

## Correlation Between Obesity, Self Esteem, & Happiness in Young Adults

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### ABSTRACT

This study examines the relationship between obesity, self-esteem, and happiness in young adults because obesity is considered to be the most important single contributor of mental health problems. A diversified sample of 40 obese young adults, free of medical conditions and diabetes, was purposively selected from several educational institutions based on their Body Mass Index scoring. Among them 32 were females and 8 were males. The Self-Esteem Rating Scale and the Oxford Happiness Questionnaire were used to assess self-esteem and happiness, respectively, with BMI serving as the obesity measure. Correlation analyses demonstrated a significant negative correlation (-0.763) between obesity and self-esteem, a negative correlation (-0.618) between obesity and happiness, and a strong positive correlation (0.842) between self-esteem and happiness. These findings indicate that higher levels of obesity are associated with lower self-esteem and decreased happiness, highlighting the psychosocial impact of obesity on well-being. Conversely, individuals with higher self-esteem experience greater happiness, emphasizing the role of positive self-perception in promoting emotional well-being. The implications of these findings suggest the importance of comprehensive interventions that address both physical health and psychological well-being in young adults facing obesity-related challenges. Future research should further explore these relationships with larger, more diverse samples and investigate additional factors influencing the complex interplay between obesity, self-esteem, and happiness. Overall, this study contributes valuable insights into understanding the psychological factors associated with obesity and underscores the need for holistic approaches to support the mental and physical health of young adults.

**Keywords:** *Obesity, Self-Esteem, Happiness, Correlation, Regression and self-perception*

"Health is the greatest possession." This timeless quote by Ralph Waldo Emerson resonates even more poignantly in the context of young adults' well-being, where physical health intertwines with emotional and psychological aspects. Obesity, a multidimensional health concern, has received widespread attention due to its negative impact on physical health.

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However, a new study has revealed its tremendous impact on psychological well-being, notably in terms of self-esteem. Understanding the relationship between obesity, self-esteem, and happiness is critical for developing successful approaches to address this widespread social issue.

Obesity, defined as a substantial accumulation of body fat, has been associated with reduced levels of self-esteem. Individuals suffering from obesity frequently experience societal stigma, unfavorable stereotyping, and discrimination, which can have a significant impact on their self-perception. Research by Puhl and Heuer (2009) indicates that obese individuals frequently internalize societal prejudices, leading to diminished self-esteem and negative body image. Obesity is often assessed using the body mass index (BMI), calculated as weight in kilograms divided by height in meters squared. According to the World Health Organization (WHO), obesity is a major global health concern, with prevalence rates escalating dramatically in recent decades (WHO, 2021). It has a wide-ranging impact on the health of the body organs. Obesity elevates the likelihood of acquiring a variety of chronic illnesses, including type 2 diabetes, cardiovascular disease, hypertension, some malignancies, and musculoskeletal disorders (Bray et al., 2018). Furthermore, obesity is also linked to compromised respiratory function, sleep apnea, and reproductive difficulties (Guh et al., 2009).

Self-esteem represents a personal evaluation of one's worth, value, and competence. It embraces ideas about oneself, such as feelings of self-acceptance, feelings of self-worth, and self-confidence (Baumeister et al., 2003). High self-esteem is correlated with a variety of beneficial outcomes, including psychological well-being, resilience, and adaptive coping methods (Orth et al. 2012). According to research, self-esteem influences an individual's ideas, feelings, and behavior in an array of areas of life. Individuals with high self-esteem are more likely to establish ambitious goals, endure in the face of adversity, and report higher overall life satisfaction (Trzesniewski et al., 2006). Low self-esteem, on the other hand, has been linked to a wide range of unfavorable outcomes, including depression, anxiety, interpersonal difficulties, and maladaptive coping methods (Orth et al., 2012).

Happiness, additionally referred to as subjective well-being, possesses a complex set of emotional, cognitive, and evaluative components. It evaluates people's overall life satisfaction along with their subjective experiences of joy, contentment, and fulfillment (Diener et al., 1999). According to research, happiness is influenced by a combination of genetic, environmental, and individual factors, making it a multifaceted and ever-changing construct (Lyubomirsky et al., 2005).

The "hedonic" approach, which emphasizes the pursuit of pleasure while avoiding suffering, is an established framework for understanding happiness. According to this viewpoint, happiness stems from pleasant emotional experiences like joy, enthusiasm, and serenity (Diener, 2000). Happiness, however, is not solely dependent on fleeting pleasures; it additionally encompasses broader characteristics of life satisfaction, purpose, and fulfillment (Seligman, 2002). In addition to the hedonic approach, researchers have proposed a "eudaimonic" perspective that highlights the quest for meaning, purpose, and self-actualization. According to this viewpoint, happiness is related to achieving one's full potential, pursuing meaningful goals, and cultivating strong relationships and connections with others (Ryan and Deci, 2001).

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The convoluted connection between obesity, self-esteem, and happiness highlights the significance of adopting a comprehensive strategy to combating obesity's numerous challenges. Obesity's physical health implications are widely established and well-documented but its psychological consequences, notably on self-esteem and happiness, are equally significant and deserve consideration. Interventions designed to combat obesity must go beyond typical weight control measures to address psychosocial issues that contribute to obesity-related discomfort. Promoting body positivity, eradicating weight-based stigma, and encouraging self-acceptance are all critical components of integrated obesity management strategies (Puhl & Heuer, 2009). Healthcare practitioners can help obese people establish positive self-perceptions and adaptive coping skills, reducing the negative impact of obesity on self-esteem and psychological well-being.

So, addressing the connection between obesity, self-esteem, and happiness requires an in-depth strategy that goes beyond traditional weight-centric paradigms. Policymakers, healthcare practitioners and researchers can develop a more inclusive, compassionate approach to obesity management by incorporating psychological insights into obesity prevention and treatment activities that prioritize individuals' and communities' overall well-being.

### ***Rationale:***

The study of the correlation between obesity, self-esteem, and happiness in young adults is critical because it has far-reaching implications for both individual and public health. Obesity rates among young adults have been steadily rising in recent years, with serious implications for physical health, mental well-being, and general quality of life (Ng et al., 2014). Furthermore, obesity in adolescence frequently persists throughout adulthood, resulting in a wide range of health issues such as diabetes, cardiovascular disease, and psychological discomfort (Reilly & Kelly, 2011). Self-esteem, a significant component of mental health, is intrinsically linked to body image and weight status, particularly throughout the formative years of young adulthood (Hoyt et al., 2015). Obese young adults may encounter societal stigma, discrimination, and unfavorable self-perceptions, reducing their self-esteem and emotional well-being (Puhl & Heuer, 2009). Individuals with higher self-esteem, on the other hand, tend to be more resilient and use adaptive coping mechanisms, which promote a positive sense of self and overall life satisfaction. Furthermore, the association between obesity and happiness is worth investigating, as subjective well-being is a substantial indicator of mental health and life satisfaction (Diener et al., 2009). While obesity is frequently linked to poor health outcomes, its impact on subjective well-being is nuanced and multidimensional, with some research indicating a negative association and others indicating no significant relationship (Luppino et al., 2010). Understanding the relationship between obesity and happiness is critical for creating effective interventions and supporting holistic approaches to health and happiness among young adults. In conclusion, researching the relationship between obesity, self-esteem, and happiness in young people is critical for tackling the multidimensional difficulties faced by the obesity epidemic while also improving mental health and well-being in this vulnerable demographic.

### ***Objective***

The objective of the present study was to investigate relationship between obesity, self-esteem, and happiness in young adults, seeking to uncover insights that can enrich understanding of how these factors interact and influence one another.

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### *Hypotheses*

Because the objective was to investigate relationship between obesity, self-esteem, and happiness in young adults therefore, three hypotheses were constructed namely,

- Obesity would be significantly correlated with self-esteem in young adults.
- Happiness would be significantly correlated with obesity in young adults.
- Self-Esteem and Happiness would be significantly correlated in young adults.

## **METHODS**

### *Sample*

The sample population for this study consisted of obese young adults aged between 18 and 25 years, with a total of 40 respondents. Among them, there were 32 females and 8 males. The sampling technique employed was Purposive, which targeted individuals meeting specific criteria. The inclusive criteria for participation were respondents aged 18-25 years, with a Body Mass Index (BMI) above 30, and who were willing to provide responses for the study. On the other hand, respondents falling below a BMI of 30 and individuals with health conditions, medications, or diabetes were excluded from the study. These criteria ensured that the sample was representative of obese young adults without significant health complications, allowing for a focused analysis of the correlation between obesity and self-esteem in this demographic population.

The research design employed in the present study is Expo Post Facto.

### *Tools*

To fulfil the objective of the present study, following **tools** were used:

- **Body Mass Index (BMI)** - BMI for obesity refers to a condition where an individual's BMI, a measure of body fat based on height and weight, exceeds a certain threshold indicating obesity. According to the World Health Organization (WHO), a BMI of 30 or above is classified as obese. It is calculated by dividing a person's weight in kilograms by the square of their height in meters.

$$\bullet \text{ BMI Formula} = \text{Weight(kg)} \div [\text{Height(m)}]^2$$

- **Self-Esteem Rating Scale** - It was developed by W. R. Nugent and J. W. Thomas in the early 1990s and it consists of 40 items. The Self-Esteem Rating Scale is a self-administered questionnaire that can be completed by an individual in a relatively short amount of time. Respondents are asked to read each statement on the scale and rate their level of agreement or disagreement using a Likert scale, which ranges from strongly agree to strongly disagree. Once the questionnaire is completed, the scores for each item are tallied up to provide a total score for the respondent's self-esteem, with higher scores indicating higher levels of self-esteem. Interpretation of the Self-Esteem Rating Scale can vary depending on the purpose of the assessment. In general, scores that fall within the range of 120-160 are considered indicative of high self-esteem, while scores below 80 are considered indicative of low self-esteem. Scores in between these ranges may be interpreted as average or moderate levels of self-esteem.
- **Oxford Happiness Questionnaire (OHQ)** – It was developed by Hills and Argyle in 2002 and has been derived from the Oxford Happiness Inventory (OHI), which also comprises of 29 items, each involving the selection of one of four options that are different for each item. The OHQ includes similar items and each presented as a single statement that can be endorsed on a uniform six-point Likert scale. The revised

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instrument is compact, easy to administer, and allows endorsements over an extended range. Associations between the scales and a battery of personality variables known to be associated with well-being were stronger for the OHQ. Sequential orthogonal factor analyses of the OHQ identified a single higher-order factor, which suggests that the construct of well-being it measures is uni-dimensional. Discriminant analysis has been employed to produce a short-form version of the OHQ with eight items.

### *Procedure*

The researcher conducted their study by approaching young adults aged 18 to 25 from various colleges in Lucknow, Uttar Pradesh. They introduced the purpose of the study warmly and obtained enthusiastic consent from the respondents. The data collection process was thorough and meticulous, resulting in a dataset that allowed for the computation of key statistical metrics such as Mean, Standard Deviation, Pearson Correlation, and Regression. The study included a sample of 40 obese young adults within the specified age range. Each respondent was assessed using the BMI Index, the Self-Esteem Rating Scale and the Oxford Happiness Questionnaire. The responses obtained from the respondents were scored following the guidelines provided for each scale, and these scores were subsequently utilized for statistical analysis, providing valuable insights into the correlation between obesity, self-esteem, and happiness in young adults.

The obtained data were analyzed by SPSS (Statistical Package for Social Sciences) version 20. Descriptive statistics (Mean and SD values) were calculated for BMI (Obesity) and Self-Esteem and the data were analyzed by Pearson Correlation and Regression to know the relation between obesity and self-esteem.

## **RESULT AND DISCUSSION**

The study examined the differences in Mean and Standard Deviation between BMI, Self-esteem, and Happiness in young adults with Obesity. Additionally, the study explored the correlation between BMI & Self-esteem and Happiness; and correlation between Self-esteem and Happiness. The result of the analysis is presented in this report to provide a comprehensive understanding the relationship between obesity, self-esteem and happiness.

*Table 1 showing the descriptive statistics of the group*

**Table 1 Displays the Mean and Standard Deviation (SD) of BMI, Self-Esteem & Happiness N= 40**

MEASURES	Mean	SD
BMI	34.02	3.05
SELF-ESTEEM	187.60	41.68
HAPPINESS	4.0070	0.82582

In table 1, the descriptive statistics for the dataset comprising 40 individuals. The mean values for BMI, self-esteem, and happiness are 34.01, 187.60, and 4.007, respectively. Additionally, the standard deviations for BMI, self-esteem, and happiness are 3.05, 41.68, and 0.82, respectively. These statistics provide valuable insights into the central tendency and variability of the variables under investigation, offering a foundational understanding of the sample characteristics.

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**Table 2 showing the Correlation Coefficient**

**Table 2: Correlation Coefficient between BMI and Self-Esteem & Happiness N = 40**

Measure	Self-Esteem	Happiness
BMI	-.763**	-.618**

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

In Table 2, the correlation coefficient value of -0.763 between BMI (Obesity) and Self-Esteem, is based on a population size (N) of 40. This highly significant negative correlation suggests a direct relationship between Obesity and Self-Esteem, indicating that as one variable increases, the other decreases. Therefore, the result supports the hypothesis that there is a significant relationship between Self-esteem and Obesity.

The hypothesis was formulated based on previous research, including a study by Puhl and Heuer (2009), their research consistently demonstrates a negative correlation between obesity and self-esteem, revealing that higher levels of obesity are linked to lower levels of self-esteem. This negative correlation is commonly attributed to the psychosocial consequences of obesity, such as weight stigma, discrimination, and body image dissatisfaction.

The correlation coefficient value between BMI (Obesity) and Happiness is noted as - 0.618 for a sample size of 40. This highly significant negative correlation suggests a direct relationship, indicating that as Obesity increases, Happiness tends to decrease. This finding supports our hypothesis, affirming a significant connection between Self-Esteem and Happiness.

The hypothesis was informed by previous research, including a study by Luppino et al. (2010). Their research highlights the association between Obesity and various health problems, leading to decreased overall well-being and potentially impacting happiness indirectly. Chronic health conditions linked to obesity, such as diabetes, cardiovascular diseases, and mobility issues, can reduce quality of life and subjective happiness.

**Table 3 showing the Correlation Coefficient between Self-Esteem and Happiness**

**Table 3: Correlation Coefficient between Self-Esteem and Happiness N=40**

MEASURE	Happiness
Self-Esteem	.842**

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

In Table 3, the correlation coefficient value noted 0.842 between Self-Esteem and Happiness, based on a population size (N) of 40. This highly significant positive correlation suggests a direct relationship between Self-Esteem and Happiness, indicating that as one variable increases, the other increases. Therefore, the result supports the hypothesis that there is a significant relationship between Self-Esteem and Happiness.

The hypothesis was informed by previous research, including a study by Orth et al. (2008). Their study have consistently shown a positive correlation between self-esteem and happiness. Individuals with higher self-esteem tend to experience greater life satisfaction, positive affect, and overall well-being compared to those with lower self-esteem.

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*Table 4 showing the linear regression analysis, showcasing BMI as a predictor of self-esteem and happiness.*

<b>PREDICTOR FOR SELF-ESTEEM AND HAPPINESS</b>		
<b>VARIABLE</b>	<b>R</b>	<b>Adjusted R Square</b>
SELF-ESTEEM	.763a	.571
HAPPINESS	.618a	.366

a. Predictors: (Constant), BMI

In table 5, the results of a linear regression analysis with BMI as a predictor of self-esteem and happiness.

- The adjusted R square value of 0.571 for self-esteem suggests that approximately 57.1% of the variance in BMI is explained by Self-Esteem in this analysis.
- The adjusted R square value of 0.366 for happiness indicates that around 36.6% of the variance in BMI is explained by Happiness in this analysis.

### ***Limitations and Implications for future work***

The limitation of this study stems from its small sample size of 40 obese young adults in Lucknow City of India, which may not fully represent the broader population. Despite this, the implications of the study highlight the critical need for comprehensive interventions addressing both physical health as well as psychological well-being in young adults with obesity-related challenges. To improve future research, studies should encompass larger and more diverse populations to enhance generalizability. Moreover, exploring additional variables that influence the relationship between obesity and self-esteem would deepen our understanding and facilitate more effective interventions for promoting holistic well-being among young adults.

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### ***Conflict of Interest***

The author(s) declared no conflict of interest.

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