

Relationships between Gender, Weight, and Body Image: Effects on Stress Management and Life Satisfaction in University Students

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Abstract

This study highlights the importance of understanding how gender and weight affect key aspects of well-being, such as body image, stress management, and life satisfaction among college students. By examining these relationships, the study aims to provide information that serves as a basis for designing specific interventions to promote mental health and general well-being in this population. The objective is to provide insights into the relationships between these variables to guide targeted interventions for student well-being. **Methods:** A total of 100 university students from Chile (60% women, 40% men), aged between 18 and 25, participated in this study. Participants were classified into weight categories based on their Body Mass Index (BMI) according to WHO standards: underweight, normal weight, overweight, and obesity. Validated scales were used to measure body image, stress management, and life satisfaction. Descriptive analyses and one-way ANOVA were conducted to identify significant differences between gender and weight categories. **Results:** Significant differences were found in stress management and body image according to weight categories. Participants with obesity reported the lowest scores in both body image and stress management, while underweight participants reported the highest scores. Men reported slightly better stress management, but the difference was not statistically significant. A moderate positive correlation was found between body image and life satisfaction ($r = 0.29$, $p < 0.05$), suggesting that participants with a more positive body image tend to have higher life satisfaction. **Conclusion:** Gender and weight play an essential role in influencing body image, stress management, and life satisfaction among university students. These findings highlight the need for interventions that promote a healthy body image and effective stress management strategies, particularly for overweight and obese students.

Keywords

Body Image, Stress Management, Life Satisfaction, Gender Differences, University Students

1. Introduction

Mental and physical health are interconnected components that directly influence the quality of life, particularly in university students who face various social and academic pressures. Factors such as gender, weight, and body image are crucial variables that affect both psychological and physical well-being [1]-[3]. Sociocultural expectations and beauty standards place significant pressure on young people, affecting their body perception, self-esteem, and ability to manage stress [4].

Body image, defined as an individual's perception of their own body, is strongly linked to self-esteem and life satisfaction [5]. Previous research has shown that women tend to experience higher levels of body dissatisfaction, while men, though also affected, focus more on aspects such as muscle strength [6]. This phenomenon is global, and in Latin America, the influence of beauty ideals and social media has heightened concerns about body image in both genders [7].

Body weight also plays a fundamental role in mental health. The World Health Organization (WHO) has established that being overweight or obese is associated with an increased risk of psychological disorders such as depression and anxiety [8]. In Latin America, where obesity prevalence has significantly risen in recent decades, this issue is particularly relevant among university students [9]. For instance, a study in Brazil found that overweight students reported more negative body image and higher stress levels [10].

Stress management is another crucial factor in university life. Research indicates that gender differences affect how men and women cope with stress. Women tend to report higher levels of stress but often use more proactive coping strategies [11]. In Latin America, academic stress is a significant source of distress for students, affecting their emotional well-being [12].

This study aims to explore how gender and weight affect body image, stress management, and life satisfaction among university students, providing valuable information for designing targeted interventions for this population.

Study Objectives

This study aims to answer the following key questions:

- 1) How does body image perception vary according to gender and weight?
- 2) Are there differences in stress management capacity between men, women, and different weight categories?
- 3) How do these factors relate to life satisfaction and health habits?

2. Material and Methods

2.1. Participants

The study included a random sample of 100 students from a university in Chile, aged 18 to 25 years ($M = 21.5$, $SD = 2.1$). Sixty percent of the participants were women ($n = 60$), and 40% were men ($n = 40$). The observed proportion reflects the usual gender distribution in our institution, where women predominate in certain disciplines. Furthermore, their greater participation could be explained by a greater interest in topics related to mental health and body image, which is in line with what was reported in previous research.

Participants were categorized by weight according to the body mass index (BMI) defined by the WHO: underweight (BMI < 18.5), normal weight (BMI 18.5 - 24.9), overweight (BMI 25 - 29.9), and obesity (BMI \geq 30) [7].

2.2. Instruments

Several validated instruments were used to measure the key variables of the study:

- Body Image: Assessed using a 5-point Likert scale adapted from previous studies on body perception. Higher scores indicated a more positive body image [5].
- Stress Management: Measured using a 3-point scale (“Almost never,” “Often,” “Almost always”) to assess participants’ ability to manage stress [11].
- Life Satisfaction: Measured on a scale of 1 to 10, where 1 means “Very dissatisfied” and 10 means “Very satisfied” [5].
- Health Habits: Measured by the frequency of health check-ups on a 3-point scale (“Never,” “Sometimes,” “Always”) [7].

2.3. Procedure

Data were collected through an online questionnaire administered during the first semester of the academic year. Participants voluntarily and anonymously completed the questionnaire after signing an electronic informed consent form. The study was approved by the Ethics Committee of the Valdivia Health Service, adhering to the ethical guidelines set out in the Helsinki Declaration.

2.4. Data Analysis

Data were analyzed using SPSS software (version 25.0). Descriptive analyses and Pearson correlation tests were conducted to evaluate the relationships between body image, stress management, life satisfaction, and health habits. One-way ANOVA tests were performed to identify significant differences between gender and weight groups. Additionally, post-hoc tests were conducted to explore specific differences between weight categories.

3. Results

3.1. Descriptive Analysis

Among the 100 participants, 5% were classified as underweight, 55% as normal

weight, 30% as overweight, and 10% as obese. Women reported slightly higher body image scores than men (3.06 vs. 2.89). However, men reported slightly higher life satisfaction scores than women (6.77 vs. 6.61). **Table 1** below presents the mean and standard deviations of the key variables by gender and weight categories.

Table 1. Descriptive data by gender and weight category.

Variable	Underweight (n = 5)	Normal weight (n = 55)	Overweight (n = 30)	Obesity (n = 10)
Gender	Men (n = 40)			
Body image (Mean, SD)	3.10 (0.40)	3.00 (0.35)	2.85 (0.30)	2.70 (0.25)
Stress management (Mean, SD)	2.50 (0.20)	2.34 (0.18)	2.20 (0.15)	2.10 (0.12)
Life satisfaction (Mean, SD)	6.80 (0.60)	6.75 (0.50)	6.50 (0.45)	6.30 (0.40)
Gender	Women (n = 60)			
Body image (Mean, SD)	3.15 (0.38)	3.08 (0.32)	2.80 (0.28)	2.65 (0.22)
Stress management (Mean, SD)	2.55 (0.22)	2.30 (0.20)	2.18 (0.17)	2.05 (0.14)
Life satisfaction (Mean, SD)	6.70 (0.55)	6.60 (0.45)	6.40 (0.42)	6.20 (0.35)

3.2. Stress Management

ANOVA analysis revealed significant differences in stress management capacity according to body weight ($F(3,96) = 4.32, p < 0.05$). Underweight participants reported the highest stress management capacity ($M = 2.50$), while those with obesity had the lowest ($M = 2.09$). Although men showed slightly better stress management capacity than women, this difference was not statistically significant ($p > 0.05$).

3.3. Body Image and Life Satisfaction

A moderate positive correlation was found between body image and life satisfaction ($r = 0.29, p < 0.05$), indicating that participants with a more positive body perception tend to report higher levels of life satisfaction.

3.4. Health Habits and Stress

No significant correlations were found between the frequency of health check-ups and the ability to manage stress ($r = -0.009, p > 0.05$), suggesting that preventive health habits are not directly related to perceived stress in this sample.

3.5. Comparison by Gender and Weight

Underweight participants reported the highest scores for body image and stress

Table 2. Statistical comparisons (ANOVA).

	p-value (Gender)	p-value (Weight)	Significant differences
Body image	0.08	0.04	Weight (Obesity < Normal weight)
Stress management	0.09	0.03	Weight (Obesity < Underweight)
Life satisfaction	0.12	0.05	Weight (Obesity < Underweight)

management, while obese participants reported the lowest in both variables. No significant differences were found between men and women within weight categories (**Table 2**).

- p-value (Gender): shows the statistical significance of gender differences for each variable;
- p-value (Weight): shows the statistical significance of weight category differences;
- Significant Differences: indicates where significant differences were found, with specific comparisons highlighted.

4. Discussion

The results provide valuable insights into the interaction between gender, weight, and body image in relation to stress management and life satisfaction. Obese participants reported the lowest body image scores and stress management capacity, which is consistent with previous studies linking excess weight to reduced psychological well-being [1].

The lower stress management ability observed among participants with higher BMI may be attributed to the psychological burden of weight stigma and social expectations. Previous research suggests that obese people often experience higher levels of stress due to negative body perceptions and social discrimination, which can hinder their ability to manage stress effectively [13].

Although men reported better stress management capacity, this difference was not statistically significant, suggesting that contextual factors, such as social expectations, may influence gender differences in stress coping [4]. Additionally, the positive correlation between body image and life satisfaction highlights the importance of promoting a healthy body image among university students [5].

Participants with a positive body image are more likely to experience greater life satisfaction because body image is closely related to self-esteem and social acceptance. A healthy perception of one's body fosters confidence, reduces psychological distress, and promotes well-being, all of which contribute to greater life satisfaction. These findings are consistent with previous research by Wodarz and Rogowska [14], who found that body appreciation plays a moderating role in the relationship between self-esteem and life satisfaction. This reinforces the importance of a positive body image in promoting self-esteem, emotional stability,

and overall life satisfaction.

Practical Implications

Universities should implement comprehensive programs addressing both mental and physical health. This could include nutrition workshops, psychological counseling, and physical activities aimed at improving body image and reducing stress. It is also essential to design gender-specific strategies that address the unique needs of men and women.

5. Conclusion

This study reveals that gender and weight influence body image, stress management, and life satisfaction among university students. The findings highlight the need for targeted interventions to improve body image and promote healthy habits, particularly among overweight or obese students. Future studies should explore these relationships in other educational and cultural contexts.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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