




## Socio-emotional balance and emotional eating: a perspective from a systematic literature review

*Balance socioemocional y la alimentación emocional: una perspectiva desde una revisión sistemática de la literatura*

Equilíbrio socioemocional e alimentação emocional: uma perspectiva a partir de uma revisão sistemática da literatura


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#### KEYWORDS

**ABSTRACT.** Emotional eating, the consumption of food in response to negative emotions like anxiety or sadness, is driven by the brain's reward system and has serious physical and psychological consequences, including obesity, guilt, low self-esteem, and eating disorders. This

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eating habits, educational coordination, emotional development, social programs, socio-emotional balance.

study explores the relationship between emotional disorders, such as anxiety, depression, and stress, and emotional eating in adults, based on evidence from scientific literature. A PRISMA systematic review was conducted, utilizing academic databases such as PubMed, Scopus, Web of Science, and Google Scholar. Search terms included combinations like "Socio-emotional balance" AND "emotional eating" and "Emotional eating" AND "emotional well-being," covering studies published from 2018 to 2023. Of 4,220 initial results, 24 relevant studies were analyzed. Key variables include socioemotional balance, which influences emotional regulation, and emotional eating, characterized by responses to negative emotions. Findings reveal that emotional eating negatively impacts physical and mental health, often causing guilt and promoting unhealthy eating patterns. Factors like gender, socioeconomic status, and emotional balance were identified as critical influences. The study concludes that emotional eating stems from negative emotions, leading to poor health outcomes. Interventions such as cognitive-behavioural therapy and mindfulness can mitigate these behaviours, improving emotional regulation and overall well-being.

#### PALABRAS CLAVE

articulación educativa, desarrollo emocional, equilibrio socioemocional, hábitos alimenticios, programas sociales.

**RESUMEN.** El comer emocional, definido como el consumo de alimentos en respuesta a emociones negativas como ansiedad o tristeza, está impulsado por el sistema de recompensa del cerebro y tiene graves consecuencias físicas y psicológicas, incluyendo obesidad, culpa, baja autoestima y trastornos alimentarios. Este estudio explora la relación entre los trastornos emocionales como ansiedad, depresión y estrés, y el comer emocional en adultos, basándose en evidencia de la literatura científica. Se realizó una revisión sistemática bajo la metodología PRISMA, utilizando bases de datos académicas como PubMed, Scopus, Web of Science y Google Scholar. Los términos de búsqueda incluyeron combinaciones como "equilibrio socioemocional" Y "comer emocional" y "comer emocional" Y "bienestar emocional", abarcando estudios publicados entre 2018 y 2023. De 4,220 resultados iniciales, se analizaron 24 estudios relevantes. Las variables clave incluyen el equilibrio socioemocional, que influye en la regulación emocional, y el comer emocional, caracterizado por respuestas a emociones negativas. Los hallazgos revelan que el comer emocional impacta negativamente la salud física y mental, provocando culpa y fomentando patrones alimenticios poco saludables. Factores como el género, el estatus socioeconómico y el equilibrio emocional son determinantes clave. El estudio concluye que el comer emocional se origina en emociones negativas, generando problemas de salud. Intervenciones como la terapia cognitivo-conductual y el mindfulness pueden mitigar estos comportamientos, mejorando la regulación emocional y el bienestar general.

#### PALAVRAS-CHAVE

articulação educacional, desenvolvimento emocional, equilíbrio socioemocional, hábitos alimentares, programas sociais.

**RESUMO.** A alimentação emocional, definida como o consumo de alimentos em resposta a emoções negativas, como ansiedade ou tristeza, é impulsionada pelo sistema de recompensa do cérebro e acarreta graves consequências físicas e psicológicas, incluindo obesidade, culpa, baixa autoestima e transtornos alimentares. Este estudo explora a relação entre os transtornos emocionais—como ansiedade, depressão e estresse—e a alimentação emocional em adultos, com base em evidências da literatura científica. Foi realizada uma revisão sistemática utilizando a metodologia PRISMA, com o uso de bases de dados acadêmicas como PubMed, Scopus, Web of Science e Google Scholar. Os termos de busca incluíram combinações como "equilíbrio socioemocional" E "alimentação emocional" E "alimentação emocional" E "bem-estar emocional", abrangendo estudos publicados entre 2018 e 2023. Dos 4.220 resultados iniciais, foram analisados 24 estudos relevantes. As variáveis principais incluem o equilíbrio socioemocional, que influencia a regulação emocional, e a alimentação emocional, caracterizada por respostas a emoções negativas. Os resultados mostram que a alimentação emocional impacta negativamente a saúde física e mental, provocando culpa e promovendo padrões alimentares pouco saudáveis. Fatores como gênero, status socioeconômico e equilíbrio emocional são determinantes importantes. O estudo conclui que a alimentação emocional surge de emoções negativas, gerando problemas de saúde. Intervenções como terapia cognitivo-comportamental e mindfulness podem mitigar esses comportamentos, melhorando a regulação emocional e o bem-estar geral.

## 1. INTRODUCTION

EE (Emotional eating). can be considered as the experience of seeking and consuming foods excessively saturated in sugar, salt, fats, among others, which potentially occurs when high levels of stress, anxiety or

emotions that could be classified as negative persist, that is, eating in response to feelings related to loneliness, anxiety, anguish, sadness, anger that promote emotional discomfort (Palomino-Pérez, 2020). Psychological well-being generated between the balance of eating and maintaining interpersonal relationships, this balance is crucial to generate the appropriate well-being that affects the way in which stress, social interactions, frustrations and emotions are managed (Bobadilla-Soto et al., 2022).

From a psychological perspective, the manifestation of unhealthy behaviours is associated with emotional eating as one of the most common ways of coping with stressful situations that arise (Estrada Nava et al., 2020). This emotional response to food intake implies that triggers such as stress, anxiety, sadness, boredom, among others, are the appetitive response from which behavioural patterns are identified that seek relief and immediate satisfaction through eating (Montserrat Vázquez et al., 2019). The temporary gratification experienced is linked to insecure attachment styles that generate a closer propensity to eat because they relate food as a form of emotional management (Sánchez Bizama et al., 2020).

An important factor within the relevant psychological processes is the fact that emotions generate a link with behavioural patterns, which are attributed to that prevailing need for immediate gratification that brings with it elements that denote aspects related to impulsiveness and insecure attachments, which bring as consequences individuals with altered states of cortical arousal, greater activation of the prefrontal cortex which is directly responsible for generating a process of emotional regulation and which is key in the control of impulses (Russell & Russell, 2019). Situation that leads to the generation of an impact of altered states that are perceived as challenges and that within the main consequences present a derivation towards psychological disorders (Díaz-Tendero et al., 2019).

From the emotional eating point of view, it is important to mention that the brain pathways involved from the limbic system are responsible for regulating the stress reaction processes and in turn the amygdala is linked to the response to negative emotions (Rojas-Jara et al., 2020). The impact triggered by the functions linked to the hypothalamus is associated with the energy balance in which, within the psychophysiological functions, they help control hunger and satiety, which is linked to a reward system when negative emotions are experienced (Anger et al., 2021). In turn, the nucleus accumbens is activated by the generation of pleasure from food intake in this case, which leads people to seek a greater consumption of foods linked to excess sugar and fats that lead to the experience of momentary pleasure. Another important aspect to point out is the function of the orbitofrontal cortex, which is related to the evaluation of rewards, which generates a negative impact on health due to impulsive behaviours (Rodríguez-Guarín et al., 2017).

The brain mechanisms involved in emotional eating are closely related to the regulation of emotions, which in turn are associated with impulsive behaviours and rewards. In this sense, satisfying hunger can lead individuals to engage in inappropriate eating habits and behaviours in the face of emotional distress (Álvarez Valbuena et al., 2021). This type of alteration leads to the appearance of dysfunctional behaviours that lead to generating cycles of emotional deregulation and inadequate feeding processes that alter physical and mental health, making emotional recovery difficult (Lemos et al., 2018).

The physical consequences of emotional eating are mainly linked to weight gain and a tendency towards obesity because high caloric intake generates reinforcing stimuli from gratification but in turn by activating the brain reward system it generates in the medium and long term a link to health problems that affect the functions of the cardiovascular system and metabolic disorders mainly (Chiesa & Fasulo, 2020). Emotional eating is linked

to the secretion of cortisol, which is activated more frequently during moments of anxiety and stress, increasing the sensation of appetite through the hormones ghrelin and leptin, negatively affecting the body's metabolism and energy balance. Likewise, gastrointestinal problems triggered by impulsive and disordered eating behaviours are accelerated, negatively affecting the digestive system (Chiesa & Fasulo, 2020).

From a psychological perspective, the consequences of emotional eating are linked to the exacerbation of feelings of guilt and shame and lead to individuals experiencing feelings of personal disapproval and self-criticism after eating, generating continuous feelings of failure. Low self-esteem leads individuals to develop body image disorders, experiencing negative relationships with food. This contributes to the appearance of eating disorders such as anorexia nervosa, bulimia or binge eating disorder. As mentioned by Rodrigues Sousa y Stefanini Milhomem (2023). In turn, the psychological problems derived from emotional eating because it not only sustains the symptomatic conditions, but also worsens them. Unmanaged and poorly expressed emotions through food hinder interpersonal processes and in turn accelerate emotional problems (Chawner & Filippetti, 2024).

Finally, the aspects related to emotional eating have repercussions at a physical and mental level that imply that individuals effectively develop processes linked to emotional control and regulation in which it is necessary to accompany through psychological interventions both from a cognitive behavioural approach and some of the third-generation therapies such as mindfulness (Rodrigues Barbosa et al., 2020). It is important to mention that changes in eating patterns and habits lead to establishing a healthier relationship with food, which is essential for the proper management of emotions (Ali et al., 2024). The aim is to answer the key research question: How are emotional disorders (such as anxiety, depression and stress) related to the incidence of emotional eating in adults, according to the evidence found in the scientific literature?

## 2. METHOD

The development of this study starts from the qualitative methodology with a systematic review approach, which was suggested by Salcido Reyna et al. (2021). The purpose of this study was to analyze the current empirical evidence that integrates the research advances in the topic of socio-emotional balance and emotional eating. Taking into account that the available evidence was synthesized, under the review of quantitative and qualitative aspects that start from the primary studies. Obtaining the supported studies allows quantifying the magnitude of the effects, such as the prevalence of emotional eating in specific populations or the effectiveness of various therapeutic interventions (Sánchez-Serrano et al., 2022).

### 2.1 Search strategy

To carry out the systematic review, a search strategy was carried out in the academic databases PubMed, Scopus, Web of Science and Google Scholar as suggested by (Sánchez-Martín et al., 2022). The information collection covered different disciplines, mainly psychology and studies related to human behaviour. The queries were carried out by applying filters through the proportion of metrics of the impact of the reported publications, selecting the most relevant articles, taking into account their quality. Obtaining a robust compilation that favored the analysis of the evidence on the relationship between socio-emotional balance and emotional eating.

The search terms and Boolean operators used in the PubMed, Scopus, Web of Science and Google Scholar databases were the following: "Socio-emotional balance" AND "emotional eating", "Emotional eating" AND "emotional well-being", "Emotional" AND "eating" AND ("intervention strategies" OR "influential factors").

## 2.2 Inclusion criteria

Primary research studies were included with an observation window of the last 5 years from 2018 to 2023, ensuring the current relevance and pertinence of advances in the area. Articles published in Spanish and English were included, and whose thematic axis will focus on socio-emotional balance and emotional eating, taking into account the interventions carried out. Articles that were not available in full text were discarded.

## 2.3 Exclusion criteria

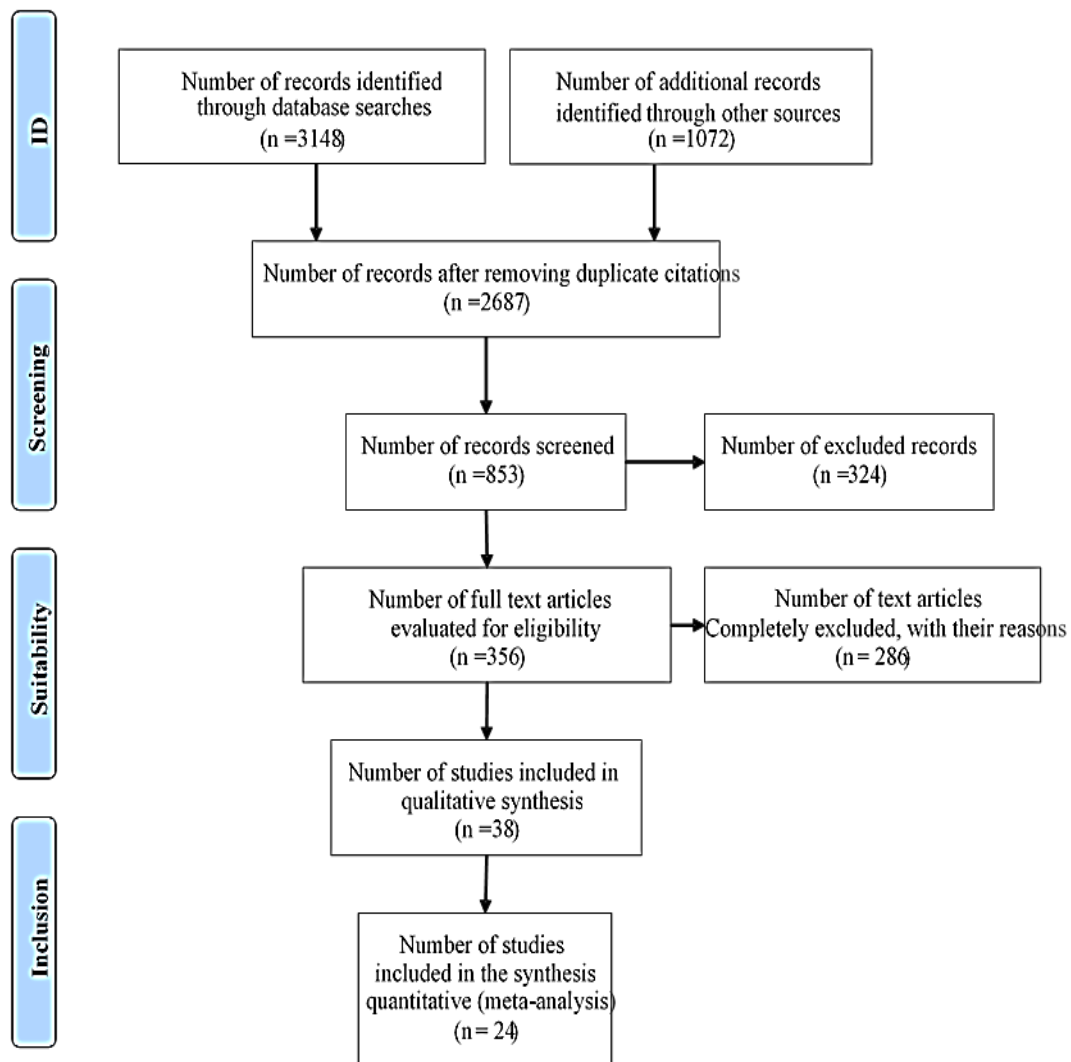
Reviews, undergraduate and graduate degree works, narrative analysis, grey literature, case studies and reports that were not peer-reviewed were excluded. Within the observation window, studies outside the range of the years 2018 to 2023 were discarded. For the context of the study, those articles that did not focus on their relationship between emotional eating without a socio-emotional context were eliminated.

## 2.4 Data collection process

The analysis of the collected research was based on the PRISMA methodology (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which is carried out using a transparent and rigorous approach that, when approached from Boolean equations and using search terms, allowed the identification of articles (Page et al., 2021). The total number of reported publications was recorded, followed by the screening phase, continuing with the selection through inclusion and exclusion criteria, eliminating duplicate files using Zotero software and finally selecting through titles and abstracts and framing by the researchers, ensuring the inclusion of the studies considered and extracting the data as shown below in flowchart 1.

Figure 1

PRISMA flow chart



### 3. RESULTS

According to the flowchart and word map described above, the analysis of variables is presented below:

#### 3.1 Variable analysis

##### 3.1.1 Socio-emotional balance

The ability to manage emotional responses and regulate them according to the demands of social contexts are essential aspects that contribute to psychological well-being, which includes physical and mental health. In this sense, the way individuals interact with their environment can present variability in health behaviours, in this case with eating behaviour. When emotional deregulation related to stress and negative affectivity persists, it impacts eating behaviour, configuring emotional hunger, which is a manifestation that arises as a response to the perceived emotional imbalance, increasing the need to eat as indicated by (Nuraini et al., 2024). The influence of different factors such as anxiety, stress, emotional instability, sadness and sometimes boredom are precipitating factors that negatively affect the search for solutions to these emotional states (Fatima et al., 2024).

For some individuals, food intake is used as a reinforcer for the appetitive stimulus that leads to unhealthy eating patterns, affecting the different areas of health, both physical and mental, which negatively impacts the socio-emotional balance. As pointed out by (Bozkurt et al., 2024), the intensification of bad eating habits and their relationship with emotional hunger is intrinsically related to cultural patterns, family, social expectations and relational dynamics of individuals, which leads to underlying emotions presenting an imbalance for emotional regulation, thus influencing a dependency that significantly affects the psychological well-being and quality of life of people (Türkmen & Kuzgun, 2023).

### 3.1.2 Emotional eating

EE (Emotional eating). can be considered as the experience of seeking and consuming foods excessively saturated in sugar, salt, fats, among others, which potentially occurs when high levels of stress, anxiety or emotions that could be classified as negative persist, that is, eating in response to feelings related to loneliness, anxiety, anguish, sadness, anger that promote emotional discomfort (De Gracia et al., 2024).

Eating food as a response to emotions, which is replaced by the real physical need to eat, has implications that arise through stressful situations, anxiety attacks or emotions such as sadness and happiness, placing food as a factor that provides temporary comfort and gratification (Basheer et al., 2024). Normally, individuals resort to a high consumption of sugars, carbohydrates and fats that provide quick relief from emotional situations but that additionally generate a cycle of consumption that affects physical and mental health as mentioned (Wardani et al., 2024). Eating unhealthy foods in response to emotions contributes to risk factors for diseases such as obesity, heart problems, diabetes and metabolic disorders that generate poor nutrition and accelerate digestive problems (Mortaş et al., 2023).

From a psychological perspective, emotional eating presents a repetitive cycle that includes guilt and shame, which means that people say they feel bad after eating, which leads to intensifying emotional discomfort. According to the contributions of (Arend et al., 2024a), emotional eating affects interpersonal and family relationships due to the persistent difficulty that occurs in the absence of social support. Poor management of emotions leads people to experience negative consequences at a physical and mental level. Among the main interventions in these aspects as indicated by (Arenxis et al., 2023). There is cognitive behavioural therapy and mindfulness practice where individuals learn to identify the emotional triggers attributed to emotional eating.

The analysis matrix that summarizes the main findings reported by the research in which the studies that present a greater relevance in the thematic area are included. The classification of the information favors the substantiation of the contributions against the reported results that identify the patterns of eating behaviour associated with socio-emotional balance and emotional eating as favoring the approach from the psychological perspective in addressing this problem as shown below in Table 1.

Table 1

Data matrix

No	Reference in Apa include doi	Study design	Main variables Emotional eating, emotional balance	Main results	Conclusions
1	Debeuf et al. (2018)	7-day diary study, with baseline questionnaires on eating behaviour and emotional regulation; stress and eating behaviour measured daily after school (5-6 PM), with reminder.	Emotional eating, daily stress, daily desire to eat, daily hunger to eat, daily snacks.	Daily stress was associated with craving and hunger motives. Emotional regulation did not significantly moderate; emotional eating showed marginal moderation of craving and snacking.	The findings highlight the importance of exploring the daily relationship between stress and eating; further research is needed to confirm the moderating role of emotional regulation and emotional eating.
2	Frayn et al. (2018)	Qualitative study with in-depth interviews with university students, selected for high emotional eating, normal BMI and weight maintenance; 8 interviews were conducted until data saturation.	emotional eating, compensatory behaviours, and concerns about emotional eating.	Participants used physical activity and eating control to reduce stress; they considered emotional eating harmful and difficult to manage for their weight and health.	Normal-weight emotional eaters use food control and exercise to maintain their weight; techniques such as mindful eating and emotional regulation, along with exercise and improved body image, can be beneficial.
3	Kerin et al. (2019)	Cross-sectional study with 2018 women (16–81 years, mostly university students). recruited from three Australian campuses and social media; online or physical survey on adaptive and maladaptive eating.	Intuitive and conscious eating, regulating overeating. Emotional eating.	Positive correlations between conscious and intuitive eating, and between emotional and external eating. Four components identified: fine-tuned, unrestricted eating, hunger awareness, and casual attitudes.	Four key components of eating behaviours—refined, unrestricted eating, hunger awareness, and casual attitudes—guide research and clinical approaches to improving eating habits.
4	Deniz y Özgen (2021)	A survey study was conducted with 1,441 high school students	Cognitive restriction, Emotional eating,	34.6% of adolescents engaged in intense physical activity.	The study shows that a higher BMI is related to more emotional eating



		in Istanbul, selected by population density. After eliminating incomplete surveys, the final sample consisted of 431 students aged 15 to 18 years.	Uncontrolled eating, Average scale score.	Cognitive restriction was greater in obese individuals and uncontrolled eating was greater in those who did not exercise.	problems, and physical activity improves eating regulation.
5	Amoako et al. (2023)	Cross-sectional study of 129 students from KNUST University, Ghana, conducted between October 2020 and January 2021, using Qualtrics during the COVID-19 pandemic.	Eating Behaviours, Dietary Patterns, Perceived Stress, Financial Stress	There were no gender differences. Emotional eating was correlated with uncontrolled eating. Women who were overweight or obese had higher emotional eating.	Emotional eating was associated with BMI in men and with anxiety and sleep quality in women. It is recommended that tools be validated for the Ghanaian population.
6	Reichenberger et al. (2018)	Cross-sectional study with 59 participants, using the DEBQ questionnaire and the PsyDiary app to collect EMA data for 10 days with five daily cues.	Eating for flavor, eating for hunger, restricted eating, emotional eating.	Stress reduced taste eating, whereas time pressure increased hunger eating. Emotions and BMI moderated these eating behaviours. Emotional eating style moderated the impact of negative emotions on taste eating.	The sample was small and the stress and negative emotions scales overlapped. It is suggested that the study be replicated with a larger sample.
7	Bourdier et al. (2018)	The cross-sectional study included 1349 college students (18-30 years). in an online survey on eating behaviours and emotional regulation. Validated scales were used to measure anxiety, depression, stress, and emotional eating.	Emotional eating, food addiction, psychological stress	The study found that emotional eating and food addiction mediated the relationship between psychological distress and BMI in college students. This suggests that these behaviours increase the risk of overweight and obesity.	The findings highlight that emotional eating and food addiction increase the risk of high BMI, recommending interventions including emotional regulation and impulse management.
8	Spinosa et al. (2019)	The study examined how psychological	Stress, resilience,	Low socioeconomic status was associated	Low socioeconomic status increases stress



		stress and emotional eating explain the relationship between low socioeconomic status and obesity, considering resilience as a protective factor. 150 subjects participated.	emotional eating and stressful events.	with higher stress, which increased emotional eating and, consequently, BMI. Resilience did not moderate this relationship.	and emotional eating, elevating BMI. Resilience does not act as a moderator. Coping-focused interventions may be helpful.
9	Lattimore (2020)	n=14 participants. A 6-week course was conducted that included mindfulness and emotional relationship with food. Paired t tests were used, controlled for type 1 error.	Cue-driven and emotional eating, perceived stress, mindfulness	Stress and cue-driven eating were reduced, and impulse control was improved. There were no significant changes in emotional eating or mindfulness.	Limitations include lack of control, but results support the MBEEAT approach and suggest exploring factors such as stress and emotional regulation.
10	Oliveira da Fonseca et al. (2023)	Randomized clinical trial with patients with generalized anxiety disorder, over 18 years old, assessed with GAD-7. n= 34.	Emotional eating, Emotional dysregulation, Self-compassion.	Emotional eating was positively correlated with emotional dysregulation and negatively correlated with self-compassion. Self-compassion mediates the relationship between emotional dysregulation and emotional eating.	Self-compassion mediates the relationship between emotional dysregulation and emotional eating, highlighting its role in the treatment of eating disorders in women with anxiety.
11	Schnepper et al. (2023)	Non-randomized controlled trial study on the influence of emotions on eating behaviour. 102 women with various BMIs were recruited, excluding eating disorders and other conditions.	Emotional eating, craving, desire to eat	The single-factor model for EElat showed good fit. Higher BMI and eating disorder symptoms were correlated with higher EElat, validating the measure. No support was found for the cognitive theory of EE.	The EE construct is validated with three methods and is associated with eating and weight problems, not with food restriction, supporting learning theories and their relevance to health.



12	Guerrero-Hreins et al. (2022)	Cross-sectional study conducted with 387 patients from the obesity treatment service. Participants completed the Emotional Eating Scale (EES).	Emotional eating, eating behaviour, obesity	"Boredom" was more associated with the desire to eat. Women had higher scores on the total EES and on depression, anger and feelings of sadness.	Gender differences in eating behaviour and the role of boredom are highlighted, suggesting the need for personalized strategies in the treatment of obesity.
13	Reichenberger et al. (2021)	Female patients with eating disorders (n=204). completed a questionnaire on "emotional eating" and "happy eating" and were compared with healthy controls (n=172). to exclude BMI as a confounding factor.	Emotional eating, anorexia nervosa, eating disorder.	In controls, higher BMI was associated with more negative emotional eating. AN-R showed less negative and more happiness eating, whereas BN and BED had more negative emotional eating. AN-BP was between AN-R and BN/BED.	Emotional eating patterns vary across eating disorders and may differentiate subgroups. BN and BED could be treated with similar approaches, whereas AN-BP and AN-R require specific treatments.
14	Schneider-Worthington et al. (2023)	Thirty-nine sibling pairs (N=78). were recruited to study energy balance. They attended three visits over three weeks, with measurements, EMA, and assessment of responses to food stimuli.	Food stimulation, emotional eating, momentary ecological assessment.	Women ate more than men, and positive emotions increase the likelihood of eating, especially in men. Those most sensitive to food stimuli ate less with negative emotions and more with positive ones.	Greater sensitivity to food cues and emotional eating may increase the risk of obesity. Research is needed on how emotions and gender influence food choices.
15	Buja et al. (2022)	Cross-sectional study in 8-9 year-old children from 11 schools. A questionnaire was used to assess factors associated with emotional eating and adherence to the Mediterranean diet. A multivariate logistic regression was performed.	Emotional overeating (EOE). and emotional undereating (EUE).	The sample included similar proportions of boys and girls; 71.3% had normal weight, and 20.8% showed good adherence to the diet. EUE was associated with emotional symptoms and siblings; EOE, with emotional symptoms, hyperactivity and fewer peer problems.	The study found that emotional eating in children is associated with certain eating patterns and behavioural traits. Educating parents and promoting stress management skills in children is recommended, as well as promoting the



				Mediterranean diet in schools.
16	Betancourt-Núñez et al. (2022)	This cross-sectional study verbally invited employees aged 18 years or older (except pregnant women) to participate. Of the initial 854 participants, 763 were included after excluding those who did not complete key questionnaires.	Emotional eating, eating patterns, eating style, eating behaviour	Emotional eating in participants with abdominal obesity was associated with a less healthy diet, with lower nutrient intake and higher fat and sodium consumption. Emotional eating in people with abdominal obesity is associated with a poor quality diet. It is key to consider this factor in interventions to promote healthy eating patterns, especially in those with abdominal obesity.
17	Javadi Arjmand et al. (2023)	Cross-sectional cohort study n= 81,170 adults. Evaluated the effects of the COVID-19 pandemic. Changes in emotional eating, sugary food consumption, and fruit and vegetable consumption over time were assessed.	Eating behaviour, emotional eating, psychological distress.	Emotional eating and sugary food consumption were high at the start of the pandemic but decreased over time. Psychological distress was associated with increased emotional eating and unhealthy food choices. The findings indicate that the high frequency of unhealthy food choices observed at the beginning of the COVID-19 pandemic improved over time.
18	Carpio-Arias et al. (2020)	Cross-sectional study with validated questionnaires on perceived stress and emotional eating in 2333 adults between January and March 2021. Analyses were performed with Chi2 tests, Student's t test and multiple linear regression.	Emotional eating, perceived stress	50.7% reported stress, and emotional eaters were more prevalent among the stressed. Regression showed that perceived stress was significantly associated with emotional eating, and BMI was associated with higher emotional eating scores. Perceived stress is linked to emotional eating, which can affect health and weight. More research is needed to prevent nutritional and health problems.
19	Arend et al. (2024b)	The study recruited 204 participants, classified into five groups according to eating disorders. Cases of psychosis	Emotional eating, cravings, eating disorders	BN patients showed high negative emotions and cravings, while in AN-BP, AN-R and BED, cravings and emotions were lower. Emotions and cravings explain dysfunctional eating behaviours in BN, AN, and BED. Treatments should focus on negative

		and unspecified disorders were excluded. The sample included students and employees with differences in BMI and age.		emotions in BN and AN, and on using positive emotions in BED and AN.
20	Bernabéu-Brotón y Marchena-Giráldez (2022)	312 adults responded to a cross-sectional survey that included three questionnaires (EEQ, Perfectionism Scale and BES). to assess emotions, perfectionism and eating disorders. Data were analyzed using multiple regression.	Emotional eating, binge eating disorder	The results show that emotional eating predicts binge eating disorder symptoms and BMI. Furthermore, perfectionism (doubts and concern about mistakes). mediates the relationship between emotional eating and BMI. Perfectionism mediates the relationship between emotional eating and BMI. Emotional eating predicts binge eating disorder and BMI, which is key for prevention and intervention programs.
21	Chwyl et al. (2022)	189 overweight or obese adults participated in a clinical trial comparing two weight loss treatments. The secondary analysis focused on data from 163 participants at 6 months.	Emotional eating, obesity, weight loss	Retrospective and momentary emotional eating were positively correlated with BMI. Retrospective emotional eating predicted long-term weight loss, while momentary emotional eating predicted weight loss at 1 and 2 years. Emotional eating measured in real time predicts better weight loss outcomes than that assessed retrospectively, highlighting the importance of multimodal approaches in its measurement.
22	Brytek-Matera et al. (2021)	298 overweight or normal weight participants were recruited from institutions, universities, and workplaces. Demographic, clinical, and medical characteristics were assessed.	Emotional eating, physical disapproval, eating patterns	Body dissatisfaction was related to uncontrolled eating and low mindfulness, more strongly in overweight, where mindfulness moderated emotional dysregulation. To effectively treat body image disorders and eating patterns in overweight patients, promoting mindful eating is key.



23	Alharbi y Alharbi (2023)	The relationship between emotional eating and dietary patterns was explored in 380 female students at Qassim University in Saudi Arabia	Emotional eating, food frequency, eating patterns.	Fat intake was found to be a significant predictor of emotional eating, and both fat intake and educational level were significantly related to emotional eating.	The importance of emotional eating, its link to fat consumption and the need to promote awareness about healthy eating for a healthy lifestyle are highlighted.
24	Bell et al. (2022)	Randomized controlled trial evaluating a 12-week intervention in Hispanic/Latino adolescents to improve physical activity, diet, and stress biomarkers. Participants were recruited from public schools. n=169	Emotional eating, stress, food quality	Perceived stress (29.61). and emotional eating (22.36). were correlated with diet quality. In the mediation model, emotional eating partially mediated the relationship between stress and diet quality (36% mediation).	This study shows that perceived stress in Latino adolescents can lead to emotional eating, affecting diet quality. It highlights the need for culturally adapted interventions to prevent obesity in this population.

#### 4. DISCUSSION

The dynamics underlying the emotional management process related to food intake are clearly visible, finding an extensive line of associated factors that increase or decrease appetite in the face of negative emotions or symptoms related to mood disorders. Among the main causes found were the following:

Socio-emotional balance, defined as the ability to manage emotions in different social contexts, is a fundamental and impactful factor for mental and physical health. The reviewed studies indicate that Socio-emotional balance in emotional eating is mediated by factors such as anxiety, stress and other negative emotions such as sadness or boredom, which in turn can trigger unhealthy eating habits (Rodrigues Sousa & Stefanini Milhomem, 2023). Likewise, these emotional states promote emotional trading, where individuals turn to food to momentarily relieve discomfort, but without satisfying a real physical need, often resulting in negative consequences for both physical and mental health (Nuraini et al., 2024).

On the other hand, emotional eating is associated with the consumption of foods rich in fats, sugars and carbohydrates, which contributes to poor nutrition and an increased risk of diseases such as obesity, cardiovascular problems and diabetes (Basheer et al., 2024). This type of impulsive eating not only affects physical health, but also perpetuates a cycle of guilt and shame in individuals, making it noteworthy that emotional eating is associated with effects on physical health, intensifying emotional discomfort (Rodrigues Barbosa et al., 2020).

The analysis shows that low socioeconomic status is associated with higher levels of stress, therefore, a higher incidence of emotional eating. This is largely because people in economically disadvantaged situations regularly face higher levels of insecurity and stress that lead them to use food as a form of emotional coping (Sánchez

Bizama et al., 2020). Furthermore, the lack of access to healthy food in these contexts aggravates the problem, increasing the intake of foods rich in fats and carbohydrates, which affects both the physical and mental health of individuals, evidencing a relationship between socioeconomic factors and their relationship with emotional eating (De Gracia et al., 2024).

Not only sociodemographic context and economic factors influence the relationship between anxious food intake and emotional aspects, as research suggests that there are significant differences between men and women regarding the incidence and triggers of emotional eating. For example, it has been found that women tend to eat emotionally in response to negative emotions such as sadness or stress, while men do so more in response to positive emotions, such as celebration or happiness (Cuesta-Zamora et al., 2022). Furthermore, women often report a higher frequency of guilt and shame after emotional eating, which reinforces the cycle of emotional distress and unhealthy eating, further underscoring gender differences in emotional eating (Montserrat Vázquez et al., 2019).

Among the most effective interventions to manage emotional eating, studies highlight cognitive-behavioural therapy and mindfulness practice. These techniques help individuals identify and manage the emotional triggers that lead them to eat impulsively, breaking the cycle of emotional dependence on food by finding a positive relationship between therapeutic interventions and a healthy diet (Bobadilla-Soto et al., 2022).

There are many factors that lead to therapeutic complications, and it is highlighted that emotional eating is common in people with eating disorders such as anorexia nervosa and bulimia. These behaviours tend to mediate the relationship between psychological distress and increased body mass index, hence a close relationship with eating disorders is evident, which underlines the need to address both emotional aspects and eating behaviours in interventions (Chwyl et al., 2022).

Current research has focused on the concept of self-compassion as a key intervention in reducing emotional eating. People who practice self-compassion tend to manage their emotions better, which reduces the need to turn to food for emotional comfort (Bernabéu-Brotón & Marchena-Giráldez, 2022). The study by Fonseca et al. suggests that self-compassion may mediate the relationship between emotional dysregulation and emotional eating, providing a new therapeutic avenue to address this problem from a more comprehensive and less punitive approach towards the individual. The role of self-compassion in the management of emotional eating (Carpio-Arias et al., 2020).

From the above, it is evident that a key area for discussion is the role of clinical interventions. Therapies that focus on emotional regulation, such as cognitive behavioural therapy (CBT). and mindfulness, have been shown to be effective in treating emotional eating. These approaches allow individuals to identify the emotional triggers that lead them to eat, teaching them healthier coping strategies. Research indicates that these therapies not only reduce episodes of emotional eating, but also improve the general well-being of individuals, decreasing anxiety and depression, which are often associated with this behaviour, with the clinical and therapeutic implications being the most effective and multimodal eating modulation strategy.

It is of fundamental importance to establish the link between emotional eating and obesity within this discussion because emotional eating often leads to greater caloric intake and a preference for unhealthy foods, thereby doubling the risk of obesity and other metabolic complications (Reichenberger et al., 2018). On the other hand, longitudinal studies reveal that people with a tendency to eat emotionally are more likely to gain weight over

time, especially if they do not receive or have received intervention, suggesting the need for preventive strategies and specific treatment for this type of eating behaviour at the primary health level (Arend et al., 2024a).

Furthermore, one aspect that is relevant to the discussion is the influence of culture and social expectations on emotional eating. In many cultures, food is associated with social and emotional events (such as celebrations, mourning, among others), which can reinforce patterns of emotional eating (Schnepper et al., 2023). Cultural differences may also influence how individuals perceive and handle food intake, but at the same time this behaviour remains a social reinforcer, adding to the list of incidences mentioned in this discussion where psychological factors related to emotional eating are also highlighted, as well as its interaction with socioeconomic, environmental and gender factors, providing a more holistic view of the phenomenon and its clinical implications.

Finally, the analysis highlights that emotional eating is closely linked to negative psychological factors, which act as triggers for the impulsive consumption of unhealthy foods rich in fats and sugars. This behaviour generates a cycle of emotional distress, guilt, and negative repercussions on both physical and mental health. Another point of agreement is the role of socioeconomic and cultural factors. Low socioeconomic status is associated with elevated stress levels and limited access to healthy foods, exacerbating emotional dependence on food. Likewise, cultural contexts reinforce patterns of emotional eating through their association with social and emotional events. Finally, therapeutic interventions, such as CBT, mindfulness, and self-compassion, are key to addressing emotional regulation and reducing emotional dependence on food, proving to be effective in improving overall well-being.

However, it is necessary to highlight the limitations encountered in conducting this review. Among them is the heterogeneity of the studies analyzed, as cultural, socioeconomic, and gender factors vary widely across contexts, making it difficult to generalize the findings. Additionally, most studies rely on cross-sectional rather than longitudinal methodologies, which limits the ability to establish causal relationships. There is also a lack of focus on specific populations, such as adolescents or older adults, as well as on the long-term impacts of interventions.

## 5. CONCLUSION

Emotional eating is a complex behaviour that is related to emotional balance, being intrinsically linked to negative emotions, such as anxiety, sadness and stress. This practice not only affects physical health through weight gain and obesity risk, but also negatively impacts mental health, generating feelings of guilt, shame and low self-esteem, indicating that these are significant triggers that lead individuals to seek comfort in food, which in turn negatively affects their physical and mental health. This emotional eating behaviour is not only linked to weight gain and obesity, but also promotes feelings of guilt and shame, which perpetuate a cycle of emotional dysregulation and unhealthy eating habits.

In addition to this, it was recognized that socio-emotional balance plays a fundamental role in the regulation of emotions and, therefore, it is also linked to the eating response. The lack of skills to manage emotions can lead individuals to use food as a defence and coping mechanism in stressful emotional situations, which further aggravates existing psychological disorders. In addition to this, other sociodemographic variables such as socioeconomic status and gender were related to the prevalence of emotional eating, suggesting that interventions should be adapted to address these variables.



When reviewing the related therapeutic process, it was found that interventions based on cognitive-behavioural therapy and mindfulness are pointed out as effective strategies to mitigate emotional eating, since these help subjects to develop greater awareness of their emotions and find healthier alternatives to manage stress and anxiety. In addition, it is necessary to promote a social environment that fosters positive interpersonal relationships and adequate emotional support, since these factors can significantly contribute to general well-being and the reduction of emotional eating.

Finally, emotional eating was shown to be a multifaceted phenomenon that requires an ecobiopsychosocial-cultural understanding of health, thus addressing the psychological, social and emotional dimensions of eating behaviour for the development of effective intervention strategies. It is recommended that future studies continue to explore this relationship, as well as the effectiveness of various interventions in different socioeconomic and cultural contexts.

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**Rol de los autores / Authors Roles:**

Nubia Hernandez-Florez: conceptualización, investigación, metodología, escritura - preparación del borrador original, escritura - revisar & edición.

Olena Klimenko: conceptualización, investigación, metodología, escritura - preparación del borrador original, escritura - revisar & edición.

Andrea Ortiz-Gonzalez: curación de datos, administración del proyecto, recursos, software, supervisión.

Luis Cantillo-Acosta: análisis formal, adquisición de fondos, recursos, validación, visualización.

Juan Pazos-Alfonso: curación de datos, administración del proyecto, software, escritura - preparación del borrador original, escritura - revisar & edición.

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