

PERSPECTIVE OPEN ACCESS

Obesity and Mental Health: A Missing Piece in the Puzzle

Natasha Kim de Oliveira da Fonseca^{1,2}  | Elisa Brietzke³ | Gisele Gus Manfro^{1,2}

¹Anxiety Disorders Program (PROTAN), Hospital de Clínicas de Porto Alegre (HCPA), Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil | ²Graduate Program in Psychiatry and Behavioral Sciences, Hospital de Clínicas de Porto Alegre (HCPA), Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil | ³Department of Psychiatry, Queens University School of Medicine, Kingston, Canada

Correspondence: Natasha Kim de Oliveira da Fonseca (natashakof@gmail.com)

Received: 25 October 2025 | Revised: 8 July 2026 | Accepted: 24 July 2026

ABSTRACT

Psychiatric disorders are highly prevalent among individuals living with obesity and contribute to treatment resistance, poor adherence, and adverse health outcomes. Yet, obesity management often remains fragmented, with limited integration between endocrinology, psychiatry, and behavioral health. This Perspective advocates for a mental health framework for obesity care. We emphasize the need for future investigations to test the clinical relevance of behavioral phenotyping as a complementary approach to pharmacotherapy, including GLP-1 receptor agonists, to enhance treatment personalization. By reframing obesity as a disease deeply intertwined with mental health, we emphasize the need for multidisciplinary care models that incorporate psychological assessment, stigma reduction, and patient-centered nutrition counseling. Advancing this framework will require closer collaboration between medical and mental health disciplines and greater investment in neurobehavioral research to improve long-term outcomes in obesity care.

1 | Beyond Calories: A Mental Health Approach to Obesity

For a long time, obesity care was reduced to a simple equation: eat less and move more. Diet and exercise have been exhaustively advised, but obesity remains a chronic and progressive disease that continues to challenge public health systems worldwide. With over 1 billion people affected globally, including 890 million adults, its prevalence is stable and shows no signs of slowing down, despite advances in knowledge [1].

This persistent high rate in epidemiological studies suggests that something is missing. A growing body of evidence reveals that obesity is not a homogeneous disease but rather a complex, heterogeneous disease shaped by multiple interacting systems such as genetic, hormonal, metabolic, environmental, and behavioral factors [2]. One major challenge in obesity care may lie in the underrecognition of behavioral and psychological factors that influence both the onset and the persistence of weight gain (Figure 1).

When two in every five individuals living with overweight or obesity also meet criteria for a psychiatric disorder, particularly mood, anxiety, psychotic spectrum, or eating disorders, treatment becomes even more complex [3]. There is substantial overlap in the risk factors that contribute to both diseases (Figure 2), including early life adversity, sedentary behavior, poor diet quality, emotional dysregulation, and sleep disturbances [4]. This bidirectional relationship is well documented and suggests that the comorbidity between psychiatric illness and obesity often leads to worse clinical outcomes [4].

2 | The Neurobiology of Hunger: Not All Appetite Is the Same

Whereas homeostatic hunger arises from a straightforward survival mechanism such as calorie deprivation, hedonic hunger reflects a complex interplay of memory, emotion, learning, and cognition [5]. Hedonic hunger is more difficult to treat at the population level but may be addressable through personalized

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2026 The Author(s). *Obesity Reviews* published by John Wiley & Sons Ltd on behalf of World Obesity Federation.



FIGURE 1 | Multifactorial drivers and perpetuating factors of obesity as critical targets for mental health multidisciplinary care. Conceptual framework illustrating the multifactorial nature of obesity. The figure presents eight interconnected domains and their respective components associated with obesity development and maintenance, including biological, behavioral, psychological, environmental, social, and healthcare-related factors.

interventions targeting specific behavioral drivers. This distinction is essential in people also living with a psychiatric condition, where impulsivity, emotional reactivity, or altered interoception may dominate the hunger experience.

Recent studies have proposed behavioral phenotypes that may guide individualized treatment. In a phenotype-based randomized trial, this tailored approach significantly outperformed conventional methods in weight loss outcomes [6]. Similarly, Koning and colleagues proposed a conceptual framework describing eating behavior phenotypes in mood disorders, including patterns related to appetite, emotion, reward, impulsivity, diet style, and circadian rhythm disruption [7]. The authors proposed that recognizing these phenotypes may help generate hypotheses for more targeted psychotherapeutic, pharmacological, and nutritional strategies. Although this framework has not yet been systematically tested in obesity treatment, it aligns with emerging precision medicine

approaches that advocate phenotype-guided interventions to improve treatment outcomes. However, further studies are needed to determine whether these phenotypes have sufficient validity and clinical utility to inform routine treatment decisions.

3 | When the Brain Drives the Body

Neuroscience provides critical insight into how decisions around food are made or disrupted. Food choices emerge from a dynamic interaction between homeostatic needs and hedonic desires, modulated by the brain systems responsible for reward, inhibitory control, and goal-directed behavior [8]. When these systems are dysregulated, some individuals may become more vulnerable to maladaptive eating behaviors and impaired self-regulation, potentially contributing to overeating [9].

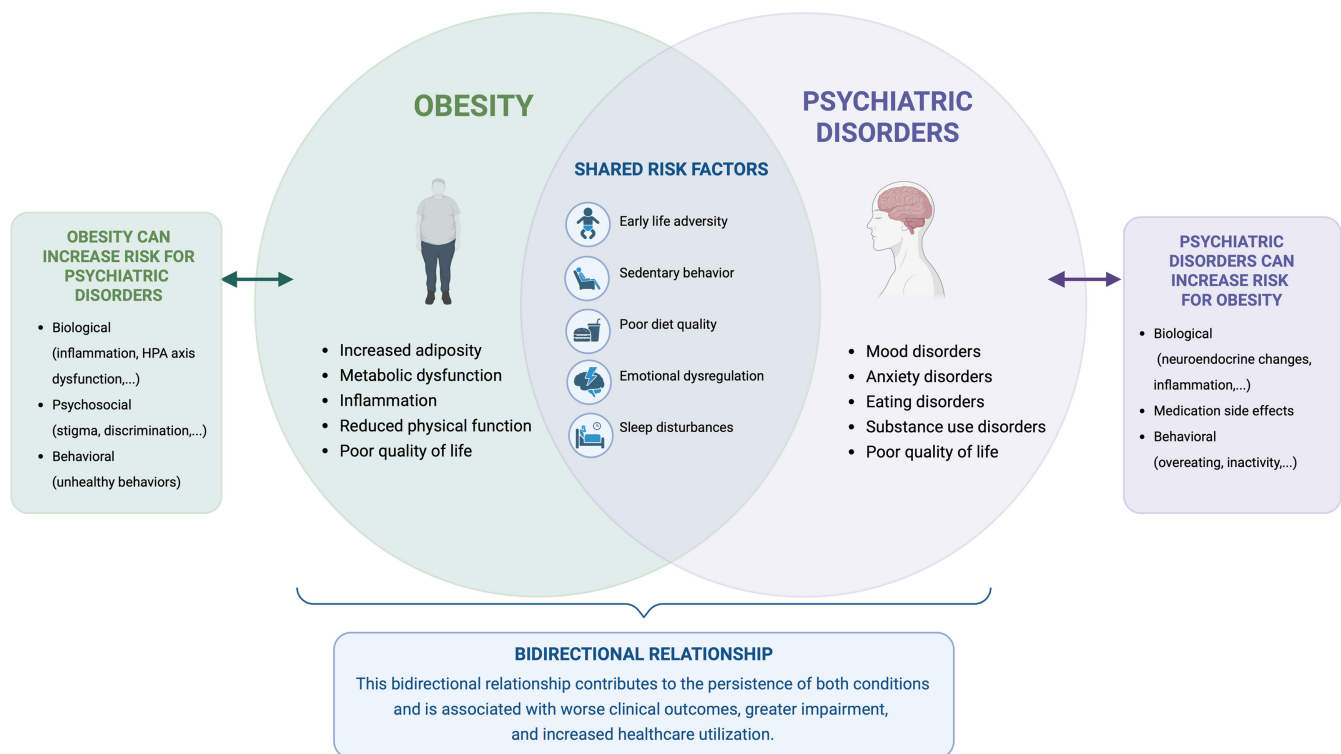


FIGURE 2 | Overlap between obesity and psychiatric disorders. Shared risk factors contribute to a bidirectional relationship in which each condition can increase the risk and worsen the clinical course of the other.

A growing number of studies have shown that individuals with increased internalizing symptoms such as anxiety or depression may use food as a coping mechanism for emotional distress [10, 11]. These behaviors, often referred to as emotional eating or stress eating, are not signs of weak willpower but rather maladaptive responses to chronic dysregulation of brain–body signaling [12].

Patients with psychiatric disorders frequently show reduced adherence to lifestyle interventions, which limits the effectiveness of preventive and therapeutic strategies [13]. Addressing obesity in these individuals requires a dual focus: recognizing and treating the underlying psychiatric condition while simultaneously targeting maladaptive eating behavior patterns [14]. In such cases, prioritizing stabilization of psychiatric symptoms before initiating intensive lifestyle or dietary changes may improve long-term adherence and outcomes [15]. In such cases, treatments that enhance interoceptive awareness, improve inhibitory control, or reduce emotional reactivity, including behavioral therapy, mindfulness-based interventions, or targeted nutritional counseling, may offer more lasting benefits than pharmacological monotherapy alone.

4 | Toward a Mental Health Framework for Obesity Care

Obesity in individuals with psychiatric disorders is still managed as if it were a uniform condition, despite clear behavioral and neurobiological heterogeneity. Current treatments like GLP-1 receptor agonists have revolutionized the pharmacological landscape and may also influence neuroinflammatory pathways and reward-related processes implicated in several

psychiatric disorders [16]. However, treatment outcomes may still be affected by factors such as emotional eating, impulsivity, difficulties in emotion regulation, psychological distress, and challenges in long-term behavioral adherence, highlighting the need for integrated treatment approaches.

The future of obesity care must integrate mental health frameworks, especially when emotional symptoms and psychiatric conditions shape eating behavior, hunger perception, and self-regulation. An integrated mental health approach to obesity management may not only improve outcomes for patients with psychiatric disorders but also reduce the stigma and frustration faced when weight struggles are misunderstood as a failure of effort or will.

Advancing care will require upskilling mental health professionals in lifestyle change and obesity management. Complementing this, dietitians and endocrinologists should be trained in behavioral strategies, emotion-focused nutrition counseling, and mental health literacy to better support patients who are living with both conditions.

This shift requires closer collaboration between endocrinologists, psychiatrists, psychologists, dietitians, general practitioners, nurses, physiotherapists, and other healthcare professionals involved in obesity care. It also demands that we expand obesity research to include behavioral neuroscience, interoception, and transdiagnostic approaches that recognize the heterogeneity of both obesity and mental illness. Recognizing the mind in the body may be the key to transforming obesity care from fragmented attempts to truly integrated, enduring solutions.

Although mental health has long been recognized within several influential obesity frameworks, including the Canadian Adult Obesity Clinical Practice Guidelines, the Edmonton Obesity Staging System (EOSS), and the 4Ms framework, its integration into routine obesity care remains inconsistent. Psychological and psychiatric factors are frequently acknowledged as important contributors to obesity outcomes, yet they are not always systematically assessed or incorporated into treatment planning, including the management of mental health symptoms and the implementation of evidence-based lifestyle and eating behavior strategies.

This inconsistency is also reflected across contemporary obesity frameworks and policy initiatives. Although some models place mental health at the center of obesity assessment, recent discussions, including the Lancet Commission on Clinical Obesity and certain EASO-related frameworks, have given comparatively less prominence to mental health considerations. As a result, individuals with obesity and coexisting mental health conditions may continue to receive interventions that primarily target weight reduction while leaving key behavioral and psychological drivers insufficiently addressed. Bridging this gap may require not only greater multidisciplinary collaboration but also a more consistent incorporation of mental health assessment and evidence-based behavioral strategies across obesity care pathways.

Author Contributions

All authors contributed to the conception, drafting, critical revision, and approval of the final version of the manuscript.

Acknowledgements

The Article Processing Charge for the publication of this research was funded by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) (ROR identifier: 00x0ma614).

Funding

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

References

1. World Health Organization, *Obesity and Overweight* (World Health Organization, 2025), <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>.
2. I. Lingvay, R. V. Cohen, C. W. L. Roux, and P. Sumithran, "Obesity in Adults," *Lancet* 404, no. 10456 (2024): 972–987, [https://doi.org/10.1016/S0140-6736\(24\)01210-8](https://doi.org/10.1016/S0140-6736(24)01210-8).
3. M. Leutner, E. Dervic, L. Bellach, P. Klimek, S. Thurner, and A. Kautzky, "Obesity as Pleiotropic Risk State for Metabolic and Mental Health Throughout Life," *Translational Psychiatry* 13, no. 1 (2023): 175, <https://doi.org/10.1038/s41398-023-02447-w>.

4. R. B. Mansur, E. Brietzke, and R. S. McIntyre, "Is There a 'Metabolic-Mood Syndrome'? A Review of the Relationship Between Obesity and Mood Disorders," *Neuroscience and Biobehavioral Reviews* 52 (2015): 89–104, <https://doi.org/10.1016/j.neubiorev.2014.12.017>.
5. A. Fasano, "The Physiology of Hunger," *New England Journal of Medicine* 392, no. 4 (2025): 372–381, <https://doi.org/10.1056/NEJMr a2402679>.
6. A. Acosta, M. Camilleri, B. Abu Dayyeh, et al., "Selection of Antiobesity Medications Based on Phenotypes Enhances Weight Loss: A Pragmatic Trial in an Obesity Clinic," *Obesity (Silver Spring, Md.)* 29, no. 4 (2021): 662–671.
7. E. Koning, J. Vorstman, R. S. McIntyre, and E. Brietzke, "Eating Behavior Phenotypes in Mood Disorders: A Narrative Review," *Psychological Medicine* 52, no. 14 (2022): 2885–2898.
8. A. Rangel, "Regulation of Dietary Choice by the Decision-Making Circuitry," *Nature Neuroscience* 16, no. 12 (2013): 1717–1724.
9. K. S. Burger, "Food Reinforcement Architecture: A Model of Risk Factors for Impulsive and Compulsive Overeating and Food Abuse," *Obesity (Silver Spring, Md.)* 31, no. 7 (2023): 1734–1744, <https://doi.org/10.1002/oby.23792>.
10. R. Zhou, L. Zhang, Z. Liu, and B. Cao, "Emotion Regulation Difficulties and Disordered Eating in Adolescents and Young Adults: A Meta-Analysis," *Journal of Eating Disorders* 13 (2025): 25, <https://doi.org/10.1186/s40337-025-01197-y>.
11. I. Silva, A. L. Meireles, C. M. D. S. Chagas, et al., "Emotional Eating and Its Relationship With Symptoms of Anxiety, Depression, and Stress During the COVID-19 Pandemic: A Multicenter Study in College Students," *International Journal of Environmental Research and Public Health* 22, no. 2 (2025): 228, <https://doi.org/10.3390/ijerph22020228>.
12. T. C. Adam and E. S. Epel, "Stress, Eating and the Reward System," *Physiology & Behavior* 91, no. 4 (2007): 449–458, <https://doi.org/10.1016/j.physbeh.2007.04.011>.
13. A. Castro, M. Roca, I. Ricci-Cabello, et al., "Adherence to Lifestyle Interventions for Treatment of Adults With Depression: A Systematic Review and Meta-Analysis," *International Journal of Environmental Research and Public Health* 18, no. 24 (2021): 13268, <https://doi.org/10.3390/ijerph182413268>.
14. V. H. Taylor, S. Sockalingam, R. Hawa, and M. Hahn, "Canadian Adult Obesity Clinical Practice Guidelines: The Role of Mental Health in Obesity Management," <https://obesitycanada.ca/guidelines/mentalhealth>.
15. G. E. Simon, P. Rohde, E. J. Ludman, et al., "Association Between Change in Depression and Change in Weight Among Women Enrolled in Weight Loss Treatment," *General Hospital Psychiatry* 32, no. 6 (2010): 583–589, <https://doi.org/10.1016/j.genhosppsych.2010.09.010>.
16. R. De Giorgi, A. Ghenciulescu, O. Dziwisz, et al., "An Analysis on the Role of Glucagon-Like Peptide-1 Receptor Agonists in Cognitive and Mental Health Disorders," *Nature Mental Health* 3, no. 3 (2025): 354–373, <https://doi.org/10.1038/s44220-025-00390-x>.