmorphic Concerns

The ANOVA analysis examines the differences in eating attitudes, self-criticism, and body dysmorphic concerns across groups. Here's a summary of the findings:

Variable X: Eating Attitudes

• **Significance:** The **p-value** of **0.422** is greater than the significance level of **0.05**, indicating that there is **no significant difference** in eating attitudes across the groups.

• **Sum of Squares:**

○ **Between groups:** 335.339

○ **Within groups:** 12678.085

• **F-value:** The F-value of **0.943** suggests that the variability between the group means is **marginally less** than the variability within the groups, reinforcing that the differences between groups are **not statistically significant**.

Factor Y: Self-Criticism

• **Significance:** Similar to eating attitudes, the **p-value** for self-criticism is **0.756**, which is also higher than **0.05**, indicating **no significant difference** between the groups.

• **Sum of Squares:**

○ **Between groups:** 110.070

○ **Within groups:** 9898.272

• **F-value:** The F-value of **0.397** suggests that the variability between group means is **not significantly different** from the variability within the groups, further indicating that the differences are **not statistically significant**.

Variable Z: Body Dysmorphic Concerns

• **Significance:** The **p-value** for body dysmorphic concerns is **0.652**, which is greater than **0.05**, indicating that there is **no significant difference** in body dysmorphic concerns between the groups.

• **Sum of Squares:**

○ **Between groups:** 71.504

○ **Within groups:** 4670.388

• **F-value:** The **F-value of 0.546** shows that the variability between group means is **marginally less** than the variability within the groups, confirming that this difference is also **not statistically significant**.

Conclusion

The **ANOVA results** for all three variables (eating attitudes, self-criticism, and body dysmorphic concerns) indicate that there are **no significant differences** across the groups. The p-values for all three variables are greater than the significance threshold of **0.05**, and the F-values suggest that the variability between groups is not substantial enough to be statistically significant. This implies that, based on the data, group membership does not significantly influence eating attitudes, self-criticism, or body dysmorphic concerns.

Correlations: Descriptive Statistics

	Mean	Std.Deviation	N
X	17.74	10.877	111
Y	36.72	9.539	111
Z	8.27	6.566	111

Correlations

	X	Y	Z
X PearsonCorrelation	1	.674	.534
Sig.(2-tailed)		.000	.000
N	111	111	111
Y PearsonCorrelation	.674	1	.721
Sig.(2-tailed)	.000		.000
N	111	111	111
Z PearsonCorrelation	.534	.721	1
Sig.(2-tailed)	.000	.000	
N	111	111	111

Descriptive Statistics and Correlation Analysis Interpretation**Descriptive Statistics**• **Variable X: Eating Attitudes**

○ **Mean:** 17.74

○ **Standard Deviation (SD):** 10.877

○ **Interpretation:** On average, participants scored 17.74 on eating attitudes, with a relatively high standard deviation, suggesting notable variability in participants' responses on this variable.

• **Variable Y: Self-Criticism**

○ **Mean:** 36.72

○ **Standard Deviation (SD):** 9.539

○ **Interpretation:** The mean self-criticism score is 36.72, with variability of 9.539. This indicates that while there is a consistent trend in scores, there is also considerable individual variation.

• **Variable Z: Body Dysmorphic Concern**

○ **Mean:** 8.27

○ **Standard Deviation (SD):** 6.566

○ **Interpretation:** The average score for body dysmorphic concern is 8.27, with a standard deviation of 6.566, suggesting moderate variability in how participants perceive body dysmorphia.

Correlation Coefficients• **X (Eating Attitudes) and Y (Self-Criticism):**

○ **Correlation (r):** 0.674

○ **Significance:** $p < 0.001$

○ **Interpretation:** A **moderate to strong positive correlation** exists between eating attitudes and self-criticism. As participants score higher on eating attitudes, they tend to score higher on self-criticism. Given the statistical significance ($p < 0.001$), this relationship is unlikely to be due to chance.

• **X (Eating Attitudes) and Z (Body Dysmorphic Concern):**

○ **Correlation (r):** 0.534

○ **Significance:** $p < 0.001$

○ **Interpretation:** A **moderate positive correlation** exists between eating attitudes and body dysmorphic concern. This suggests that individuals with higher eating attitudes are more likely to also experience greater concerns about body dysmorphia. The statistical significance of this correlation further supports its reliability.

• **Y (Self-Criticism) and Z (Body Dysmorphic Concern):**

○ **Correlation (r):** 0.721

○ **Significance:** $p < 0.001$

○ **Interpretation:** A **strong positive correlation** exists between self-criticism and body dysmorphic concern. Participants with higher levels of self-criticism are more likely to experience higher concerns about body dysmorphia. This correlation is statistically significant and suggests a meaningful link between these two variables.

Conclusion

The descriptive statistics reveal that while the mean scores for eating attitudes, self-criticism, and body dysmorphic concern show relatively consistent patterns, there is notable variability across participants, particularly in eating attitudes and self-criticism.

The **correlation analysis** highlights **strong positive associations** among all three variables:

- **Eating attitudes and self-criticism** are moderately to strongly linked ($r = 0.674$), suggesting that individuals with more critical views of their eating behaviors tend to be more self-critical.
- **Eating attitudes and body dysmorphic concern** also show a moderate positive correlation ($r = 0.534$), indicating that individuals who focus more on eating behaviors may have heightened concerns about their body image.
- The **strongest correlation** exists between **self-criticism and body dysmorphic concern** ($r = 0.721$), suggesting that individuals who are highly self-critical are more likely to experience body dysmorphic concerns.

Implications for Mental Health

These findings suggest that **eating attitudes, self-criticism, and body dysmorphic concerns** are interconnected, with individuals who have more negative eating attitudes or self-criticism being more likely to struggle with body image issues. This interconnection highlights the importance of addressing multiple psychological domains when assessing and treating mental health issues related to eating disorders and body dysmorphia. Interventions that target self-criticism, eating behaviors, and body image concerns may provide a holistic approach to improving psychological well-being and preventing or treating disorders such as eating disorders, body dysmorphia, and related conditions.

Future research may focus on exploring the **causal mechanisms** behind these correlations and how these variables interact over time to influence mental health outcomes.

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