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Effects of weight bias internalization on quality of life among selected BPE students

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Abstract

This quantitative descriptive correlational study aimed to describe the relationship between weight bias internalization and quality of life among Bachelor of Physical Education (BPE) students enrolled at the University of Mindanao, 1st semester, SY 2023-2024. It sought to determine the level of weight bias internalization in terms of distress and self-worth, and the level of quality of life concerning physical function, self-esteem, sexual life, public distress, and work. Data were collected using an adopted survey questionnaire, utilizing quantitative survey tools. Descriptive statistics, such as mean and standard deviation, were employed to gauge the levels of weight bias internalization and quality of life, while Pearson's correlation coefficient examined the relationship between these factors. The results revealed a significant yet low positive correlation ($r = .471^*$) between weight bias internalization and quality of life, suggesting a weak tendency for one variable to increase or decrease as the other changes. These findings support Goffman's social stigma theory, highlighting the importance of recognizing and addressing weight bias internalization to enhance an individual's quality of life. The study underscores the significance of understanding the psychological and social implications of weight bias internalization among BPE students, contributing to a better understanding of these implications and promoting inclusivity, diversity, and well-being within physical education programs. By addressing weight bias internalization, educators and policymakers can foster a more supportive and health-oriented environment for students, ultimately leading to improved quality of life and reduced risk of obesity-related diseases.

Keywords: Education, weight bias internalization, quality of life, stigma, health

1. Introduction

Weight-related quality of life is a complex and multidimensional concept that involves physical health, emotional well-being, social interactions, and functional limitations (Bujang *et al*, 2023) [6]. One of the main problems of weight in quality of life is the increased risk of mental health issues such as depression and anxiety. One study found that obesity is associated with a higher prevalence of depression and anxiety disorders, leading to a significant decline in overall quality of life by (Rindler *et al*, 2023) [12]. Quality of life is challenging due to various factors including psychological well-being, demographics, socio-economic factors, body image dissatisfaction, and lack of social connectedness. These factors contribute to lower quality of life and emotional/social problems (Magiera & Pac, 2022) [19]. Another problematic aspect of weight-related quality of life is the negative impact it can have on physical health, with obesity being linked to an increased risk of chronic diseases such as type 2 diabetes, cardiovascular disease, and certain cancers (Blüher, 2019) [4]. This can lead to a reduced life expectancy and a lower overall quality of life.

Addressing these various dimensions requires a holistic approach beyond traditional weight management strategies. Promoting a positive body image, challenging societal norms, and fostering inclusivity are integral components of interventions to enhance weight-related quality of life (Koulanova *et al.*, 2021) [15]. Focusing on weight-related quality of life (WRQoL) has implications for public health by promoting healthier lifestyles and preventing obesity-related diseases. It aligns with the broader goal of improving the well-being of communities (Buratta *et al.*, 2023) [7].

Indeed, weight related quality of life is essential to discuss since it can comprehensively

understand how an individual's weight and body image impact various aspects of their life (Gattario & Frisen., 2019)^[13]. Weight-related quality of life considers physical, mental, and social well-being. It provides a holistic view of an individual's overall health and happiness, recognizing that well-being extends beyond physical health alone (Ruggeri *et al.*, 2020)^[29]. Individuals who are dissatisfied with their weight or body image may experience adverse psychological effects, including depression, anxiety, and low self-esteem (Muhlheim, 2023)^[21]. Assessing weight-related quality of life helps identify these mental health concerns and informs interventions to address them. The concept is linked to health behaviors, as individuals with a positive body image and higher quality of life may be more motivated to adopt and maintain healthy habits. It includes regular exercise, a balanced diet, and avoiding harmful behaviors (Honório *et al.*, 2019)^[14].

Weight bias internalization involves individuals internalizing negative beliefs and attitudes about their body weight or shape. According to Goffman's theory of social stigma, this internalization leads to socially discrediting attributes, behaviors, or reputations, causing individuals to be classified in undesirable stereotypes (Kwon., 2020)^[16]. This internalization significantly impacts mental and physical well-being, affecting weight-related quality of life. Research indicates that weight-biased internalization is linked to poorer weight-related quality of life encompassing emotional, social, and physical aspects (Puhl *et al.*, 2021)^[26]. The complex relationship involves psychological, social, and physiological factors (Forbes & Donovan, 2019)^[11]. Internalizing negative beliefs can lead to low self-esteem, shame, and depression, negatively affecting an individual's quality of life (O'Donnell & Foran., 2024)^[22]. Addressing weight bias and promoting body positivity is crucial for improving mental and physical well-being (Lee *et al.*, 2019)^[17]. Interventions focusing on reducing weight bias, promoting self-compassion, and fostering positive body image are recommended for enhancing weight-related quality of life (Brenton-Peters *et al.*, 2021)^[2].

Weight bias internalization involves distress and self-worth (Smith *et al.*, 2024)^[30]. Internalized weight bias occurs when individuals with overweight or obesity believe negative societal attitudes about weight status are relevant to themselves, resulting in a devalued sense of self-worth (Olson *et al.*, 2018)^[24]. In a society idealizing thinness and stigmatizing larger body sizes, those experiencing weight bias may internalize these norms, negatively affecting their health (Clark *et al.*, 2021)^[10]. Weight-biased internalization includes incorporating external judgments into self-concept manifesting in various ways and influencing thoughts, emotions, behaviors, and health outcomes (Pearl *et al.*, 2018)^[25]. Consequences extend to developing a negative body image. Addressing this issue requires a cultural shift embracing diverse body sizes and challenging weight-based stereotypes while also involving communities and institutions (Puhl *et al.*, 2021)^[26]. Recognizing and actively countering weight bias internalization can build a more accepting society prioritizing the well-being of all individuals, irrespective of their body weight (Rubino *et al.*, 2020)^[28].

Five factors of quality of life and their effects on weight: physical performance, self-esteem, sexual life, public distress, and work. The stigma associated with obesity affects many facets of daily life, including health, work, education, family, the media, public health, and society (Lee *et al.*, 2019)^[17]. Many medical professionals have biases and negative

attitudes toward fat patients. (Alberga *et al.*, 2019)^[11]. Other traits associated with obese people include passivity, laziness, and a lack of self-discipline (Buczowska *et al.*, 2022)^[5]. On a personal, societal, and global scale, obesity shortens life expectancy, decreases the quality of life, and raises healthcare expenditures (Okunogbe *et al.*, 2021)^[23]. The good news is that some of the potential risks related to obesity can be reduced by decreasing weight through being physically active and engaging in physical activities (Shukla., 2021)^[31].

Existing studies lack specificity in understanding how internalized weight bias uniquely impacts various aspects of an individual's quality of life, hindering a comprehensive understanding of this complex relationship (Ramos Salas *et al.*, 2019)^[27]. Studying the effects of weight-biased internalization on weight-related quality of life is crucial for informing interventions, addressing psychological and social consequences, and offering targeted support to individuals facing weight-related stigma (Salas *et al.*, 2019)^[27]. This research contributes to destigmatizing discussions around weight, promoting a more inclusive understanding of health, and aiding in the development of public health strategies that address psychosocial aspects, fostering empathy and reducing societal biases (Westbury *et al.*, 2023)^[35]. Given the rising global obesity rates and pervasive weight bias contributing to stigma and discrimination, understanding and addressing the effects of weight bias internalization are urgent for improving mental health, well-being, and overall quality of life (Brown *et al.*, 2022)^[3]. The significant implications for mental health and social functioning underscore the urgency of addressing weight bias internalization to improve overall public health outcomes and reduce the burden of obesity-related stigma (Rubino *et al.*, 2020)^[28].

Studying the effects of weight bias internalization on weight-related quality of life is crucial for various reasons. Firstly, it significantly impacts mental health, increasing the risk of conditions like depression, anxiety, and low self-esteem. This negative self-perception leads to a cycle of self-criticism and emotional distress, informing targeted interventions for mental well-being (Cuauero *et al.*, 2023)^[8]. Additionally, weight-related quality of life is vital for overall well-being, offering insights into how weight and body image affect physical health, mental well-being, and social interactions. Understanding these effects enables researchers to develop interventions for a positive quality of life (Yazdani *et al.*, 2018)^[38]. The significance of studying weight bias internalization extends to mental health, social functioning, public health, healthcare disparities, health behaviors, and cultural perspectives on body size (Salas *et al.*, 2019)^[27].

Weight bias internalization refers to the acceptance of a stigmatized identity in society and the belief that these presumptions apply to individuals (Pearl & Puhl, 2018)^[25]. This study aimed to evaluate physical education students' understanding of the impact of internalizing weight bias on quality of life, as they are expected to lead and mentor others in the future. The study's efficacy and findings may be impacted by its limitations, but it is necessary to understand the connection between internalizing weight bias and quality of life. It has implications for society, health and well-being, educational institutions, and physical education students, as it informs those struggling with these issues about the impact of internalizing weight bias on their quality of life. Additionally, the study assesses how past experiences influence understanding of weight bias and helps educators evaluate their interactions with people affected by weight prejudice, ensuring they feel reassured and protected from

discriminatory behavior.

The study aimed to describe the relationship between weight bias internalization and quality of life among selected BPE or "Bachelor of Physical Education" students. It seeks to answer the level of weight bias internalization on BPE students in terms of distress and self-worth and determine the level of quality of life in terms of physical function, self-esteem, sexual life, public distress, and work. The hypothesis will be tested at a significance level of .05, which tends to measure and conclude if there is a significant relationship between the two variables.

2. Materials and methods

2.1 Research Respondents

The study respondents were Bachelor of Physical Education students enrolled in the College of Teacher Education at the University of Mindanao in Matina Campus, for 1st semester, S.Y. 2023-2024. To be eligible for the study, the students had to be aged 18 years or above, any gender, studying at the University of Mindanao, and willing to participate. Participants in the research includes 80 first-year students, 100 second-year students, and 87 third-year students. A total respondent population of 267 were required to form the sample. The fourth-year students were excluded as respondents for this study due to their current schedules, which are not allocated at the University of Mindanao campus. Also, those students who were not officially enrolled in the 1st semester, S.Y. 2023-2024 were excluded as well. To ensure more accurate and relevant results, only those who met the qualifications were included in the survey. Participants also have the option to withdraw if they choose not to continue.

2.2 Research Instrument

The data was collected through the use of an adopted survey questionnaire, employing quantitative survey tools and documents. Respondents provided their feedback using a 5-point likert scale. (5) Strongly agree, (4) Agree, (3) Moderately Agree, (2) Disagree, and (1) Strongly Disagree. There are two sections to the questionnaire. The first section focuses on indicators related to the impact of weight bias internalization, including distress (7 items) and self-esteem (6 items) from the study of Meadows and Higgs (2019). The second section focuses on impact on quality-of-life indicators including physical function (11 items), self-esteem (7 items), sexual life (4 items), public distress (5 items), and work (4 items) from the study of Wrzcionkowska and Calleja (2022). Various ranges indicate how participants perceive their weight bias internalization: 4.20-5.00 (very high) signifies outstanding weight bias internalization, 3.40-4.19 (high) indicates very satisfactory weight bias internalization, 2.60-3.39 (Moderate) suggests satisfactory weight bias internalization, 1.79-2.59 (low) implies unsatisfactory weight bias internalization and 1.00-1.79 (Very low) points to poor weight bias internalization.

The different ranges indicate how much participants felt how their weight affects their quality of life: 4.20-5.00 (Very high) indicates that participants consistently experience the impact of weight bias internalization on their quality of life, 3.40-4.19 (High) suggests that participants often experience the impact of weight bias internalization on their quality of life, 2.60-3.39 (Moderate) implies that participants sometimes experience the impact of weight bias internalization on their quality of life, 1.79-2.59 (Low) shows that participants rarely experience the impact of weight bias internalization on their

quality of life, 1.00-1.79 (very low) indicates that participants do not experience the impact of weight bias internalization on their quality of life.

The questionnaires were validated by two experts with a total mean score of 4.43 and 4.71 and pilot testing data was assessed for reliability. The Cronbach Alpha coefficient was .920 for the independent variable and .950 for the dependent variable. This mainly interprets that the items in the questionnaire is reliable since the value of the Cronbach Alpha of the two variable is greater than 0.70, which means that the survey questionnaire of this study has an excellent reliability.

2.3 Design and Procedure

A quantitative descriptive correlational design was used in this study. The correlational study aimed to uncover correlations between variables and to forecast future events using present knowledge (Walters., 2020) [34]. Furthermore, descriptive correlational is an appropriate approach if the study aims to describe the link between two variables, weight bias internalization and weight on quality of life.

The Dean was consulted before the survey was conducted by the researchers through submitting a letter of permission to the Dean's Office of the College of Teacher Education of the University of Mindanao. This letter ensures that the researchers are allowed to conduct a study with the utmost approval of the Dean of the College. The study included targeted respondents, who were meticulously surveyed in person by the researchers. The survey questionnaires were distributed during the participants' free time, ensuring that comprehensive and accurate data was collected from each respondent. The privacy and anonymity of all participants was kept strictly confidential. Tables containing the responses were created for statistical analysis. The correlation between the mean, standard deviation, and Pearson coefficient were used to examine the data.

3. Results & Discussion

3.1 Level of Weight Bias Internalization of BPE Students

Table 1 presents the data on the level of weight bias internalization of Bachelor of Physical Education students in the University of Mindanao. The weight bias internalization was measured in terms of distress and self-worth. Each criterion's weighted mean was calculated, in which the overall mean score of weight bias internalization has $M=3.32$ and $SD=0.92$ with a descriptive interpretation of moderate means that the students have satisfactory weight bias internalization. This indicates that the respondent's level of weight bias internalization is satisfactory. Moreover, the results manifested that self-worth had the highest mean score value of $M=3.34$ ($SD=0.98$), which was described as moderate with a verbal interpretation of satisfactory weight bias along with distress with a mean score of $M=3.30$ ($SD=1.05$), which was also described as moderate and with a verbal interpretation of satisfactory weight bias internalization. The moderate level of weight bias internalization among BPE students indicates that they sometimes experience the impact of weight bias on their self-worth and emotional well-being (Forbes & Donovan, 2019) [11].

This may manifest in various ways, such as feelings of shame, guilt, or low self-esteem related to their weight. The finding that self-worth had the highest mean score, described as moderate and interpreted as satisfactory, suggests that individuals with obesity tend to internalize negative societal

attitudes and stereotypes about weight, leading to a perceived lower sense of self-worth.

Table 1: Level of weight Bias Internalization of BPE students

Indicators	Mean	SD
Distress	3.30	1.05
Self-Worth	3.34	0.98
Overall	3.32	0.92

This means that individuals may struggle with negative self-perceptions and feelings of inferiority due to societal stigmatization of weight. On the other hand, the description of distress as moderate and interpreted as satisfactory suggests that individuals with obesity experience a significant level of emotional distress due to internalizing societal weight biases (Pearl & Puhl, 2021) [26]. This means that individuals may experience feelings of sadness, anxiety, or frustration as a result of negative attitudes and stereotypes about weight. However, the fact that the rating is not extremely high suggests that the students are also able to maintain a positive sense of self despite these negative attitudes (Lee *et al.*, 2019) [17].

3.2 Level of Quality of Life of BPE Students

As manifested in Table 2, the level of quality of life was measured based on the following indicators: physical function, self-esteem, sexual life, public distress, and work. Quality of life has an overall weighted mean score of 3.02 and SD=0.78, with a verbal interpretation of moderate which implies that the participants sometimes experience the impact of weight bias internalization on their quality of life.

For the specific indicators, work has the highest mean score with values of 3.21 (SD=0.98) and a descriptive level of moderate; followed by self-esteem with M=3.13 (SD=0.89) and a descriptive level of moderate; sexual life with M=3.02 (SD=1.02) and a descriptive level of moderate; public distress with M=2.92 (SD=0.99) and a descriptive level of moderate and the physical function stands out as the lowest indicator, with a total mean score of M=2.81 (SD=0.99) and a descriptive level of moderate. This implies that the quality of life of the respondents is sometimes influenced by their physical function, self-esteem, sexual life, public distress, and work.

Table 2: Level of Quality of Life of BPE students

Indicators	Mean	SD
Self-esteem	3.13	0.89
Sexual Life	3.02	1.02
Public Distress	2.92	0.99
Work	3.21	0.98
Overall	3.02	.78

The respondents rated moderately on physical function, self-esteem, sexual life, public distress, and work, indicating a moderate level of quality of life. This suggests that these factors have an impact on the students' quality of life. Physical function, for example, can affect a student's ability to participate in activities they enjoy, such as sports or exercise, which can in turn impact their mood and overall sense of well-being. Self-esteem can affect a student's confidence and ability to form and maintain relationships, as well as their motivation to achieve their goals. Sexual life can also have a significant impact on a student's quality of life, as sexual

health and satisfaction are important components of overall well-being. Public distress, such as exposure to violence or discrimination, can have a profound effect on a student's mental health and sense of safety.

Finally, work can impact a student's quality of life by creating stress, limiting free time, and affecting their financial stability. Overall, it is important to consider all of these factors when assessing and addressing the quality of life of students (Türkben Polat & Kaplan Serin, 2021) [32]. The domains of self-esteem, sexual life, and work had the highest mean scores, indicating their importance and impact on individuals' well-being. This suggests that weight-related issues significantly affect these aspects of life. Addressing issues related to physical function, self-esteem, sexual health, social distress, and work can help improve quality of life and promote holistic well-being (Meadows, & Higgs, 2019) [20].

3.3. Correlation of Weight Bias Internalization and Quality of Life

Table 3 shows the significant relationship between weight bias internalization and quality of life. It depicted a low positive relationship between Weight Bias Internalization and Quality of Life with a total correlation coefficient of .471*. This suggests a weak relationship where one variable shows some tendency to increase (Positive correlation) or decrease (Negative correlation) as the other changes, which rejected the null hypotheses at .05 level of significance.

Table 3: Correlation of correlation of weight bias internalization and quality of life

Quality of Life	Weight Bias Internalization		
	Distress	Self-worth	Overall
Physical Function	.425*	.363*	.435*
Self-esteem	.431*	.246*	.375*
Sexual Life	.306*	.259*	.311*
Public Distress	.466*	.381*	.468*
Work	.300*	.222*	.289*
Overall	.482*	.370*	.471*

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

Ideally, a strong negative correlation between weight bias internalization and quality of life would be preferred (Walsh *et al.*, 2018) [33]. This would mean that as weight bias internalization decreases, quality of life improves. A negative correlation indicates an inverse relationship between the two variables, suggesting that higher levels of weight bias internalization are associated with lower quality of life. A low positive correlation means that there is a positive relationship between weight bias internalization and quality of life, but it is not very strong. This implies that as weight bias internalization decreases, there is some tendency for quality of life to improve, but the effect may not be significant (Olson *et al.*, 2018) [24].

In other words, the correlation coefficient between these two variables is low positive, but it is closer to zero than to one, meaning that the two variables are not strongly related. However, even a weak positive correlation can have implications for interventions aimed at improving the well-being of individuals who experience weight-bias (Pearl & Puhl, 2018) [25]. By recognizing and addressing weight bias internalization, it may still be possible to positively impact an individual's quality of life, even if the correlation is low positive. Therefore, while the relationship between weight bias internalization and quality of life may not be very strong, it is still present and should not be ignored.

4. Conclusion

The study conducted on Bachelor of Physical Education students at the University of Mindanao found that there is a low positive relationship between weight bias internalization and quality of life. This suggests a weak relationship where one variable shows some tendency to increase (Positive correlation) or decrease (Negative correlation) as the other changes. Furthermore, the study found that the level of weight bias internalization among BPE students was moderate. This indicates that they sometimes experience the impact of weight bias on their self-worth and emotional well-being. Additionally, the study also found that the level of quality of life among BPE students was moderate as well. This implies that the quality of life of the respondents is sometimes influenced by their physical function, self-esteem, sexual life, public distress, and work. These findings suggest that weight bias internalization can harm an individual's mental and physical health, and efforts should be made to address this issue to promote a better quality of life and overall well-being. This finding holds true to Goffman's social stigma theory, which states that individuals with stigmatized attributes are often devalued and discriminated against by society (Clair, 2018) ^[9].

The study reveals a satisfactory level of weight bias internalization among participants and moderate ratings on aspects related to quality of life. To enhance the well-being of the student population, especially BPE students, the University of Mindanao should implement comprehensive Cognitive Behaviour Therapy (CBT) programs that should be held at least twice a month and made constant to cater to the unique needs of the students. The Bachelor of Science in Psychology students at the University of Mindanao will be implementing Cognitive Behavioural Therapy (CBT) for fellow students as part of their practical training. This hands-on experience aims to provide practical exposure in applying therapeutic techniques under the supervision of licensed professionals. The program will focus on structured CBT sessions addressing common student issues such as stress, anxiety, and academic pressures. Furthermore, based on the satisfactory and moderate results of weight bias internalization and quality of life, the researchers would recommend that teachers and the Bachelor of Physical Education organization should implement targeted seminars and workshops aimed at addressing weight bias internalization among its students. These sessions could include interactive discussions, guest speakers, and practical activities focused on raising awareness about the negative impact of weight bias internalization on mental and physical health. Lastly, UM-GSTC could offer resources and support services for students struggling with self-esteem issues related to weight bias, such as counseling or peer mentoring programs.

For future researchers who are interested in addressing weight bias internalization among students, it is recommended to conduct further studies that explore the effectiveness of various interventions such as group therapy, individual counseling, and educational programs. Additionally, it may be useful to examine the impact of environmental factors, such as campus culture and social norms, on weight bias internalization among students.

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