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MENTAL HEALTH IMPACTS IN INDIVIDUALS UNDERGOING BARIATRIC SURGERY: A SYSTEMATIC REVIEW

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ABSTRACT: Introduction: Obesity is a chronic and multifactorial condition, related to genetics and behaviors, as well as various comorbidities such as diabetes. Furthermore, it is linked to social stigmatization, which affects treatment. Diagnosis is made using Body Mass Index (BMI), and obesity affects more than half of the Brazilian population. Bariatric surgery has proven effective in weight loss and improving physical and mental health. Despite this, there are risks such as nutritional deficiencies, physical complications, and psychological impacts. Bariatric surgery improves self-esteem, depression, and anxiety, but may increase the risk of alcoholism and suicide. **Objective:** To analyze, through a systematic review, the impact on the mental health of individuals undergoing bariatric surgery. **Methods:** This is a systematic review with a final sample of 25 articles, selected in June 2025, retrieved from PubMed and BVS, and selected according to the PRISMA criteria. **Results:** Most of the articles were observational, cohort, and cross-sectional studies. Mental health outcomes were synthesized according to the main findings: positive, negative, or neutral (without statistical significance or with inconclusive results). **Conclusion:** The study showed that bariatric surgery can generate both benefits and drawbacks to mental health. Although bariatric surgery represents an important tool in the treatment of severe obesity, its impacts on mental health still show heterogeneous results.

Keywords: bariatric surgery; quality of life; obesity; mental disorders.

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Repercussões Na Saúde Mental De Indivíduos Submetidos À Cirurgia Bariátrica: Revisão Sistemática

RESUMO: Introdução: A obesidade é uma condição crônica e multifatorial, relacionada a genética e comportamentos, além de diversas comorbidades. Ademais, está ligada à estigmatização social, o que afeta o tratamento. O diagnóstico é feito pelo IMC, e a obesidade atinge mais da metade da população brasileira. A cirurgia bariátrica mostrou-se eficaz na perda de peso e na melhora da saúde física e mental. Apesar disso, há riscos como deficiências nutricionais, complicações físicas e impactos psicológicos. A bariátrica melhora autoestima, depressão e ansiedade, mas pode aumentar o risco de alcoolismo e suicídio. **Objetivo:** analisar, por meio de uma revisão sistemática, as repercussões na saúde mental de indivíduos submetidos à bariátrica. **Métodos:** Trata-se de uma revisão sistemática com amostra final de 25 artigos, selecionados em junho de 2025, levantados junto a *PubMed* e a BVS, selecionados segundo os critérios do PRISMA. **Resultados:** A maioria dos artigos foram estudos observacionais, de coorte e transversal. Os desfechos em saúde mental foram sintetizados de acordo com os principais achados, sendo: positivos, negativos ou neutros (sem significância estatística ou com resultados inconclusivos). **Conclusão:** O estudo apresentou que a cirurgia bariátrica pode gerar tanto benefícios quanto prejuízos à saúde mental. Embora a cirurgia bariátrica represente importante ferramenta no tratamento da obesidade grave, seus impactos na saúde mental ainda apresentam resultados heterogêneos.

Palavras-chave: cirurgia bariátrica; qualidade de vida; obesidade; transtornos mentais.

Repercusiones En La Salud Mental De Individuos Sometidos A Cirugía Bariátrica: Revisión Sistemática

RESUMEN: Introducción: La obesidad es una condición crónica y multifactorial, relacionada con la genética y los comportamientos, así como con diversas comorbilidades como la diabetes. Además, está vinculada a la estigmatización social, lo que afecta el tratamiento. El diagnóstico se realiza mediante el Índice de Masa Corporal (IMC), y la obesidad afecta a más de la mitad de la población brasileña. La cirugía bariátrica ha demostrado ser eficaz en la pérdida de peso y en la mejora de la salud física y mental. A pesar de ello, existen riesgos como deficiencias nutricionales, complicaciones físicas e impactos psicológicos. La cirugía bariátrica mejora la autoestima, la depresión y la ansiedad, pero puede aumentar el riesgo de alcoholismo y suicidio. **Objetivo:** Analizar, mediante una revisión sistemática, el impacto en la salud mental de individuos sometidos a cirugía bariátrica. **Métodos:** Se trata de una revisión sistemática con una muestra final de 25 artículos, seleccionados en junio de 2025, recuperados de PubMed y BVS, y seleccionados según los criterios PRISMA. **Resultados:** La mayoría de los artículos fueron estudios observacionales, de cohorte y transversales. Los resultados de salud mental

se sintetizaron según los principales hallazgos: positivos, negativos o neutros (sin significancia estadística o con resultados inconclusos). **Conclusión:** El estudio mostró que la cirugía bariátrica puede generar tanto beneficios como perjuicios para la salud mental. Aunque la cirugía bariátrica representa una herramienta importante en el tratamiento de la obesidad severa, sus impactos en la salud mental aún muestran resultados heterogéneos.

Palabras clave: cirugía bariátrica; calidad de vida; obesidad; trastornos mentales.

INTRODUCTION

Obesity is a chronic, complex, and multifactorial condition involving an interplay of genetic, behavioral, and environmental factors, and is characterized by excessive accumulation of body fat (Sohan et al., 2024). Furthermore, there is a well-established association between this clinical condition and numerous comorbidities, including type 2 diabetes mellitus, hypertension, dyslipidemia, osteoarticular disorders, cardiovascular and psychiatric conditions, along with a decline in overall well-being, reduced psychosocial functioning, and decreased work productivity (Barber et al., 2024).

According to the World Health Organization (WHO), body mass index (BMI) is used to classify obesity. Obesity is defined as a BMI ≥ 30 kg/m², while overweight is classified as a BMI ≥ 25 kg/m². Globally, approximately 2.8 million deaths per year are attributed to obesity or overweight, based on 2021 data, which remains highly relevant (WHO, 2021). In Brazil, the prevalence of obesity among adults has increased by 72% over the past 13 years, and excess weight affects 55.4% of the population (Brasil, 2020). Given its high prevalence, appropriate management and treatment are essential, including lifestyle interventions, pharmacotherapy, and bariatric surgery, which represents an effective option for severe obesity and its associated complications (Dijkhorst et al., 2024).

Eligibility criteria for bariatric surgery within the Brazilian Unified Health System (SUS) are defined by Ministry of Health ordinances 424 and 425. These include a BMI ≥ 40 kg/m², with or without comorbidities, after failure of clinical management for at least two years. In the presence of high cardiovascular risk comorbidities, such as diabetes and hypertension, surgery may be indicated for patients with a BMI ≥ 35 kg/m² (Sociedade Brasileira de Cirurgia Bariátrica e Metabólica, 2023). In addition, individuals undergoing bariatric surgery may experience a range of health consequences, including impacts on mental health.

The WHO defines mental health as a dimension of overall health encompassing psychological, physical, and emotional aspects, which contribute to the development of personal and social skills necessary for community life and coping with life's challenges (WHO, 2022). In this context, obesity is a complex condition involving multiple dimensions, including socio-environmental, psychological, genetic, and metabolic factors (Colangeli et al., 2024).

From a social perspective, individuals with obesity are often subjected to stigma and discrimination across various settings. These factors not only negatively affect mental health but also pose significant barriers to seeking appropriate treatment, including bariatric surgery (Colangeli et al., 2024). Bariatric surgery can positively influence psychological well-being through improvements in quality of life among some patients. Both short- and long-term weight loss are associated with enhanced self-esteem and body image, which contribute to better emotional outcomes and significant reductions in anxiety and depression (Sohan et al., 2024).

However, despite its benefits in improving obesity-related comorbidities, bariatric surgery may also lead to complications such as infections, thromboembolic events, and impaired absorption of fat-soluble vitamins (A, B12, D, E, and K), as well as iron, calcium, and folic acid—nutrients essential for proper metabolism. Some of these complications require lifelong treatment and dietary changes, which may affect patients' mental health after surgery, particularly among those experiencing weight regain (Sohan et al., 2024).

Liao et al. (2022), in a meta-analysis, reported significant improvements in psychosocial outcomes—especially in depression and anxiety—among patients following bariatric surgery. However, the study also identified an increased risk of suicide and self-harm in some patients 8 to 10 years after the procedure. Similarly, another systematic review with meta-analysis found that bariatric surgery improves mental health by reducing symptoms of anxiety, depression, and eating disorders. Nevertheless, an increase in alcohol use disorder (AUD) was observed, possibly linked to alterations in reward mechanisms that predated the surgery (Law et al., 2023).

In light of this context, the present study aimed to analyze, through a systematic review, the repercussions on the mental health of individuals undergoing bariatric surgery.

METHODS

This study consists of a systematic review of the scientific literature, based on primary studies as its data source. This approach is justified by the need to synthesize the diverse body of research on the topic, as well as to enable an in depth analysis of the mental health repercussions in individuals who have undergone bariatric surgery.

A systematic review allows for the identification, selection, evaluation, and synthesis of relevant available evidence on a given topic (Galvão; Pereira, 2014). Accordingly, information related to the subject was carefully selected, considering that particularly in the health field this method is especially valuable, as it supports decision-making by professionals, enhances clinical practice, and contributes to the continuous updating of knowledge (Mendes et al., 2008).

The methodology of this systematic review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Updated in 2020, PRISMA provides a structured framework for reporting systematic reviews and meta-analyses. It consists of a 27-item checklist, including sub-items that should be addressed in the study, as well as guidance on checklist completion, explanatory notes, and the development of a flow diagram. This flow diagram includes the number of records identified, screened, excluded (with reasons, such as duplication or irrelevance based on title/abstract), reports assessed for eligibility, and the final number of studies included in the review (Page et al., 2021).

To minimize limitations and reduce the risk of bias, PRISMA 2020 establishes guidelines that emphasize transparency, reproducibility, and completeness in reporting. These include a detailed description of the search strategy, presentation of the study selection flow diagram, critical appraisal of methodological quality, and a clear synthesis of results (Page et al., 2021).

The research question guiding this study was: *What are the mental health repercussions in individuals who have undergone bariatric surgery?* The literature search was conducted in June 2025 using the PubMed database (via the National Library of Medicine) and the Virtual Health Library (VHL). The search strategy was structured through the combination of Health Sciences

Descriptors (DeCS) and Medical Subject Headings (MeSH): "Obesity," "Bariatric Surgery," and "Mental Health," connected by the Boolean operator AND.

The selection of studies followed predefined inclusion criteria: articles published in Portuguese, English, or Spanish between 2021 and 2025 (last five years), with full-text availability, and compliant with ethical research standards. Exclusion criteria comprised studies not related to bariatric surgery and mental health outcomes, as well as reviews, editorials, and opinion articles. No restrictions were imposed regarding study design, population characteristics, or additional languages. All studies addressing mental health outcomes were considered eligible.

This study was conducted and reported in accordance with PRISMA 2020 guidelines. All applicable checklist items were addressed, including a clearly defined research question, eligibility criteria, search strategy, study selection process, data extraction, synthesis of findings, and discussion of limitations.

The methodological quality and risk of bias of the included studies were assessed using validated tools appropriate to each study design. For observational studies (cohort, case-control, and cross-sectional), the Joanna Briggs Institute (JBI) critical appraisal tools were employed, as they are widely recommended for systematic reviews in health research.

The assessment was conducted independently, considering criteria such as clarity in the definition of the study population, appropriateness of exposure and outcome measurements, control of confounding factors, validity of the instruments used, and completeness of the data. Studies were classified as having high, moderate, or low methodological quality, and these assessments were taken into account in the interpretation and discussion of findings.

Overall, most studies demonstrated moderate to high methodological quality. However, some limitations were identified, including methodological heterogeneity, lack of longitudinal follow-up in certain studies, and the use of self-reported instruments for assessing mental health outcomes

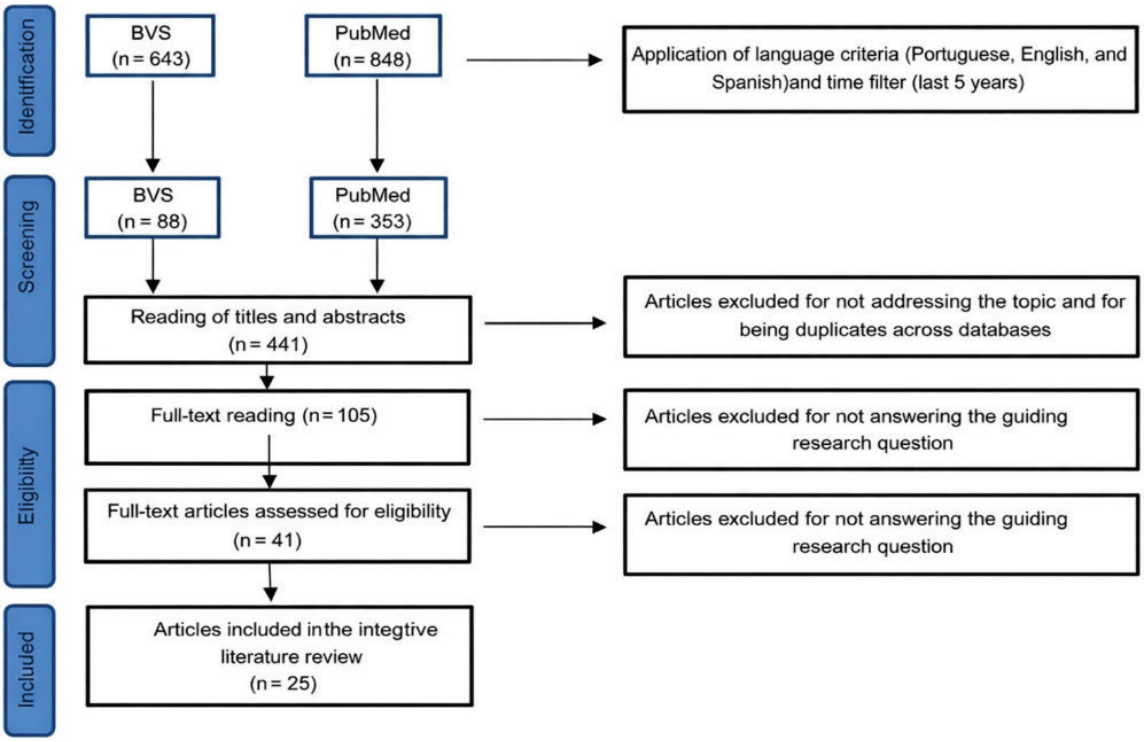

Figure 1. PRISMA flowchart with information from database searches

RESULTS

A total of 25 articles were selected to compose the final sample: five from 2021, three from 2022, four from 2023, eight from 2024, and five from 2025. Table 1 presents the synthesized final findings, providing a clearer and more in-depth understanding of the selected studies, facilitating the individual interpretation of each article's study design and its main findings.

Table 1. Characterization of the 25 articles in the final sample, in descending order of year of publication.

Authors / Year of Publication	Journal / Country	Study Type (N)	Analyzed Outcomes	Direction of Effect and Main Findings
Albarrán-Sánchez et al. (2021)	Gac Med Mex (Mexico)	Analytical cross-sectional study (n=230)	Depression; Anxiety; QoL; Weight regains	(0) Depression: no statistical changes. (0) Anxiety: no statistical changes. (+) QoL: improvement. (0) Weight regains: no changes.
Arhi et al. (2021)	Obesity Surgery (USA)	Retrospective nested case-control (n=3534)	Depression; Coping mechanisms; Weight loss	(+) Reduced consultations in pre-existing depression. (-) Increased risk of new depression. (-) Food substitution as coping. (0) No weight effect on depression.
Fialho et al. (2021)	Geriatr Gerontol Aging (Brazil)	Cross-sectional (n=74)	Depression; Anxiety; Behavior; Weight regain	(+) Minimal depressive symptoms (89.2%). (+) Minimal anxiety (92.9%). (+) Healthy behavior. (-) Weight regain associated with lower anxiety.
Konttinen et al. (2021)	Annals of Surgery (USA)	Prospective non-randomized (n=5335)	Self-harm; Suicide	(-) Doubled risk vs control.
Mabey et al. (2021)	Surg Obes Relat Dis (USA)	Cohort (n=336)	Suicidal ideation; QoL	(-) Higher suicidal ideation. (-) Poor QoL predicts long-term ideation.
Alshammari et al. (2022)	Cureus (USA)	Cross-sectional (n=367)	Depression; Anxiety; Satisfaction	(0) No depression/anxiety changes. (+) 97% satisfaction.
Liu et al. (2022)	Obesity Surgery (USA)	Cross-sectional	Internalized stigma	(-) Reduced QoL.
Tan et al. (2022)	J Clin Med (Switzerland)	Prospective cohort (n=246)	Mental health	(-) Honeymoon effect then decline.
Furtado et al. (2023)	ABCD (Brazil)	Cross-sectional (n=217)	Weight regain; Depression; BED	(-) 35–46.5% regain. (-) Depression harms adherence. (-) BED linked to regain.
Hung et al. (2023)	Ann Surg (USA)	Retrospective cohort (n=38661)	Suicide outcomes	(-) Increased risk.
Komorniak et al. (2023)	Nutrients (Switzerland)	RCT double-blind (n=200)	Depression; Microbiota; Diet; Probiotics	(+) Diet improves depression. (0) No probiotic effect. (-) Microbiota changes risk.
Mela et al. (2023)	Nutrients (Switzerland)	Retrospective (n=53)	Weight loss	(+) Better health with more loss.
Alqifari et al. (2024)	Cureus (USA)	Cross-sectional (n=182)	Depression; Anxiety; QoL	(+) Low depression. (-) Anxiety risk groups. (+) QoL improved.
By-Band-Sleeve Group (2024)	BMJ Open (England)	Prospective cohort (n=758)	Depression; Anxiety	(+) Reduced prevalence.

Authors / Year of Publication	Journal / Country	Study Type (N)	Analyzed Outcomes	Direction of Effect and Main Findings
Díaz-González et al. (2024)	Nutrients (Switzerland)	Prospective (n=56)	QoL; Depression	(+) QoL improved. (0) No depression change.
ElBarazi (2024)	Indian J Psychol Med (USA)	Cross-sectional (n=288)	Depression; Anxiety; Stress	(+) Depression improved. (-) Anxiety/stress increased.
Iljin et al. (2024)	Pol Przegl Chir (Poland)	Observational (n=64)	Eating; Weight regain; Addictions	(+) Less binge eating. (-) More regain. (-) Alcohol issues.
Konttinen et al. (2024)	Int J Obes (England)	Controlled prospective (n=5335)	QoL 15y	(+) QoL improved. (0) Small mental changes.
Kozela et al. (2024)	Eat Weight Disord (Germany)	Case-control (n=1452)	Post-op efficacy	(0) No impairment.
Mauro et al. (2024)	Arch Endocrinol Metab (Brazil)	Cross-sectional (n=90)	Weight regain; Behavior	(-) BED, bulimia, alcohol. (-) Impulsivity higher.
Botros et al. (2025)	Obes Surg (USA)	Retrospective (n=944)	Healthcare use; Mental disorders	(-) Increased service use. (-) Anxiety linked symptoms.
Epping et al. (2025)	Obes Facts (Switzerland)	Case-control (n=1040)	Depression 7y	(+) Short-term improvement. (-) Long-term worsening. (-) Higher in women.
Lin et al. (2025)	BMC Psychiatry (England)	Longitudinal (n=147)	Mental health	(+) Improved anxiety/depression.
Pyykkö et al. (2025)	Qual Life Res (Netherlands)	Prospective (n=529)	BMI; Depression	(+) BMI maintained. (-) No QoL relation.
Si et al. (2025)	Front Psychiatry (Switzerland)	Longitudinal (n=431)	Depression; Anxiety	(+) Reduced symptoms.

Legend:
(+) Positive: Indicates reduction of symptoms, clinical improvement, or a favorable outcome related to the intervention/exposure.
(-) Negative: Indicates worsening of symptoms or an unfavorable outcome.
(0) Neutral: Indicates lack of statistical significance or inconclusive results.
Source: Prepared by the authors.

The conceptual forest plot presents the distribution of the direction of effects observed in the included studies, considering three categories: positive effect (+), no effect (0), and negative effect (-), across the different analyzed outcomes.

Depression showed a predominance of positive effects, indicating consistent improvement in most studies. Regarding anxiety, a balanced distribution was observed among positive, neutral, and negative effects, highlighting substantial heterogeneity in the findings. For weight loss, results were predominantly neutral or inconsistent, suggesting the absence of a clear pattern of association. Quality of life demonstrated a favorable trend, with a higher concentration of positive effects. In contrast, outcomes related to eating behavior showed a predominance of negative effects, indicating worsening or persistence of dysfunctional patterns in a significant proportion of the studies.

Notably, psychiatric risk (including suicidal ideation and self-harm behaviors) showed exclusively negative effects, representing a consistent and clinically relevant finding. Similarly, clinical and behavioral predictors associated with the analyzed outcomes also demonstrated a predominance of negative effects, reinforcing their role as risk factors. Overall, the plot highlights the coexistence of benefits and risks, suggesting that although improvements are observed in aspects such as depression and quality of life, important challenges remain regarding mental health and eating behavior, indicating the need for long-term multidisciplinary follow-up.

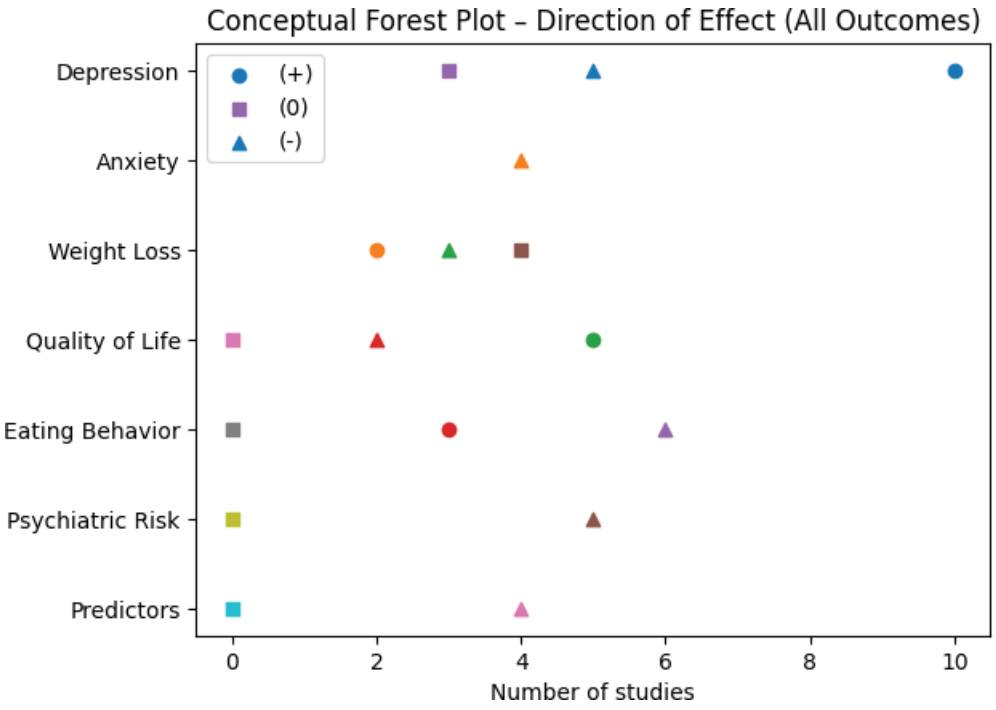

Figure 2. Conceptual forest plot of the direction of effect based on Table 1

The effect size table demonstrates small to moderate positive effects for depression and quality of life, whereas outcomes related to anxiety and body weight remained close to the line of nullity, indicating negligible effects. In contrast, behavioral and psychiatric outcomes particularly psychiatric risk and predictive factors showed large negative effect sizes, suggesting clinically relevant adverse associations.

Table 1. Standardized effect size (approximate Cohen's d) of the evaluated outcomes based on direction of effect

Outcome	d (Cohen)	Effect Size
Depression	0.28	Moderate
Anxiety	0.00	No effect
Lost wight	-0.11	Small negative
Quality of life	0.43	Moderate
Eating Behavior	-0.33	Moderate negative
Psychiatric Risk	-1.00	Very strong negative
Predictors	-1.00	Very strong negative

DISCUSSION

This review identified several impacts on the mental health of individuals undergoing bariatric surgery. In the preoperative period, emotional outcomes are primarily influenced by psychological determinants. Internalized weight bias is negatively associated with mental quality of life due to reduced self-esteem and increased symptoms of anxiety and depression. Thus, this stigma compromises well-being and surgical outcomes (Liu et al., 2022). Additionally, individuals with pre-existing mental disorders use more hospital services in the first postoperative year (Brotos et al., 2025).

It is noteworthy that bariatric surgery may be associated with the onset or persistence of depressive symptoms in the postoperative period. Although some individuals experience partial remission, there is an increased risk of new diagnoses or worsening after surgery, especially in the presence of difficulties adhering to the new lifestyle, clinical complications, or unmet expectations. Therefore, psychiatric symptoms may remain prevalent, and the procedure does not act as a universal protective factor (Arhi et al., 2021; Alshammari et al., 2022; Tan et al., 2022).

Although many patients show initial improvements in mental health after bariatric surgery, these benefits are not always sustained in the long term. Weight loss and regain trajectories influence psychological outcomes. Poor psychological adaptation, weight variability, and eating disorders are associated with chronic emotional stress and fluctuations in depression levels and quality of life. Thus, surgical success does not guarantee emotional stability, and weight fluctuations may intensify psychological adversities (Pyykko et al., 2025; Epping et al., 2025; Furtado et al., 2023; Mauro et al., 2024; ElBarazi et al., 2024).

In addition to depression and anxiety, studies highlight extreme outcomes in the post-bariatric period. Pre-existing emotional vulnerability, social identity crisis, persistent low self-esteem, weight regain, and ongoing stress and anxiety may be associated with suicidal ideation, suicide attempts, and suicide-related mortality. Therefore, weight reduction alone does not eliminate psychopathological risk. Psychiatric follow-up should include symptom monitoring and surveillance of severe risks (Konttinen et al., 2021; Hung et al., 2023; Mabey et al., 2021).

Bariatric surgery may also have positive impacts on the physical and psychological health of patients with obesity. After the procedure, improvements have been observed in conditions such as depression, anxiety, mood disorders, eating disorders, and social interaction, as well as gains in quality of life (Albarrán-Sánchez et al., 2021; Arhi et al., 2021; Fialho et al., 2021; Mela et al., 2023; By-Band-Sleeve Collaborating Group, 2024; ElBarazi, 2024; Lin et al., 2025; Si et al., 2025). Similarly, improvements in depressive symptoms have been reported in previously diagnosed patients, with a reduction in the frequency of psychological or psychiatric consultations after surgery, reinforcing evidence that the procedure contributes to reducing the incidence of pre-existing mental disorders (Arhi et al., 2021).

These results may be related to improvements in chronic comorbidities associated with obesity following bariatric surgery. Multisystem dysfunctions and gastrointestinal rhythm alterations showed favorable evolution after BMI reduction, contributing to the attenuation of depression, anxiety, and binge eating in the postoperative period (Alshammari et al., 2022; Tan et al., 2022; Díaz-González et al., 2024; Iljin et al., 2024; Konttinen et al., 2024; Kozela et al., 2024; Lin et al., 2025). Furthermore, the adoption of a healthier lifestyle, including regular physical activity and dietary changes, enhanced mental health benefits, quality of life, and life expectancy after

surgery (Albarrán-Sánchez et al., 2021; Komorniak et al., 2023; Díaz-González et al., 2024; Iljin et al., 2024). These factors contribute to improved postoperative outcomes.

The findings reinforce that successful bariatric surgery can promote improvements in physical, mental, and social well-being. These benefits include greater engagement in daily activities, increased socialization, enhanced self-esteem, improved emotional status, and better control of comorbidities, resulting in significant gains in quality of life. Notably, some patients reported a high level of satisfaction with the achieved results, highlighting the positive physical, psychological, and overall effects of the procedure (Alshammari et al., 2022; Alqifari et al., 2024; Konttinen et al., 2024).

Given this scenario, it is essential that mental health outcomes in individuals undergoing bariatric surgery be monitored both before and after the procedure by multidisciplinary teams. Structured programs and complementary therapies may enhance positive outcomes and reduce complications related to mental disorders. Additionally, further studies are needed to establish guidelines for monitoring and managing mental health in these patients during the postoperative period.

This systematic review has some limitations that should be considered when interpreting the results. The inclusion of predominantly observational studies may increase susceptibility to methodological biases and inherent limitations of this design. Furthermore, the heterogeneity of the instruments used to assess mental health and the follow-up periods made direct comparisons between studies difficult. The search was limited to two databases and did not include gray literature, which may have restricted the identification of all relevant studies on the topic.

CONCLUSION

The results of this review demonstrated that bariatric surgery can lead to both benefits and impairments in the mental health of individuals with obesity. These outcomes are related to clinical status, pre- and postoperative support, and the internalization of stigma, which may compromise overall well-being.

Patients with pre-existing psychopathologies, such as anxiety and depression, show a greater demand for healthcare services in the first year after surgery; however, this need tends to decrease when adequate psychological and psychiatric support is provided, along with adherence to lifestyle changes. Despite potential complications, such as weight regain and unfavorable progression of chronic comorbidities, continuous multidisciplinary follow-up proved essential in promoting emotional stability and physical, social, and mental well-being.

It can be concluded that, although bariatric surgery represents an important tool in the treatment of severe obesity, its impacts on mental health still show heterogeneous results. Therefore, it is imperative that future studies establish standardized protocols for psychological and psychiatric follow-up, in order to ensure not only the maintenance of weight loss but also the protection of long-term mental health.

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