U.PORTO

MESTRADO EM PSICOLOGIA
PSICOLOGIA

Positive body image, psychological functioning and quality of life in individuals with obesity

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M

2024

Universidade do Porto

Faculdade de Psicologia e de Ciências da Educação

POSITIVE BODY IMAGE, PYSCHOLOGICAL FUNCTIONING AND QUALITY OF LIFE IN INDIVIDUALS WITH OBESITY

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Outubro 2024

Dissertação apresentada no Mestrado em Psicologia, área de Psicologia da Justiça e Desviância, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto, orientada pela Professora Doutora ***Filipa Mucha Vieira*** (FPCEUP).

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Agradecimentos

A todos que me acompanharam, que acreditaram e iluminaram o meu caminho um sincero obrigada. A todos que fizeram este percurso ser único e me elevaram enquanto pessoa, posso dizer que sou grata e levarei no coração todas as memórias. Foram 5 anos de uma montanha-russa que me trouxe a este momento e, hoje, posso afirmar que saio de coração cheio.

Um especial obrigada à Professora Doutora Filipa Vieira que foi sempre extremamente paciente e atenciosa e que me vez ir além do que eu acreditava ser as minhas capacidades. Foi um prazer e um privilégio cruzar caminho nesta última fase do meu percurso académico com uma profissional tão excecional.

À minha família, que sempre foi um pilar e conforto nos dias mais difíceis. Aos meus irmãos que são partes de mim em forma humana e me inspiram todos os dias a tentar alcançar a minha melhor versão. Ao Manuel que sem ser meu pai, acolheu-me, cuidou e moveu o mundo para que fosse feliz, mostrando-me que ser pai é muito mais que sangue. Por fim, e muito especialmente, um enorme obrigada à minha mãe que nunca desistiu de mim, que dá os melhores abraços, que é o meu maior exemplo de resiliência e amor, que me trouxe até aqui e acreditou (e acredita) que alcançarei grandes feitos na vida. Obrigada por estarem sempre lá para mim.

Aos meus amigos que são abraço-casa, luz nos dias escuros, memórias e a família que eu escolhi. Obrigada Gonçalo e *Bea* por serem os meus melhores amigos há mais de 10 anos e me encorajarem a crescer, dando a mão, colo e casa nos dias que não queria estar sozinha. Obrigada Celeste, *Marujo* e Bárbara por serem um ponto de referência, por ouvirem os meus anseios e me proporcionarem calma e carinho. Obrigada Diogo, *Bea*, Maria, Mariana e Irina, por terem tornado este percurso mais leve e bonito a partir da vossa amizade e ligação única, sei que estes anos foram mágicos por vos ter do meu lado. Obrigada Rui e Marina por terem sido os meus companheiros de aventura, por termos crescido 5 anos juntos e me terem apoiado nas minhas fases mais negras.

Por fim, um obrigada aos que me acolheram como fosse parte da família e me significam tanto. Pedro, Inês, *Tozé*, Sílvia e Elsa, sou grata pelo vosso coração bonito, por me fazerem sempre sentir em casa e por me fazerem sentir segura e capaz.

Deixo também uma palavra de apreço aos participantes, pois sem eles nada disto era possível. Obrigada por despenderem um pouco do vosso tempo para contribuir neste estudo.

Resumo

Pesquisas ao longo dos anos na obesidade tem se focado nas preocupações com a imagem corporal, principalmente a vertente negativa. Porém, existe outra dimensão da imagem corporal que deve ser considerada: a imagem corporal positiva (ICP). Estudos recentes em amostras comunitárias evidenciam relações positivas entre ICP e melhor bem-estar psicológico e qualidade de vida. O presente estudo tem como objetivo caracterizar a ICP, através da faceta da apreciação corporal, em indivíduos com diagnóstico de obesidade (GO), por comparação com um grupo não clínico normoponderal (GNC). Assim como, examinar as suas associações com o funcionamento psicológico (sintomas de depressão, ansiedade e stress) e a qualidade de vida.

Os dados foram recolhidos de uma amostra de 245 participantes, sendo 136 do GO e 109 GNC. Os resultados mostram que o grupo com obesidade tem valores mais baixos de apreciação corporal, de ansiedade e de qualidade de vida comparativamente com grupo normoponderal, mas não diferem nos valores de depressão e stress. Ainda, no GO, a apreciação corporal associa-se de forma significativa e positiva com a qualidade de vida e de forma negativa com a depressão, ansiedade e stress. Esta faceta da ICP é um preditor significativo do bem-estar psicológico e da qualidade de vida na amostra de pessoas com obesidade, explicando, nomeadamente, cerca de 20% da variabilidade dos resultados da qualidade de vida psicológica.

Os resultados deste estudo sugerem que a PBI tem um papel protetor na saúde mental e na melhoria da qualidade de vida, sendo importante no futuro as intervenções na obesidade terem uma abordagem multidisciplinar, onde se enfatize a importância de fortalecer a imagem corporal positiva.

Palavras-Chaves: Imagem Corporal Positiva; Apreciação Corporal; Obesidade; Bem-estar Psicológico; Depressão; Ansiedade; Stress; Qualidade de Vida

Abstract

Research over the years on obesity has focused on concerns about body image, mainly the negative aspects. However, there is another dimension of body image that must be considered: positive body image (PBI). Recent studies in community samples show positive relationships between PBI and better psychological well-being and quality of life. The present study aims to characterize PBI, through the facet of body appreciation, in individuals diagnosed with obesity (OB), in comparison with a non-clinical normoponderal group (NC). As well as examining its associations with psychological functioning (symptoms of depression, anxiety and stress) and quality of life.

Data were collected from 245 participants, 136 from OB and 109 from NC. The results show that the obese group has lower values of body appreciation, anxiety and quality of life compared to the normal weight group. Still, they do not differ in the values of depression and stress. Furthermore, in OB, body appreciation is significantly and positively associated with quality of life and negatively with depression, anxiety, and stress. This facet of PBI is a significant predictor of psychological well-being and quality of life in the sample of people with obesity, explaining, in particular, around 20% of the variability in psychological quality of life results.

The results of this study suggest that PBI has a protective role in mental health and improving quality of life. In the future, obesity interventions should adopt a multidisciplinary approach that prioritizes fostering a positive body image. This emphasis on body positivity will be essential for promoting both physical and mental well-being.

Keywords: Positive Body Image; Body Appreciation; Obesity; Psychological Well-being; Depression; Anxiety; Stress; Quality of Life

ACRONYMS

PBI Positive Body Image

OB Obesity Group

NC Normoponderal non-clinical Group

WHO World Health Organization

QoL Quality of Life

BMI Body Mass Index

Introduction

Obesity is recognized as a significant global health issue with widespread epidemiological implications. The World Health Organization (WHO) projects that by 2030, more than one billion adults worldwide will be classified as obese (World Obesity Federation, 2022). In Europe, approximately 60% of the adult population is either overweight or obese, according to the WHO European Regional Obesity Report (2022). Portugal reflects similar trends, with 53.6% of its adult population identified as overweight or obese (Instituto Nacional de Estatística, 2019).

The etiology of obesity is multifactorial, influenced by genetic, cultural, and psychosocial factors (Wanderley & Ferreira, 2010). Research examining the link between obesity and quality of life has consistently shown a negative relationship, with individuals with obesity generally reporting lower quality of life (Da Silva et al., 2006; Jaison et al., 2024; Pimenta et al., 2015). More specifically, studies suggest that the obese population experiences poorer psychological well-being (Morris et al., 2010; Yazdani et al., 2018), with higher levels of depression, anxiety, and stress (Atlantis & Baker, 2008; Gariepy et al., 2010; Jaison et al., 2024). A recent meta-analysis by Jokela & Laakasuo (2023) concluded that obesity may be a causal risk factor for depression.

Concerning body image, research suggests that individuals with obesity or overweight are more likely to experience higher levels of body dissatisfaction (Hatami et al., 2015; Weinberger et al., 2016). This dissatisfaction is strongly linked to increased depression and has been a significant predictor of depressive symptoms in both adolescent girls and boys (Bornioli et al., 2020). Overweight and obese individuals with body dissatisfaction are at a higher risk of psychological distress (Abbas et al., 2018; Rashid et al., 2021). Moreover, body dissatisfaction is also associated with lower self-esteem, particularly among young women (Bansal et al., 2017; Pop, 2016).

While these studies emphasize the negative aspects of body image, there is an equally important, yet often overlooked, dimension: positive body image (PBI). PBI is a multifaceted concept, defined as the acceptance, love, and respect for one's body (Tylka & Wood-Barcalow, 2015b). It encompasses constructs such as body appreciation, adaptive appearance investment, body image flexibility, and recognition of body functionality (Webb et al., 2015).

It is a recent concept that has sparked research interest over the past decade. Research indicates that PBI is correlated with fewer mental health issues and improved quality of life and social, emotional, and psychological well-being (Linardon et al., 2022; Swami et al., 2018). Greater life satisfaction (Davis et al., 2019), and lower levels of depression along with higher self-esteem (Gillen, 2015; Winter et al., 2019) were also associated with PBI. Several recent studies (e.g., Linardon et al., 2023; Modica & Markley, 2024; Urke et al., 2021) identified PBI as a predictor of reduced depressive symptoms and increased self-esteem and well-being. Although, these studies are on non-clinical samples.

The relationship between body weight and PBI appears to be inversely correlated, with studies suggesting that individuals with higher body mass index (BMI) generally report lower levels of body appreciation (He et al., 2020). However, research exploring the link between PBI and obesity remains limited, with findings lacking clear consensus. This association may be influenced by several moderating factors, such as demographic and contextual variables. Weinberger and Luck-Sikorski (2020) found no significant differences in PBI between obese and normal-weight female participants, though differences were observed among male participants. The meta-analysis by He and collaborators (2020) shows that the relationship between BMI and body appreciation is moderated by factors such as ethnicity and geographic region in both men and women. The educational level also could be a moderating factor, particularly among women. Additionally, body appreciation is influenced by relationship status. Overweight or obese individuals in a romantic relationship tend to have similar levels of body appreciation compared to those with a standard weight. However, single individuals with overweight/obesity have less body appreciation than those with a standard weight (Razmus et al., 2018).

Body appreciation seems to predict healthy behaviors, related to eating and weight management, such as diet and physical activity (Thomas & Warren-Findlow, 2019). Furthermore, it is positively correlated with health-promoting behaviors (e.g., seeking routine medical care) and negatively associated with health-risk behaviors (e.g., tobacco and alcohol use) (Nolen & Panisch, 2024). These findings suggest that PBI can be a protective factor for enhancing quality of life (Linardon et al., 2022; Tylka & Wood-Barcalow, 2015b). Therefore, studying PBI in clinical populations with obesity is particularly relevant, as obesity is typically associated with poorer physical and psychological well-being (Bornioli et al., 2020; Morris et al., 2010).

To contribute to a deeper understanding of these results and further investigate the role of PBI in obesity, this study aims to characterize the main study facet of PBI, body appreciation, in individuals with obesity and examine their associations with psychological functioning and quality of life (QoL). Specifically, we sought (1) to compare body appreciation, psychological functioning (i.e., depression, anxiety, and stress symptoms), and QoL between individuals diagnosed with obesity (OB group) and a non-clinical group (NC group), (2) to examine the associations between body appreciation and psychological functioning, and QoL in individuals with obesity and (3) to investigate whether body appreciation predicts QoL and psychological functioning in this clinical sample.

Considering that research indicated a negative association between BMI and body appreciation (He et al., 2020), psychological well-being, and QoL (Jaison et al., 2024; Yazdani et al., 2018), we can expect that the OB group presents lower levels of body appreciation, psychological well-being, and QoL when compared to NC group. Since PBI has been linked to greater psychological well-being and improved QoL in community samples (Linardon et al., 2022; Winter et al., 2019), we expect to find positive correlations between body appreciation and QoL, and negative correlations between body appreciation and depression, anxiety and stress symptoms. Finally, as PBI has been shown to predict reduced depressive symptoms, as well as increased self-esteem and well-being (Modica & Markley, 2024; Urke et al., 2021), we hypothesized that body appreciation will be a significant predictor of all psychological functioning indicators and QoL in the OB group.

Methods

1. Participants

The total sample consists of 245 participants, 190 women (77.6%) and 55 men (22.4%), the mean age is 39.76 (SD = 12.05), ranging from 19 to 69 years old. These participants are divided into two groups: a clinical group diagnosed with obesity (OB group) and a normoponderal, non-clinical group (NC group). Participants were required to be 18 years or older. Eligibility for the OB group required a BMI of 30 kg/m² or higher, while participants in the NC group needed to have a BMI below 30 kg/m².

The OB group comprises 136 individuals (110 women and 26 men), with BMI ranging from 30kg/m² to 59.52kg/m² (M = 37.99, SD = 5.91). NC group includes 109 individuals (80 women e 29 men), mean BMI was 22.21 kg/m^2 (SD = 1.51), ranging from 18.59kg/m² to 24.42kg/m². There were no significant group differences in age [t (243) = 0.41, p = 0.68, d = 12.07] and years of schooling [t (237) = -1.93, p = 0.06, d = 3.42].

2. Instruments

2.1. Demographics

A custom questionnaire was developed to gather sociodemographic information, including age, sex, marital status, education level, profession, and anthropometric data.

2.2. Body Appreciation

The Body Appreciation Scale 2 (BAS-2) was used to measure PBI (Tylka & Wood-Barcalow, 2015; Lemoine et al., 2018). It is a self-report scale with 10 items that must be answered in a 5-point Likert-type scale, ranging from 1 (never) to 5 (always). Higher scores on the scale indicate greater body appreciation. In this study, Cronbach's α for the OB group is 0.91, and for the NC group is 0.92.

2.3. Quality of Life (QoL)

The WHO Quality of Life Scale Abbreviated Version (WHOQOL-Bref) (World Health Organization, 1998; Vaz Serra et al., 2006) assesses QoL through 26 items divided into 4 domains: physical, psychological, social, and environmental. Higher scores indicate higher QoL in the four domains. Participants rated items on a 5-point Likert-type scale that measured evaluation, frequency, capacity, and intensity. In the OB group, Cronbach's α for the subscales varied between 0.74 and 0.82; in the NC group, it varied between 0.73 and 0.83.

2.4. Depression, Anxiety and Stress Symptoms

The 21-item Depression, Anxiety, and Stress Scale (DASS) (Lovibond & Lovibond, 1995; Pais-Ribeiro et al., 2004) assesses depression, anxiety, and stress symptoms through a 4-

point Likert-type scale, ranging from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). Higher scores indicate more symptoms. In the OB group, Cronbach's α for the subscales varied between 0.87 and 0.93; in the NC group, it varied between 0.82 and 0.89.

3. Procedure

The study complied with the Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. It was approved by the Ethics Committee of the Faculty of Psychology and Education Sciences, University of Porto (Reference 2018/12-6), the Data Protection Unit of the University of Porto (Reference 4/2020), and the Health Ethics Committees of the University Hospital Center of São João (Reference CA-301/18), and the Hospital Center of Douro e Vouga (Reference 37/2022). Informed consent was obtained from all participants. Participants in the OB group were recruited from a public medical service in northern Portugal that specializes in obesity treatment. They were referred by clinicians and completed paper-and-pencil questionnaires. Participants in the NC group were recruited through social media advertisements and completed an online survey.

4. Statistical analysis

Data were analyzed using the IBM SPSS Statistics version 28. Missing data accounted for 10% of the main dataset. According to Bennett (2001), this low percentage suggests that our statistical analyses are not prone to bias, and there were no replacement for missing values. To check for outliers, we used boxplots and z-scores. No significant severe outliers were identified. After confirming no significant deviations from normality—using skewness and kurtosis values below |3| and |10|, respectively (Kline, 2011)—independent-sample t-tests were performed to compare study variables (body appreciation, psychological functioning, and QoL) between the OB group and the (NC) group. Effect sizes were calculated using Cohen's (1998) guidelines: 0.20 for a small effect, 0.50 for a moderate effect, and 0.80 for a large effect.

Bivariate correlations between all variables were conducted for the OB group. According to Cohen (1998), Pearson r values of 0.10, 0.30, and 0.50 represent small, medium, and large effects, respectively.

Linear regression analyses using the enter method were conducted to examine whether body appreciation predicted psychological functioning and QoL (criterion variables) in the OB group. Multicollinearity was assessed by reviewing the Variance Inflation Factors (VIFs), ensuring all values were below 10 (Hair et al., 1995). A significance level of 0.05 was considered with a 95% confidence interval.

Results

1. Comparative Analysis between OB group and NC group

Independent-sample t-tests (Table 1) revealed significant differences between groups in the study variables, except for the depression and stress symptoms. OB group reports poorer body appreciation and QoL, as well as more anxiety symptoms, than the NC group.

2. Correlations between body appreciation, psychological functioning and QoL in OB group

As shown in Table 2, body appreciation in the OB group demonstrated significant correlations with all other study variables. The PBI facet was negative and moderately correlated with depressive, anxiety, and stress symptoms ($-0.27 < r < -0.36$), and a positive, moderate correlation with the four domains of QoL ($0.25 < r < 0.46$).

3. Predictive role of body appreciation

To determine whether the body appreciation facet of the PBI (independent variable) predicted depression, anxiety, stress symptoms, and domains of QoL (criterion variables), seven separate linear regression analyses were performed. As shown in Table 3, all models were statistically significant. Body appreciation accounted for 13% of the variance in depression, 7% in anxiety, 9% in stress, 8% in physical QoL, 21% in psychological QoL, 7% in social QoL, and 6% in environmental QoL.

Table 1. *Comparisons between the OB group and the NC group*

	OB Group (*n* = 136)		NC Group (n = 109)		*t*	*df*	Cohen's *d*	95% CI		*p*
	M	*SD*	*M*	*SD*				Lower	Upper	
Body appreciation	2.87	0.73	3.86	0.61	-11.29	243	0.68	-1.16	-0.81	<0.001
DASS-Depression	4.30	5.17	3.23	3.41	1.72	186	4.24	-0.16	2.31	0.088
DASS-Anxiety	4.25	4.88	2.87	3.03	2.39	186	3.92	0.24	2.52	0.018
DASS-Stress	6.51	4.62	5.83	3.89	1.07	150.14	4.21	-0.58	1.94	0.288
Pyshical QoL	12.72	1.89	13.53	1.47	-3.61	230	1.71	-1.25	-0.37	<0.001
Psychological QoL	13.83	2.03	15.17	1.78	-5.35	230	1.92	-1.84	-0.85	<0.001
Social QoL	14.51	3.28	15.78	2.85	-3.11	230	3.09	-2.07	-0.46	0.002
Environment QoL	14.42	2.12	15.56	2.33	-3.89	219.99	2.22	-1.72	-0.56	<0.001

Note: CI = confidence interval; DASS = Depression, Anxiety and Stress Scale; QoL = quality of life; OB Group = obesity group; NC = normoponderal group

Table 2. *Bivariate correlations between variables for the OB group*

	1	2	3	4	5	6	7
Body appreciation	-0.36**	-0.27*	-0.29**	0.28**	0.46***	0.26**	0.25**

Note: OB group n = 363; 1 = DASS-Depression; 2 = DASS-Anxiety; 3 = DASS-Stress; 4 = Physical QoL; 5 = Psychological QoL; 6 = Social QoL;

7 = Environmental QoL; DASS = Depression, Anxiety and Stress Scale; QoL = quality of life. *p < 0.05; ** p < 0.01; *** p < 0.001

Table 3. *Results of the multiple regressions with depression, anxiety, and stress symptoms, and QoL as the criterion variables for the OB group*

		95% CI for B		SE B	B	*t*	*p*	R^2	Adj R^2
	B	**LL**	**UL**						
DASS-Depression									
Body appreciation	-2.53	-4.03	-1.03	0.75	-0.36	-3.37	0.001		
F (1, 78) = 11.33, p = 0.001								0.13	0.12
DASS-Anxiety									
Body appreciation	-1.80	-3.26	-0.34	0.73	-0.27	-2.46	0.016		
F (1, 78) = 6.06, p = 0.016								0.07	0.06
DASS-Stress									
Body appreciation	-1.85	-3.22	-0.48	0.69	-0.29	-2.69	0.009		
F (1, 78) = 7.22, p = 0.009								0.09	0.07
Physical QoL									
Body appreciation	0.73	0.28	1.18	0.23	0.28	3.24	0.002		
F (1, 122) = 10.49, p = 0.002								0.08	0.07
Psychological QoL									
Body appreciation	1.26	0.82	1.71	0.23	0.46	5.61	<0.001		
F (1, 122) = 31.50, p < 0.001								0.21	0.20
Social QoL									
Body appreciation	1.18	0.40	1.96	0.39	0.26	3.00	0.003		
F (1, 122) = 9.02, p = 0.003								0.07	0.06
Environment QoL									
Body appreciation	0.73	0.22	1.23	0.26	0.25	2.85	0.005		
F (1, 122) = 8.14, p = 0.005								0.06	0.06

Note: B = unstandardized coefficient; CI = confidence interval; SE B = standard error for the unstandardized coefficient; β = standardized coefficient; R^2 = R square; Adj R^2 = Adjusted R square; LL = lower limit; UL = upper limit; DASS = Depression, Anxiety and Stress Scale; QoL= quality of life; OB Group (n = 136)

Discussion

This study aimed to explore the concept of PBI in the context of obesity. We proposed to contribute to a deeper understanding of the role of PBI in this clinical sample, examining the associations between body appreciation, psychological functioning and QoL.

As predicted by our hypothesis (1), statistically significant differences were found between the OB group and the NC group in body appreciation and QoL. This aligns with previous research, which shows that individuals with higher BMI tend to have lower body appreciation (He et al., 2020) and reduced QoL (Kushner & Foster, 2000; Taylor et al., 2013). This diminished QoL is often reported in the health domain (Jaison et al., 2024), where those diagnosed with obesity experience poorer physical well-being, including pain and comorbidities such as heart disease (McVinnie, 2013; WHO, 2024), as well as lower psychological well-being (Yazdani et al., 2018). Psychological distress has also been linked to the stigma associated with this disease, which negatively affects mental and social well-being (Steptoe & Frank, 2023) and leads to lower QoL scores. Research indicates that individuals diagnosed with obesity often face stigma from their communities and even from healthcare professionals (Puhl & Heuer, 2009; Ratcliffe & Ellison, 2013), experiencing greater body dissatisfaction (Wu & Berry, 2017) and discrimination in various areas, such as the workplace (Carr & Friedman, 2005; Puhl & Heuer, 2009). This combination of poorer physical and mental health, along with the stigma and discrimination encountered by people with obesity, likely contributes to lower QoL across different domains.

In terms of psychological functioning, differences between groups were found only in anxiety, with the OB group reporting higher anxiety levels, but no significant differences in depression or stress. Although the literature suggests poorer psychological functioning in individuals with obesity (Atlantis & Baker, 2008; Gariepy et al., 2010; Jaison et al., 2024), it is important to note that this population is highly heterogeneous. Some studies indicate more varied findings regarding depression compared to anxiety, with several influencing factors. For instance, research shows that higher BMI is associated with more pronounced psychological symptoms, including depressive symptoms (Correia et al., 2009; Jung et al., 2017), and that age, less education, and ethnicity can also be a risk for higher depression levels (Blasco et al., 2020; Correia et al., 2009; Rindler et al., 2023). Additionally, one study indicates that depression is more strongly linked to obesity than the reverse; individuals with higher levels of depression are at greater risk of developing obesity than vice versa (Mannan et al., 2016). These

unexamined factors may explain the differences observed in the present study, as they were not explored or controlled for. On the other hand, social and cultural changes in recent years have contributed to increasing levels of depression, anxiety, and global stress (Hidaka, 2012). These issues have become even more pronounced following the COVID-19 pandemic (Shah et al., 2020; WHO, 2022). In Portugal, 8% of the population has been diagnosed with depression (*Depressão*, 2023). Additionally, a study from a family health unit in northern Portugal found a prevalence of severe depression, anxiety, and stress ranging between 10.5% and 17.5% (Chyczij et al., 2020). This suggests that individuals, even without an obesity diagnosis, may still experience high levels of depression and stress due to various factors, such as work, socioeconomic status, and political issues, among others.

As expected, this study supported the relationship between body appreciation and psychological well-being outcomes (Hypothesis 2). Similar findings have been reported in various community samples studies, showing that body appreciation is associated with lower levels of depression and anxiety, along with higher QoL (Linardon et al., 2022; Winter et al., 2019). In our study, psychological QoL showed the strongest correlation with body appreciation. Indeed, body appreciation is particularly linked to greater life satisfaction, psychological well-being, and self-esteem (Davis et al., 2019; Gillen, 2015; Swami et al., 2018). Additionally, body appreciation is associated with healthier self-care behaviors (Nolen & Panisch, 2022), which can enhance individuals' perception of QoL, especially at a psychological level, even in the presence of an obesity diagnosis.

Gillen (2015) found that individuals with higher body appreciation report better mental well-being, regardless of their BMI. Consistent with this, our sample showed that body appreciation predicts both psychological functioning and QoL (Hypothesis 3), in line with recent literature (Linardon et al., 2023; Modica & Markley, 2024; Urke et al., 2021). This is further reinforced by the finding that body appreciation contributes to predicting psychological QoL in the obesity sample, accounting for 20% of the variance. Regardless of BMI, higher body appreciation serves as a protective factor for psychological well-being (Gillen, 2015; Tylka & Wood-Barcalow, 2015b). Research consistently shows that body appreciation is linked to improved well-being (e.g., Davis et al., 2019) and positive mental health (Swami et al., 2024), leading individuals to evaluate their QoL more positively, regardless of BMI.

Given these findings, both in this study and in other samples, developing multidisciplinary intervention programs that focus on enhancing body appreciation (PBI) seems

highly beneficial. An online program aimed at promoting healthier lifestyles and body image in overweight and obese individuals has shown promising results, leading to improvements in body image and reductions in disordered eating behaviors (Beintner et al., 2019). These types of programs may help protect against declines in well-being and quality of life (e.g., Nayir et al., 2021; Davis et al., 2019; Linardon et al., 2022), and could also prevent the onset or worsening of depressive symptoms, anxiety, and stress (e.g., Winter et al., 2019). Furthermore, research indicates that PBI encourages self-care behaviors, such as paying greater attention to diet and physical activity (Thomas & Warren-Findlow, 2019; Nolen & Panisch, 2024). Finally, incorporating PBI into youth health and obesity prevention programs is essential. While many programs focus solely on diet and physical activity to promote healthier lifestyles and prevent obesity, it is equally important to include PBI. By emphasizing body appreciation and recognizing its capabilities, this approach helps foster confidence and self-esteem in children. It can also serve as a protective buffer against societal ideals and beauty standards, which often contribute to body dissatisfaction and unhealthy dieting behaviors (Bray et al., 2018).

1. Limitations

Although this study is innovative and promising, the results should be interpreted with caution, considering several limitations. First, the sample is predominantly female, which may influence the findings, as gender differences exist in body image assessment (Calogero & Thompson, 2010; Webb et al., 2015). Additionally, the sample is not representative of the Portuguese population, given its relatively small size and the fact that the clinical group was recruited from a single city in Portugal (Porto). Therefore, the results should not be generalized.

Moreover, as a cross-sectional study, it does not establish causality for the observed outcomes. Another limitation is that only one facet of body appreciation (PBI) was measured, whereas other dimensions may also explain the relationship between PBI, psychological well-being, and QoL in obesity (Tylka & Wood-Barcalow, 2015b; Razmus, 2018). Lastly, variables such as socioeconomic status, comorbidities, and ethnicity were not controlled, so we cannot definitively rule out the possibility that other factors may explain our results.

2. Future Research

Although the present study is a pioneer in understanding PBI in obesity in the Portuguese population, considering the relationships between PBI and symptoms of depression, anxiety and stress and QoL, other approaches should be considered.

In the future, longitudinal studies should be conducted to determine whether there is a causal relationship between body appreciation (PBI) and the variables studied (depression, anxiety, stress, and QoL). Additionally, other facets of PBI, such as Positive Rational Acceptance Coping, Body Image Flexibility, Broad Conceptualization of Beauty, and Body Acceptance by Others, should be explored to gain a more comprehensive understanding of the relationships between PBI, well-being, and obesity. These facets focus on respecting the body for what it is, valuing it beyond societal standards, embracing acceptance by others, and adopting a broader view of beauty. Given the stigma, deviation from beauty standards, and body dissatisfaction commonly associated with obesity, it would be valuable to examine how these facets influence psychological well-being and QoL.

It is also important in future investigations to have a more robust and representative sample, considering gender issues. Finally, it would be interesting to control variables such as socioeconomic level, education, comorbidities, to understand whether PBI explains better psychological well-being and quality of life in obesity or whether there is a greater influence of these factors.

3. Conclusion

This study explores the associations between body appreciation, psychological functioning, and QoL in individuals with obesity. The findings reveal that body appreciation is linked to improved psychological well-being and a higher QoL. Based on this evidence, and in line with existing literature, we suggest that promoting a PBI plays a protective role in enhancing and mental health in individuals diagnosed with obesity. Therefore, future interventions should adopt a multidisciplinary approach that not only focuses on weight loss but also emphasizes the importance of strengthening PBI.

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