JHGD
Journal of Human Growth and Development

www. jhgd.com.br

ORIGINAL ARTICLE

Binge eating disorders and behaviors in metropolitan São Paulo, Brazil: prevalence estimates and associations with chronic conditions

Sofia Villela Musso[a], Carla Moronari de Oliveira Aprelini[b], Alana Machado Batista[c], Laura Helena S. G. Andrade[d], Rafael Bello Corassa[e], Maria Carmen Viana[f]

Open acess

[a] Postgraduate Program in Public Health, Federal University of Espírito Santo, Vitória, ES 29043-900, Brazil;

[b] Postgraduate Program in Public Health, Federal University of Espírito Santo, Vitória, ES 29043-900, Brazil;

[c] Postgraduate Program in Public Health, Federal University of Espírito Santo, Vitória, ES 29043-900, Brazil;

[d] Section of Psychiatric Epidemiology–LIM 23, Department and Institute of Psychiatry, University of São Paulo Medical School, São Paulo, SP 05403-903, Brazil;

[e] Postgraduate Program in Public Health, Federal University of Espírito Santo, Vitória, ES 29043-900, Brazil;

[f] Department of Collective Health and Postgraduate Program in Public Health, Federal University of Espírito Santo, Vitória, ES 29043-900, Brazil;

Corresponding author
mcviana6@gmail.com

Manuscript received: may 2025
Manuscript accepted: june 2025
Version of record online: august 2025

Abstract

Introduction: Binge eating disorders and behaviors (BEDB) are frequently associated with multiple comorbid conditions, including obesity, metabolic disorders, and cardiovascular diseases, which often result in significant functional impairment and impose a substantial health burden. Given the clinical and public health relevance of these associations, this study aimed to estimate the lifetime, 12-month, and 30-day prevalence of BEDB—encompassing bulimia nervosa (BN), binge eating disorder (BED), and any binge eating disorders/behaviors (ABEDB)—while also examining their associations with chronic somatic conditions and sociodemographic characteristics.

Methods: The study utilized data from the São Paulo Megacity Mental Health Survey, a population-based study comprising a representative sample of 2,942 adult residents of the São Paulo metropolitan area. Diagnoses were assessed using the Composite International Diagnostic Interview (CIDI 3.0), administered via face-to-face interviews, to determine lifetime, 12-month, and 30-day prevalence rates of DSM-IV-defined BN, BED, and ABEDB. Additional data included demographics and anthropometric measures (weight, height) as well as self-reported chronic health conditions, such as autoimmune disorders, neck/back pain, headaches, other chronic pain, brain/cardiovascular diseases, hypertension, chronic pulmonary disease, diabetes or glucose intolerance and gastrointestinal ulcer. Statistical analysis employed cross-tabulations to assess prevalence distributions by sociodemographic variables and comorbidity with chronic conditions and overweight, while bivariate analyses and Poisson's regression models (STATA 17.0) evaluated associations, with significance set at $p< 0.05$.

Results: The lifetime, 12-month, and 30-day prevalence estimates were, respectively, 2.0% (SE 0.3), 0.9% (SE 0.2), and 0.4% (SE 0.1) for BN; 4.7% (SE 0.3), 1.8% (SE 0.3), and 1.2% (SE 0.2) for BED; and 9.0% (SE 0.5), 3.4% (SE 0.4), and 2.0% (SE 0.3) for ABEDB. Women presented significantly higher BEDB rates, except for 12-month BN. Although prevalence was consistently higher among younger cohorts for all eating-related conditions, age-related differences reached statistical significance only for lifetime ABEDB. No significant differences emerged based on marital status, education, or income. Comorbidity analyses revealed that lifetime BN was most prevalent among individuals with gastrointestinal ulcers (8.2%, SE 2.8), headaches (3.5%, SE 0.6), neck/back pain (3.3%, SE 0.6), and hypertension (3.1%, SE 0.7). Lifetime BED showed elevated rates in those with chronic pulmonary disease (13.2%, SE 6.0), arthritis/rheumatism (10.0%, SE 2.1), gastrointestinal ulcers (9.2%, SE 2.6), neck/back pain (8.9%, SE 1.3), other chronic pain (7.7%, SE 1.2), and headaches (6.6%, SE 0.9). Similarly, lifetime ABEDB was most prevalent among respondents reporting gastrointestinal ulcers (18.1%, SE 3.1), neck/back pain (14.0%, SE 1.9), headaches (12.8%, SE 1.2), and other chronic pain (11.7%, SE 1.5).

Conclusion: Binge eating disorders and behaviors are more prevalent among women and demonstrate high comorbidity with chronic health conditions, particularly gastrointestinal, musculoskeletal, and pain-related disorders. These findings highlight the need for integrated public health strategies and clinical interventions to address the dual burden of BEDBs and chronic somatic conditions, ensuring comprehensive care for affected individuals.

Keywords: Eating disorders, binge eating disorder, binge eating behaviors, bulimia nervosa, comorbidity, chronic diseases, BMI.

Suggested citation: Musso SV, Aprelini CMO, Batista AM, Andrade LHSG, Corassa RB, Viana MC. Binge eating disorders and behaviors in metropolitan são paulo, brazil: prevalence estimates and associations with chronic conditions. *J Hum Growth Dev. 2025; 35(2):260-272.* DOI: http://doi.org/10.36311/jhgd.v35.17795

Authors summary

Why was this study done?
This study aimed to estimate the prevalence of eating disorders and behaviors, and their associations with comorbid chronic conditions and sociodemographic characteristics, in a population-based sample of residents in a large metropolitan area of Brazil. Data from the São Paulo Megacity Mental Health Survey, which is a component of the World Health Organization (WHO) World Mental Health (WMH) Surveys Consortium, was analyzed; results can guide public mental health policies and future research.

What did the researchers do and find?
Using a population-based sample of 2,942 adult residents in the São Paulo Metropolitan Area, we were able to identify lifetime, 12-month and 30-day prevalence estimates of binge eating disorders and behaviors, and associations with chronic diseases, including obesity, and sociodemographic characteristics. We found significantly higher prevalences of binge eating disorders and behaviors among women compared to men, and higher comorbidity rates with several chronic diseases and conditions, regardless of gender differences.

What do these findings mean?
Data suggests strong comorbidity between eating disorders and chronic conditions, such as gastrointestinal ulcer, chronic back and neck pain, headaches, among others, highlighting the importance of prevention and treatment of eating disorders, and investigating comorbid chronic diseases. These results corroborate previous findings from other researchers.

INTRODUCTION

Binge eating disorder (BED) and bulimia nervosa (BN) are complex eating disorders (EDs) that share the criteria of recurrent binge eating episodes, which are characterized by the excessive consumption of food within a distinct, usually short, period of time, accompanied by a sense of loss of control. Inappropriate compensatory behaviors to prevent weight gain are present in BN but do not occur in BED[1].

BED and binge eating symptoms have been associated with overweight, obesity and various metabolic disorders such as diabetes, hypertension, hypercholesterolemia, and hypertriglyceridemia[2-6]. Moreover, BN has been associated with multiple ill-health conditions such as renal and electrolyte disturbances[7], cardiovascular diseases[8], polycystic ovarium syndrome[9] and, like other EDs, higher risk of premature mortality[10]. Despite of the subject relevance, to our knowledge, only one Brazilian population-based study, conducted in Rio de Janeiro, assessed the frequency and correlates of EDs; the estimated lifetime prevalence of DSM-5 BN, BED and recurrent binge eating episodes were, respectively, 0,7%, 1,4%, and 6,2%[11].

EDs are frequently associated with other psychopathology and role impairment, yet often remain undiagnosed and under-treated[12]. Reports from the World Health Organization World Mental Health Surveys show lifetime prevalence estimates of 1.0% for BN and 1.9% for BED across surveys in 14 countries in 4 continents[13]. Associations of BN and BED with equivalently high rates of current overweight and obesity, and high comorbidity with other DSM-IV/CIDI disorders, contrasting with low proportions of people with EDs that actually receive treatment, were also reported[13].

Given the negative consequences of EDs and related comorbidities, there is a clear need to promote their prevention, early identification and prompt treatment. In this context, research on the epidemiology of eating disorders can provide a foundation for planning and strengthening public health policies. Furthermore, research addressing population-based samples of urban areas, known to be more affected by metabolic conditions, can offer greater insight into the processes of illness associated with binge eating conditions.

In the light of these considerations, the present study aims to investigate the lifetime, 12-months and 30-day prevalence estimates of BN, BED and any binge eating disorders or behaviors (ABEDB), as well as their distribution according to sociodemographic characteristics, and the comorbidity of these EDs with chronic conditions in a representative sample of the adult population (aged 18 and older) residing in the São Paulo Metropolitan Area, analyzing data from the São Paulo Megacity Mental Health Survey[14].

METHODS

Study Design and Population

Data analyzed came from the São Paulo Megacity Mental Health Survey[14], a population-based cross-sectional survey of psychiatric morbidity, assessing a probabilistic sample of 2,942 household residents in the São Paulo Metropolitan Area, Brazil, aged 18 years and over. Data was collected between May 2005 and April 2007. Respondents were selected from a stratified multistage clustered area probability sample of households, covering 39 municipalities, without replacement. Respondents were assessed using the World Mental Health Survey version of the World Health Organization Composite International Diagnostic Interview (CIDI 3.0)[15], which was translated and adapted into the Brazilian-Portuguese language[16]. A total of 5,037 individuals were interviewed, with a global response rate of 81.3%[17]. For this study, a sub-sample of 2,942 respondents, who were assessed regarding eating disorders, was considered. Detailed information on sampling methods and psychiatric assessment are presented elsewhere[14].

Data Collection

Data was collected by trained lay interviewers. The WMH-CIDI comprises clinical and non-clinical sections, producing diagnoses according to the Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV)[18]. Respondents were interviewed after informed written consent was obtained, and total confidentiality was assured.

Measures

The CIDI 3.0 section on eating disorders was applied and DSM-IV diagnostic algorithms were used to identify lifetime, 12-month and 30-day cases of Binge eating disorder (BED), Bulimia nervosa (BN) and Any binge eating disorder or behavior (ABEDB). The latter refers to the presence of recurrent binge eating episodes, regardless of whether full diagnostic criteria for BED or BN were met. This category was constructed based on responses indicating recurrent episodes of excessive food intake accompanied by a sense of loss of control, as identified in the eating disorders module, and therefore it includes individuals with BN, BED and any recurrent binge eating behavior. The operationalization of CIDI according to DSM-IV criteria can be found elsewhere[13].

ABEDB refers to the presence of recurrent binge eating episodes, regardless of whether full diagnostic criteria for BED or BN were met. This category was constructed based on responses indicating recurrent episodes of excessive food intake accompanied by a sense of loss of control, as identified in the eating disorders module, and therefore it includes individuals with BN, BED and any recurrent binge eating behavior.

Sociodemographic variables

The sociodemographic variables assessed were: sex (male and female), age group (18–34, 35–49, 50–64, ≥65 years), marital status (married/cohabiting, separated/divorced/widowed and never married), education (0-4, 5-8, 9-11 and 12+ years) and monthly household income categorized as low, lower-middle, upper-middle, and high, according to the sample distribution quartiles.

Chronic diseases and conditions

Self-reported 12-month chronic conditions (arthritis or rheumatism, neck or back problems, headaches, other chronic pain), lifetime events (heart attack), and previous medical diagnoses of cardiovascular disease, hypertension, chronic pulmonary disease, diabetes or glucose intolerance and gastrointestinal ulcer were assessed through the CIDI 3.0 Chronic Conditions section.

Body Mass Index (BMI)

BMI was calculated based on self-reported weight and height, using the formula weight (in kg) divided by squared height (in m^2). Participants were classified according to the World Health Organization (WHO) criteria as underweight (BMI <18.5), normal weight (BMI 18.5–24.9), overweight (BMI 25.0–29.9), obesity class I (BMI 30 - 34,9), obesity class II (BMI 35-39,9) and obesity class III (BMI ≥ 40). In the regression models, BMI categories were grouped as normal (BMI<25), overweight (BMI 25.0–29.9), and obesity (BMI ≥ 30.0).

Data Analysis

Weights were applied to adjust for differences in the probability of selection, differential non-response, and post-stratifying the final sample to approximate the year 2,000 population census regarding gender and age distribution[19], which were applied to data from the Part I sample. An additional weight adjusted for Part II selection - oversampling cases - was used to analyze Part II data. Weighting procedures are described in more detail elsewhere[14]. Descriptive statistics and measures of association were calculated considering the study design effect, using weights adjusting for sampling selection probabilities in each stratum and for the age and gender structure of the target-population. Differences in distributions were evaluated using chi-square tests. Lifetime prevalences were estimated as the proportion of respondents who had ever fulfilled DSM-IV diagnostic criteria for the eating disorders assessed up to their age at interview; 12-month and 30-day prevalences were estimated in the same way for the corresponding time period. To assess the associations of eating disorders and lifetime chronic conditions, crude and adjusted prevalence ratios (PR) were calculated using Poisson's regression and adjusted for sex and age group. All analysis were carried out in STATA 17, using the survey mode; all tests were two-sided with statistical significance set at 0.05 ($p < 0.05$).

Ethical Considerations

The São Paulo Megacity Mental Health Survey was approved by the Ethical and Research Committee of the School of Medicine, University of São Paulo (Process 792/03), and was supported by the Fundação de Apoio à Pesquisa do Estado de São Paulo (FAPESP - State of São Paulo Research Foundation). Respondents were interviewed only after informed written consent was obtained, and total confidentiality was assured.

RESULTS

Prevalence estimates of eating disorders and behaviors according to sociodemographic variables are reported in Table 1. Overall lifetime, 12-month and 30-day prevalence estimates were, respectively, 2.0% (SE 0,3), 0.9% (SE 0.2) and 0.4% (SE 0.1) for BN, 4,7% (SE 0,3),1.8% (SE 0.3) and 1.2% (SE 0.2) for BED and 9.0% (SE 0.5), 3.4% (SE 0.4) and 2.0% (0.3) for ABEDB. Women presented significantly higher rates of all eating disorders compared to men, with the exception of 12-month BN. Although prevalences were systematically higher among younger cohorts for all eating conditions, differences in age categories were statistically significant only for lifetime ABEDB. No significant differences in prevalences were observed for marital status, education and income categories (Table 1).

Table 1: Lifetime, 12-month and 30-day prevalence estimates of bulimia nervosa (BN), binge eating disorder (BED) and any binge eating disorders and behaviors (ABEDB) according to sociodemographic characteristics in the São Paulo Megacity Mental Health Survey (n= 2,942).

	Lifetime			12-month			30-day		
	BN	BED	ABEDB	BN	BED	ABEDB	BN	BED	ABEDB
	n = 101	n = 194	n = 356	n = 38	n = 89	n = 154	n = 20	n = 54	n = 91
	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)
Overall prevalence estimates	2.0 (0.25)	4.7 (0.34)	9.0 (0.52)	0.9 (0.21)	1.8 (0.29)	3.4 (0.35)	0.4 (0.13)	1.2 (0.21)	2.0 (0.25)
Sociodemographic variables									
Sex	*	*	**		**	**	*	*	*
Female	2.5 (0.37)	6.2 (0.64)	11.2 (0.92)	1.3 (0.32)	2.7 (0.42)	4.5 (0.47)	0.7 (0.26)	1.8 (0.33)	2.7 (0.34)
Male	1.3 (0.28)	3.0 (0.65)	6.6 (0.68)	0.6 (0.26)	0.8 (0.27)	2.3 (0.49)	0.1 (0.09)	0.6 (0.24)	1.3 (0.38)
Age (years)			**						
18-34	2.2 (0.41)	5.3 (0.67)	11.3 (0.80)	1.1 (0.32)	1.8 (0.38)	4.1 (0.61)	0.5 (0.18)	1.2 (0.35)	2.2 (0.50)
35-49	2.0 (0.41)	4.8 (0.72)	8.3 (0.95)	0.8 (0.28)	1.7 (0.29)	2.7 (0.37)	0.5 (0.17)	1.2 (0.30)	2.0 (0.35)
50-64	2.0 (0.67)	3.7 (0.84)	6.7 (1.06)	1.2 (0.53)	1.8 (0.57)	3.7 (0.67)	0.5 (0.34)	1.1 (0.35)	2.2 (0.52)
≥ 65	0.5 (0.42)	2.9 (1.49)	3.4 (1.53)	0 (0)	2.3 (1.53)	2.4 (1.53)	0 (0)	1.2 (1.03)	1.2 (1.03)
Marital status									
Married/ Cohabitating	2.2 (0.34)	4.0 (0.44)	8.0 (0.72)	1.1 (0.29)	1.8 (0.32)	3.2 (0.37)	0.4 (0.18)	1.1 (0.23)	2.0 (0.30)
Separated/ Widowed/ Divorced	1.9 (0.50)	6.0 (1.42)	9.6 (1.69)	1.1 (0.43)	2.9 (1.06)	4.3 (1.29)	0.6 (0.32)	1.7 (0.68)	2.1 (0.70)
Never Married	1.4 (0.39)	5.6 (1.11)	11.1 (1.49)	0.4 (0.28)	1.1 (0.45)	3.4 (0.88)	0.4 (0.28)	1.0 (0.42)	2.0 (0.69)
Education (years)									
0-4	1.2 (0.40)	3.5 (0.67)	7.3 (1.07)	0.7 (0.39)	1.9 (0.47)	3.3 (0.66)	0.5 (0.31)	1.0 (0.30)	1.7 (0.48)
5-8	2.4 (0.62)	4.6 (0.94)	9.4 (0.96)	1.0 (0.46)	1.7 (0.46)	3.2 (0.70)	0.2 (0.17)	0.8 (0.30)	2.0 (0.58)
9-11	2.1 (0.35)	5.1 (0.68)	9.2 (0.95)	0.9 (0.28)	1.7 (0.57)	3.1 (0.77)	0.4 (0.13)	1.4 (0.47)	2.1 (0.58)
≥ 12	2.1 (0.62)	5.7 (1.00)	10.3 (1.46)	1.1 (0.54)	2.0 (0.64)	4.6 (0.79)	0.6 (0.43)	1.5 (0.62)	2.4 (0.76)
Income									
Low	2.3 (0.62)	4.9 (0.97)	10.5 (1.31)	1.1 (0.44)	2.0 (0.51)	4.0 (0.72)	0.5 (0.29)	1.0 (0.36)	2.1 (0.55)
Low – Average	1.8 (0.45)	4.5 (1.03)	7.0 (1.28)	0.8 (0.31)	1.6 (0.56)	2.7 (0.75)	0.3 (0.16)	1.2 (0.52)	1.9 (0.59)
High – Average	1.6 (0.47)	5.4 (1.40)	10.8 (1.79)	0.9 (0.42)	1.0 (0.40)	3.0 (0.83)	0.5 (0.32)	0.6 (0.34)	1.4 (0.61)
High	2.2 (0.51)	4.2 (0.74)	8.4 (0.82)	0.9 (0.41)	2.5 (0.66)	4.1 (0.62)	0.5 (0.30)	1.9 (0.53)	2.7 (0.53)

Two-sided Chi square tests; * p-value < 0.05; **p-value < 0.01.

Prevalence estimates of eating disorders and behaviors according to chronic diseases and conditions are reported in Table 2. Higher prevalence estimates of BEDB were seen among those with most chronic conditions, although not all differential distributions showed statistical significance. Significantly higher prevalences of lifetime BN were seen in those with gastrointestinal ulcer (8.2%%; SE 2.8), headaches (3.5% SE 0.6), neck or back problems (3.3%; SE 0.6) and hypertension (3.1%, SE 0.7), compared to those without these conditions. For lifetime BED, was higher among individuals that had chronic pulmonary disease (13.2%; SE 6.0), arthritis or rheumatism (10.0%; SE 2.1), gastrointestinal ulcer (9.2%; SE 2.6), neck or back problems (8.9%, SE 1.3), chronic pain (7.7%, SE 1.2) and headaches (6.6%, SE 0.9). Finally, lifetime prevalence of ABEDB was higher among those who reported gastrointestinal ulcer (18.1%; SE 3.1), neck or back problems (14.0%; SE 1.9), headaches (12.8%; SE 1.2) and chronic pain in other sites (11.7%, SE 1.5).

Significantly higher prevalence estimates of binge eating disorders and behaviors were observed in individuals of higher BMI categories, with the exception of 30-day BN (Table 2).

Table 2: Prevalence estimates of eating disorders and behaviors according to reported chronic conditions and nutritional status (BMI) in the São Paulo Megacity Mental Health Survey (n= 2,942).

Chronic conditions	**Lifetime**			**12-month**			**30-day**		
	BN	BED	ABEDB	BN	BED	ABEDB	BN	BED	ABEDB
	n = 101	n = 194	n = 356	n = 38	n = 89	n = 154	n = 20	n = 54	n = 91
	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)	% (SE)
Arthritis (n = 2921)		**			**	**		**	*
Yes	1.5 (0.37)	10.0 (2.09)	12.1 (2.16)	0.5 (0.24)	7.1 (1.81)	8.1 (1.85)	0.3 (0.18)	4.5 (1.93)	5.3 (2.04)
No	2.0 (0.26)	4.2 (0.37)	8.8 (0.51)	1.0 (0.23)	1.4 (0.26)	3.1 (0.34)	0.4 (0.14)	0.9 (0.23)	1.8 (0.32)
Neck or back problems (n = 2939)	*	**	**	**	**	**		**	**
Yes	3.3 (0.64)	8.9 (1.30)	14.0 (1.85)	1.9 (0.52)	3.9 (0.74)	6.3 (0.72)	0.9 (0.38)	2.9 (0.63)	4.1 (0.58)
No	1.5 (0.28)	3.3 (0.34)	7.3 (0.61)	0.6 (0.18)	1.1 (0.25)	2.5 (0.36)	0.3 (0.13)	0.6 (0.15)	1.3 (0.24)
Headaches	**	*	**	*	*		**	*	*
Yes	3.5 (0.63)	6.6 (0.92)	12.8 (1.17)	1.6 (0.48)	3.2 (0.74)	4.9 (0.91)	1.0 (0.39)	2.3 (0.57)	3.5 (0.73)
No	1.3 (0.22)	3.9 (0.42)	7.5 (0.81)	0.6 (0.20)	1.2 (0.35)	2.9 (0.50)	0.2 (0.10)	0.8 (0.26)	1.4 (0.32)
Other chronic pain		**	*		**	**		**	**
Yes	2.5 (0.56)	7.7 (1.19)	11.7 (1.48)	1.5 (0.57)	4.2 (1.06)	6.0 (1.05)	0.8 (0.43)	3.5 (0.93)	4.7 (0.93)
No	1.9 (0.25)	4.2 (0.42)	8.6 (0.56)	0.8 (0.20)	1.4 (0.25)	3.0 (0.35)	0.2 (0.12)	0.8 (0.18)	1.6 (0.26)
Heart attack							**		
Yes	3.0 (2.05)	11.6 (8.62)	17.1 (8.41)	3.0 (2.05)	1.0 (0.99)	4.7 (2.42)	3.0 (2.05)	1.0 (0.99)	4.0 (2.29)
No	2.0 (0.25)	4.6 (0.33)	9.0 (0.50)	0.9 (0.21)	1.8 (0.29)	3.4 (0.35)	0.4 (0.13)	1.2 (0.21)	2.0 (0.25)
Heart disease (n = 2931)					**	**		*	
Yes	3.6 (1.56)	7.5 (2.45)	12.5 (2.71)	1.6 (0.92)	6.1 (2.66)	8.5 (2.68)	0.9 (0.53)	3.4 (1.84)	4.4 (1.85)

Continuation - Table 2: Prevalence estimates of eating disorders and behaviors according to reported chronic conditions and nutritional status (BMI) in the São Paulo Megacity Mental Health Survey (n= 2,942).

Chronic conditions	Lifetime			12-month			30-day		
No	1.9 (0.25)	4.5 (0.38)	8.8 (0.50)	0.9 (0.22)	1.6 (0.23)	3.2 (0.31)	0.4 (0.13)	1.1 (0.19)	1.9 (0.27)
Hypertension (n = 2929)	*			*		*			
Yes	3.1 (0.66)	6.4 (1.93)	11.0 (1.67)	1.6 (0.58)	3.0 (0.81)	5.3 (1.17)	0.5 (0.28)	1.8 (0.51)	2.9 (0.60)
No	1.7 (0.23)	4.2 (0.47)	8.5 (0.65)	0.8 (0.18)	1.5 (0.32)	3.0 (0.36)	0.4 (0.14)	1.1 (0.28)	1.9 (0.31)
Chronic pulmonary disease (n = 2938)		*							
Yes	3.7 (1.98)	13.2 (5.97)	16.1 (5.92)	0.6 (0.56)	2.1 (1.29)	2.9 (1.41)	0.6 (0.56)	0.8 (0.63)	1.4 (0.82)
No	1.9 (0.24)	4.5 (0.33)	8.9 (0.51)	0.9 (0.21)	1.8 (0.29)	3.5 (0.35)	0.4 (0.12)	1.2 (0.21)	2.1 (0.25)
Diabetes or glucose intolerance (n=2912)					*			*	**
Yes	2.7 (1.18)	6.9 (2.12)	11.1 (2.75)	1.0 (0.83)	3.4 (0.9)	5.6 (1.41)	0.2 (0.12)	2.9 (0.90)	4.6 (1.31)
No	1.9 (0.24)	4.6 (0.39)	8.9 (0.55)	0.9 (0.21)	1.7 (0.30)	3.3 (0.37)	0.5 (0.14)	1.1 (0.23)	1.9 (0.25)
Gastrointestinal ulcer (n = 2926)	**	*	**	**	*	**	**	**	**
Yes	8.2 (2.81)	9.2 (2.59)	18.1 (3.11)	5.6 (2.42)	6.1 (3.37)	11.6 (3.63)	2.9 (1.41)	5.7 (3.36)	9.7 (3.47)
No	1.8 (0.26)	4.6 (0.37)	8.8 (0.53)	0.8 (0.21)	1.7 (0.25)	3.2 (0.36)	0.4 (0.12)	1.1 (0.19)	1.8 (0.26)
Nutrition status (BMI) (n = 2742)	**	**	**	**	**	**		**	**
<18.5 (underweight)	0.4 (0.27)	2.4 (1.65)	2.8 (1.64)	0.2 (0.16)	1.1 (0.84)	1.2 (0.86)	0 (0)	1.1 (0.84)	1.1 (0.84)
18.5 – 24.9 (healthy weight)	0.9 (0.16)	3.0 (0.61)	6.9 (1.03)	0.3 (0.13)	1.0 (0.23)	2.1 (0.39)	0.2 (0.10)	0.5 (0.22)	1.2 (0.30)
25 – 29.9 (overweight)	2.7 (0.57)	4.6 (0.77)	9.0 (1.19)	1.6 (0.49)	1.8 (0.56)	3.9 (0.73)	1.0 (0.42)	1.2 (0.42)	2.1 (0.45)
30 – 34.9 (obesity class I)	5.9 (1.52)	14.0 (2.83)	21.3 (3.42)	2.9 (1.24)	5.2 (1.17)	9.1 (1.61)	0.5 (0.29)	3.6 (1.23)	5.8 (1.29)
35 – 39.9 (obesity class II)	2.2 (1.52)	9.0 (3.68)	11.6 (4.12)	0 (0)	6.2 (2.67)	6.9 (2.77)	0 (0)	4.3 (1.94)	4.3 (1.94)
>40 (obesity class III)	4.9 (3.95)	12.7 (7.06)	15.2 (7.19)	0 (0)	6.7 (4.93)	6.7 (4.93)	0 (0)	6.7 (4.93)	6.7 (4.93)

BN, bulimia nervosa; BED, binge eating disorder; ABEDB, any binge eating disorders and behaviors. BMI: body mass index. Two-sided Chi square tests; * p-value < 0.05; **p-value < 0.01.

Poisson regression models of BEDB adjusted for sex and age are described in Table 3. Significant associations of BEDB and several chronic conditions were observed, as well as with overweight and obesity. PRs of all BEDB were systematically higher among individuals with gastrointestinal ulcer, with Prs ranging from 2.2 to 8.4. The PRs of lifetime, 12-month and 30-day BED and ABEDB were significantly higher among individuals with obesity, and in individuals that reported 12-month arthritis or rheumatism, neck or back problems, other chronic pain. Lifetime and 12-month BN were also associated with obesity and neck or back problems. The PRs of lifetime, 12-month and 30-day BN and ABEDB, as well as of lifetime BED, were significantly higher among overweight individuals. Lifetime, 12-month and 30-day ABEDB were also associated with a medical diagnosis of diabetes or glucose intolerance, although BN and BED individually were not (except for 12-month and 30-day BED in the crude model). Lifetime and 12-month BN and ABEDB were associated with the diagnosis of hypertension, while ABEDB and BED appear significantly associated with heart disease. Only 30-day BN was associated with lifetime heart attack. Lifetime BED was also associated with the diagnosis of chronic pulmonary disease. Lifetime BN and ABEDB, as well as 30-day ABEDB was associated with frequent or intense headaches.

Table 3: Adjusted prevalence ratios of binge eating disorders or behaviors according to reported chronic conditions and nutritional status in the São Paulo Megacity Mental Health Survey (n= 2,942).

Chronic conditions	**BN**			**BED**			**ABEDB**		
	Lifetime	**12-month**	**30-day**	**Lifetime**	**12-month**	**30-day**	**Lifetime**	**12-month**	**30-day**
	n = 101	n = 38	n = 20	n = 194	n = 89	n = 54	n = 356	n = 154	n = 91
	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)	PR (95%CI)
Arthritis/ rheumatism (n = 2921)	0.8 (0.47-1.41)	0.6 (0.20-1.60)	0.6 (0.15-2.78)	**2.8 (1.63-4.87)**	**5.1 (2.37-11.14)**	**5.2 (1.35-19.73)**	**1.8 (1.19-2.76)**	**3.1 (1.77-5.55)**	**3.4 (1.14-10.14)**
Neck/back problems (n = 2939)	**2.1 (1.14-3.93)**	**3.2 (1.57-6.69)**	3.0 (0.73-12.23)	**2.7 (1.63-4.40)**	**3.2 (1.74-5.86)**	**4.1 (2.26-7.47)**	**2.0 (1.32-2.92)**	**2.5 (1.79-3.50)**	**3.0 (2.01-4.33)**
Headaches	**2.3 (1.37-3.98)**	2.1 (0.86-5.17)	4.2 (0.82-21.92)	1.4 (0.91-2.18)	2.1 (0.89-4.90)	2.5 (0.94-6.61)	1.5 (1.05-2.14)	1.4 (0.77-2.73)	2.2 (1.05-4.45)
Other chronic pain	1.3 (0.79-2.19)	1.8 (0.81-4.05)	2.0 (0.56-7.12)	**1.8 (1.25-2.73)**	**2.7 (1.43-5.20)**	**4.0 (1.90-8.33)**	**1.4 (1.04-1.93)**	**2.0 (1.30-3.05)**	**2.9 (1.71-4.92)**
Heart attack	1.6 (0.40-6.81)	3.6 (0.77-17.16)	**7.5 (1.38-41.31)**	2.7 (0.62-11.55)	0.5 (0.06-3.94)	0.8 (0.09-6.32)	2.3 (0.89-5.83)	1.4 (0.44-4.62)	2.0 (0.54-7.14)
Heart disease (n = 2931)	2.3 (0.81-6.27)	2.2 (0.55-9.24)	2.5 (0.59-11.07)	1.9 (0.97-3.87)	**3.8 (1.74-8.28)**	**3.3 (1.24-8.77)**	**1.9 (1.19-2.91)**	**3.1 (1.78-5.57)**	**2.6 (1.13-5.95)**
Hypertension (n = 2929)	2.5 (1.29-4.71)	3.0 (1.19-7.63)	1.4 (0.28-6.82)	1.9 (0.67-5.07)	2.0 (0.89-4.66)	1.9 (0.62-5.87)	**1.8 (1.10-2.84)**	**2.2 (1.26-3.84)**	1.79 (0.93-3.44)
Chronic pulmonary disease (n = 2938)	2.2 (0.74-6.21)	0.7 (0.12-4.40)	1.8 (0.37-8.83)	**3.3 (1.30-8.27)**	1.4 (0.36-5.06)	0.8 (0.16-3.86)	2.0 (0.98-3.92)	0.9 (0.35-2.55)	0.8 (0.24-2.47)
Diabetes or glucose intolerance (n=2912)	1.9 (0.75-4.77)	1.4 (0.23-8.77)	0.4 (0.09-2.11)	2.0 (0.97-4.22)	2.1 (0.88-4.92)	3.1 (0.99-9.91)	**1.9 (1.17-3.15)**	**2.2 (1.16-4.16)**	**3.1 (1.53-6.43)**
Gastrointestinal ulcer (n = 2926)	**5.1 (2.19-11.78)**	**8.1 (2.64-24.91)**	**8.4 (2.39-29.46)**	**2.2 (1.23-3.77)**	**3.2 (1.07-9.45)**	**5.1 (1.67-15.73)**	**2.5 (1.68-3.58)**	**3.8 (1.99-7.42)**	**5.6 (2.63-11.77)**
Nutrition status (n=2742)									
Normal BMI (≤ 24.9)	1	1	1	1	1	1	1	1	1
Overweight (BMI 25-29,9)	**4.1 (2.25-7.60)**	**7.1 (2.33-21.54)**	**6.8(1.26-37.18)**	**1.9 (1.14-3.03)**	2.0 (0.98-4.09)	2.6 (1.00-6.49)	**1.7 (1.14-2.56)**	**2.3 (1.44-3.66)**	**2.1 (1.13-4.01)**
Obesity (BMI ≥30)	**7.2 (3.79-13.64)**	**8.3 (2.94-23.69)**	2.4 (0.45-12.46)	**4.9 (2.67-9.07)**	**6.0 (2.89-12.29)**	**7.8 (2.49-24.22)**	**3.3 (2.21-5.07)**	**4.7 (2.90-7.59)**	**5.2 (2.50-10.95)**

BN, bulimia nervosa; BED, binge eating disorder; ABEDB, any binge eating disorders or behaviors. Bold: p-value < 0.05 in Poisson distribution models adjusted for sex and age.

DISCUSSION

This is the first epidemiological study estimating the prevalence of binge eating disorders and behaviors in the general population of the largest Metropolitan Area in South America (9.0%; SE 0.52). It, further, examined their associations with chronic conditions and nutrition status. The estimated lifetime prevalences of BN and BED in this Brazilian sample (2.0% and 4.7%, respectively) were considerably higher than global averages from the WHO World Mental Health Surveys, which reported 1.0% for BN and 1.9% for BED across surveys in multiple countries[13]. Disorganized urbanization in addition to significant socio-economic inequalities may help explain the high frequency of EDs reported in Latin America, and especially in metropolitan areas[20,21] A more recent systematic review of international studies reported lifetime prevalence estimates of 0.57% for DSM-IV BN and 1.72% for DSM-IV BED, and 1.41% for DSM-5 BN and 1.04% for DSM-5 BED[22], also lower than the São Paulo estimates reported here.

Higher prevalence estimates of EDs among women found in this study have been widely documented[23-25].The 12-month prevalence estimates of 0.9% and 1.8% for DSM-IV BN and BED, respectively, were similar to those reported in a more recent study in another metropolitan area in the southeast of Brazil, that used DSM-5 criteria and estimated point prevalences of 0.7% for BN and 1.4% for BED, taking in consideration the differences between DSM-IV and DSM-5 criteria for BN and BED in the frequency of recurrent binge eating symptoms[11]. Few prevalence studies on eating disorders have been conducted in Brazil, indicating the need for further researches, especially including rural samples[26].

Consistent with our findings, while using different methods, the study in Rio de Janeiro also reported associations of BED with several medical conditions, such as arthritis/rheumatism, spine problems and chronic muscle pain, whilst BN was also associated with hypertension and headaches[11]. In our study, however, ABEDB were associated with diabetes or glucose intolerance in the adjusted model, but not BN or BED individually, although the association of BED and diabetes has been reported by other authors using both different and similar methods[11,13,27].

Results were mostly convergent with global estimates in population-based samples, as BN and BED have been associated with musculoskeletal conditions, other chronic pain conditions, diabetes, hypertension and ulcers in multiple countries[13].

The associations of most BEDB with overweight and all but one with obesity were significant and corroborate findings from other studies[28]. Binge eating behavior has been prospectively associated with subsequent overweight/obesity in cohort studies, with OR 1.73 (95%CI 1.11-2.69)[29] and OR 1.9 (95% CI 1.0-3.5)[30], respectively, while lifetime BED was associated with severe obesity in cross-sectional analysis[12]. The Saudi Arabian National Mental Health Survey reported that respondents with overweight or obesity were more likely to be diagnosed with BED, compared to underweight individuals or those with normal weight, and overweight individuals were more likely to be diagnosed with BN, compared to those in the underweight, normal, or obesity BMI categories[31]. Their findings are in accordance with ours, although we also reported a higher prevalence of BN among those with obesity compared to normal weight individuals. Besides, the Saudi Arabia study revealed that people with overweight or obesity were significantly more likely to be diagnosed with BED in the preceding 12 months, reinforcing the bidirectional character of the associations[13,31].

The strong association of 30-day BN with reported history of heart attacks found in this study corroborates findings from the WHO World Mental Health Surveys, where BN was associated with subsequent heart attack[13]. The association of BN with ischemic heart disease has been described in a Canadian longitudinal cohort study of women, as well as the association with other cardiovascular conditions[8]. Damage done to the heart from BN may be attributed to the tendency to purge and the electrolyte imbalance caused by excessive vomiting and inappropriate use of medications[35].

Even though this study showed significantly higher prevalences of BN and ABEDB, but not BED, among individuals with a diagnosis of hypertension, BED has been associated with hypertension in other investigations[11,13,36]. However, in a sensitive analysis adjusting by BMI, the associations with hypertension found in our study lost statistical significance. On the other hand, the association of heart disease with both ABEDB and BED reported herein remained significant when adjusted by BMI, suggesting that binge eating behavior is associated to heart disease regardless of the presence of obesity or overweight. This may be linked to the frequent consumption of ultra-processed and hyperpalatable food during binge episodes, reported in Brazilian and other population samples around the globe[37-39].

Although the diagnosis of diabetes or glucose intolerance was associated with ABEDB in all time frames, that association only remained significant for 30-day ABEDB when adjusted by BMI. This implies high BMI as a mediator factor in the association between binge eating behavior and diabetes, explained by the insulin resistance caused by chronic inflammation, especially in visceral obesity[40, 41].

Results showed comorbidity of chronic pain with BED and ABEDB, and while significantly higher prevalence estimates of lifetime BN and ABEDB, but not BED, were found among those who reported frequent or intense headaches, other studies have reported associations of BED with headaches, as well as with chronic pain[11,27,36].

In addition, the significantly higher prevalence of lifetime BED among those with chronic pulmonary disease may be related to overlapping neurobiological and behavioral patterns displayed by individuals with food addiction or BEDB and smoking/vaping habits[42,43].

It is worth acknowledging that associations of BEDB with arthritis or rheumatism, neck or back problems, other chronic pain and gastrointestinal ulcer found here remained significant when adjusted for BMI (data not shown).

Results from the latest Vigitel[32], a Brazilian serial health survey carried out by the Ministry of Health annually by telephone contact in state capitals and the Federal District, showed high percentages of adults with excess weight (BMI ≥25: 61.4%), including overweight (37.1%) and obesity (24.3%), with similar findings in the city of São Paulo (63.0%, 38.7% and 24.3%, respectively)[33]. However, these indicators are much larger than those observed in 2006, where the overall Brazilian rates of excess weight was 42.6% and obesity was 11,8%, and, for São Paulo state capital, rates were 44.3% and 11,0%, respectively[34], which are slightly lower than those found in this study from the São Paulo Metropolitan area (47,1% and 13,8%, respectively). This expressive national increase (1.03% and 0.69% per year, respectively)[34], reinforces the urgent need for public healthcare policies regarding the prevention and control of this steadily growing epidemic and its related conditions.

The results reported in this paper should be interpreted taking into account several limitations. As a cross-sectional study, the direction of associations was not ascertained; although the age of onset of all eating disorders was enquired, we did not know when the chronic conditions assessed started, nor the history of weight gain. Further, weight and height measures used to calculate BMI were self-reported. Individuals with eating disorders may be more likely to misestimate their weight, as this may be a sensitive issue for them, and frequently have a distorted body image[44,45]. Indeed, an overestimation of self-reported height and underestimation of weight has been found in this sample, in general, resulting in a systematic reduction of BMI[46]. Nevertheless, if this was the case, the association of BEDB with obesity and overweight would be diminished in our study, increasing type I error. Regarding clinical diagnoses, the concordance of the WMH-CIDI with the Structured Clinical Interview for DSM-IV (SCID)[47] was found to be unbiased for 12-month WMH-CIDI prevalence estimates, but generally conservative for lifetime disorders[48]; however, no assessment of the consistency of WMH-CIDI eating disorders diagnoses was conducted. Furthermore, embarrassing behaviors or emotional contents, such as those related to binge eating and purging, and psychological suffering, are likely to be underreported, especially in cross-sectional assessments, and even more so in non-clinical interviews conducted within the respondent's household[49]. Recall bias may also impair the accuracy of retrospective information, although the questionnaire was rebuilt taking into consideration a series of strategies to minimize this type of error[15]. Moreover, people with mental problems are known to be more reluctant to participate in epidemiological surveys of this sort[50]. It is not possible, however, to evaluate this hypothesis and determine its impact, as information on non-responders (28.7%) was limited to the household listing (age, gender, and family relation to household informant). All these plausible biases were, therefore, likely to have yielded conservative rates of psychiatric morbidity, according to the adopted system of classification. Finally, sample sizes for some crosstabulations were too small, reducing the statistical power to identify significant associations on disorders with low prevalence, such as BN, 30-day diagnoses and less common chronic conditions.

Despite of these limitations, the findings reported herein represent an important contribution to the understanding of the prevalence and distribution of binge eating disorders and behaviors and their frequent comorbidity with chronic conditions in the Brazilian population, offering insights on the public health and clinical implications which may be helpful for guiding public policies and clinical interventions. We hope this sheds a light on the importance of a multidisciplinary approach in the prevention, screening and treatment of these conditions, as to minimize the burden and functional impairment in the general population.

CONCLUSION

The prevalence of BEDB was systematically higher among women, and comorbidity with multiple chronic conditions was commonly observed. Significant associations with high BMI and multiple chronic conditions, including metabolic and cardiovascular diseases, and other conditions not directly related with obesity, such as chronic pain and gastric ulcers. Other studies may unravel more aspects of those associations, and investigate the comorbidity of EDs with other conditions, such as mental disorders, especially in Brazil, where few population-based studies on this topic have been conducted.

Author Contributions

MCV and LHA supervise data collection; SVM and MCV designed the study and wrote the manuscript; SVM, MCV and CMOA performed the statistical analysis; SVM and MCV interpreted the results; SVM, MCV and CMOA prepared the tables; SVM, MCV, CMOA, AMB and RBC provided critical revisions of the manuscript. All authors reviewed and approved the final version.

ORCID and e-mails of all authors:
[a] ORCID: 0000-0002-5587-9644; sofiavmusso@gmail.com;
[b] ORCID: 000-0003-4812-374X; carla.moronari@gmail.com;
[c] ORCID: 0000-0003-1694-1625; alana.batista@edu.ufes.br;
[d] ORCID: 0000-0002-2362-3521; laurandrade@uol.com.br;
[e] ORCID: 0000-0001-9413-7400; rafael.corassa@saude.gov.br;
[f] ORCID: 0000-0002-0464-4845; mcviana6@gmail.com.

Funding

The São Paulo Megacity Mental Health Survey was supported by the Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP; Grant 03/00204-3). Instrument development was supported by the Fundo de Apoio à Ciência e Tecnologia do Município de Vitória (FACITEC -Vitoria Foundation for Science and Technology 002/2003).

Acknowledgments

The São Paulo Megacity Mental Health Survey is carried out in conjunction with the World Health Organization World Mental Health (WMH) Survey Initiative. We thank the WMH staff for assistance with instrumentation, fieldwork, and data analysis. These activities were supported by the United States National Institute of Mental Health (R01MH070884), the John D. and Catherine T. MacArthur Foundation, the Pfizer Foundation, the US Public Health Service (R13-MH066849, R01-MH069864, and R01 DA016558), the Fogarty International Center (FIRCA R03-TW006481), the Pan American Health Organization, the Eli Lilly & Company Foundation, Ortho-McNeil Pharmaceutical, Inc., GlaxoSmithKline, Bristol-Myers Squibb, and Shire. A complete list of WMH publications can be found at https://www.hcp.med.harvard.edu/wmh/.

Conflicts of Interest

the authors report no conflicts of interest.

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. American Psychiatric Association; 2013. https://doi.org/10.1176/appi.books.9780890425596.
2. Solmi F, Moreno AB, Lewis G, Angélica Nunes M, De Jesus Mendes Da Fonseca M, Harter Griep R. Longitudinal association between binge eating and metabolic syndrome in adults: Findings from the ELSA-Brasil cohort. Acta Psychiatr Scand 2021;144:464–74. https://doi.org/10.1111/acps.13356.
3. Udo T, Grilo CM. Psychiatric and medical correlates of DSM-5 eating disorders in a nationally representative sample of adults in the United States. Intl J Eating Disorders 2019;52:42–50. https://doi.org/10.1002/eat.23004.
4. Wassenaar E, Friedman J, Mehler PS. Medical Complications of Binge Eating Disorder. Psychiatric Clinics of North America 2019;42:275–86. https://doi.org/10.1016/j.psc.2019.01.010.
5. Agüera Z, Lozano-Madrid M, Mallorquí-Bagué N, Jiménez-Murcia S, Menchón JM, Fernández-Aranda F. A review of binge eating disorder and obesity. Neuropsychiatr 2021;35:57–67. https://doi.org/10.1007/s40211-020-00346-w.
6. Alagha M, Al-Alam F, Saroufine K, Elias L, Klaimi M, Nabbout G, et al. Binge Eating Disorder and Metabolic Syndrome: Shared Mechanisms and Clinical Implications. Healthcare 2025;13:482. https://doi.org/10.3390/healthcare13050482.
7. Nitsch A, Dlugosz H, Gibson D, Mehler PS. Medical complications of bulimia nervosa. CCJM 2021;88:333–43. https://doi.org/10.3949/ccjm.88a.20168.
8. Tith RM, Paradis G, Potter BJ, Low N, Healy-Profitós J, He S, et al. Association of Bulimia Nervosa With Long-term Risk of Cardiovascular Disease and Mortality Among Women. JAMA Psychiatry 2020;77:44. https://doi.org/10.1001/jamapsychiatry.2019.2914.
9. Cooney LG, Gyorfi K, Sanneh A, Bui LM, Mousa A, Tay CT, et al. Increased Prevalence of Binge Eating Disorder and Bulimia Nervosa in Women With Polycystic Ovary Syndrome: A Systematic Review and Meta-Analysis. The Journal of Clinical Endocrinology & Metabolism 2024;109:3293–305. https://doi.org/10.1210/clinem/dgae462.
10. Krug I, Liu S, Portingale J, Croce S, Dar B, Obleada K, et al. A meta-analysis of mortality rates in eating disorders: An update of the literature from 2010 to 2024. Clin Psychol Rev 2025;116:102547. https://doi.org/10.1016/j.cpr.2025.102547.
11. Appolinario JC, Sichieri R, Lopes CS, Moraes CE, Da Veiga GV, Freitas S, et al. Correlates and impact of DSM-5 binge eating disorder, bulimia nervosa and recurrent binge eating: a representative population survey in a middle-income country. Soc Psychiatry Psychiatr Epidemiol 2022;57:1491–503. https://doi.org/10.1007/s00127-022-02223-z.
12. Hudson JI, Hiripi E, Pope HG, Kessler RC. The Prevalence and Correlates of Eating Disorders in the National Comorbidity Survey Replication. Biological Psychiatry 2007;61:348–58. https://doi.org/10.1016/j.biopsych.2006.03.040.
13. Kessler RC, Berglund PA, Chiu WT, Deitz AC, Hudson JI, Shahly V, et al. The Prevalence and Correlates of Binge Eating Disorder in the World Health Organization World Mental Health Surveys. Biological Psychiatry 2013;73:904–14. https://doi.org/10.1016/j.biopsych.2012.11.020.
14. Viana MC, Teixeira MG, Beraldi F, Bassani IDS, Andrade LH. São Paulo Megacity Mental Health Survey - a population-based epidemiological study of psychiatric morbidity in the São Paulo metropolitan area: aims, design and field implementation. Rev Bras Psiquiatr 2009;31:375–86. https://doi.org/10.1590/S1516-44462009000400016.

15. Kessler RC, Üstün TB. The World Mental Health (WMH) Survey Initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). Int J Methods Psych Res 2004;13:93–121. https://doi.org/10.1002/mpr.168.
16. Viana MC, Viana-Moldes I, Teixeira M, Basani I, Andrade LH. The World Mental Health Survey Initiative Version of the Composite International Diagnostic Interview (WMH-CIDI): Translation and adaptation to Brazilian-Portuguese: The Instrument used in the "São Paulo Megacity Mental Health Survey". Printed Version; 2004.
17. Viana MC, Andrade LH. Lifetime Prevalence, Age and Gender Distribution and Age-of-Onset of Psychiatric Disorders in the São Paulo Metropolitan Area, Brazil: Results from the São Paulo Megacity Mental Health Survey. Revista Brasileira de Psiquiatria 2012;34:249–60. https://doi.org/10.1016/j.rbp.2012.03.001.
18. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). vol. 1. 4th ed. Arlington, VA: American Psychiatric Association; 2000. https://doi.org/10.1176/appi.books.9780890423349.
19. Instituto Brasileiro de Geografia e Estatística - IBGE. Censo demográfico populacional do ano 2000. [citado 17 Junho 2025]. Disponível em: https://www.ibge.gov.br/estatisticas/sociais/populacao/9663-censo-demografico-2000.html.
20. Hay P, Mitchison D. Urbanization and eating disorders: a scoping review of studies from 2019 to 2020. Current Opinion in Psychiatry 2021;34:287–92. https://doi.org/10.1097/YCO.0000000000000681.
21. Kolar DR, Mebarak M. An update on the epidemiology of eating disorders in Latin America: current findings and future challenges. Current Opinion in Psychiatry 2022;35:385–9. https://doi.org/10.1097/YCO.0000000000000813.
22. Qian J, Wu Y, Liu F, Zhu Y, Jin H, Zhang H, et al. An update on the prevalence of eating disorders in the general population: a systematic review and meta-analysis. Eat Weight Disord 2022;27:415–28. https://doi.org/10.1007/s40519-021-01162-z.
23. Attia E, Walsh BT. Eating Disorders: A Review. JAMA 2025;333:1242. https://doi.org/10.1001/jama.2025.0132.
24. Galmiche M, Déchelotte P, Lambert G, Tavolacci MP. Prevalence of eating disorders over the 2000–2018 period: a systematic literature review. The American Journal of Clinical Nutrition 2019;109:1402–13. https://doi.org/10.1093/ajcn/nqy342.
25. Guerdjikova AI, Mori N, Casuto LS, McElroy SL. Update on Binge Eating Disorder. Medical Clinics of North America 2019;103:669–80. https://doi.org/10.1016/j.mcna.2019.02.003.
26. De Oliveira J, Di Stasi Marques Dos Santos T, Coelho Ferro JL, Isis De Carvalho Stelmo M. Brazil has a problem: therapeutic itinerary, research and data about eating disorders. The Lancet Regional Health - Americas 2024;39:100903. https://doi.org/10.1016/j.lana.2024.100903.
27. Johnson JG, Spitzer RL, Williams JBW. Health problems, impairment and illnesses associated with bulimia nervosa and binge eating disorder among primary care and obstetric gynaecology patients. Psychol Med 2001;31:1455–66. https://doi.org/10.1017/S0033291701004640.
28. Hilbert A. Binge-Eating Disorder. Psychiatric Clinics of North America 2019;42:33–43. https://doi.org/10.1016/j.psc.2018.10.011.
29. Sonneville KR, Horton NJ, Micali N, Crosby RD, Swanson SA, Solmi F, et al. Longitudinal Associations Between Binge Eating and Overeating and Adverse Outcomes Among Adolescents and Young Adults: Does Loss of Control Matter? JAMA Pediatr 2013;167:149. https://doi.org/10.1001/2013.jamapediatrics.12.
30. Field AE, Sonneville KR, Micali N, Crosby RD, Swanson SA, Laird NM, et al. Prospective Association of Common Eating Disorders and Adverse Outcomes. Pediatrics 2012;130:e289–95. https://doi.org/10.1542/peds.2011-3663.
31. AlHadi AN, Almeharish A, Bilal L, Al-Habeeb A, Al-Subaie A, Naseem MT, et al. The prevalence and correlates of bulimia nervosa, binge-eating disorder, and anorexia nervosa: The Saudi National Mental Health Survey. Int J Eat Disord 2022;55:1541–52. https://doi.org/10.1002/eat.23790.
32. Brasil, Ministério da Saúde. Vigitel Brazil 2023: surveillance of risk and protective factors for chronic diseases by telephone survey: estimates of frequency and sociodemographic distribution of risk and protective factors for chronic diseases in the capitals of the 26 Brazilian states and the Federal District in 2023. Brasília, DF: Ministério da Saúde; 2024. [cited 26 july 2025] Available at: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/svsa/vigitel/vigitel-brasil-2023-vigilancia-de-fatores-de-risco-e-protecao-para-doencas-cronicas-por-inquerito-telefonico/view.

33. Brasil, Ministério da Saúde. Vigitel Brazil 2021: surveillance of risk and protective factors for chronic diseases by telephone survey: estimates of frequency and sociodemographic distribution of risk and protective factors for chronic diseases in the capitals of the 26 Brazilian states and the Federal District in 2021. Brasília, DF: Ministério da Saúde; 2022. [cited 26 july 2025] Available at: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/svsa/vigitel/vigitel-brasil-2021-estimativas-sobre-frequencia-e-distribuicao-sociodemografica-de-fatores-de-risco-e-protecao-para-doencas-cronicas/view
34. Brasil, Ministério da Saúde. Vigitel Brazil 2006-2023 : Surveillance of risk and protective factors for chronic diseases by telephone survey: estimates of frequency and sociodemographic distribution of nutritional status and food consumption in the capitals of the 26 Brazilian states and the Federal District between 2006 and 2023 : nutritional status and food. Available at: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/svsa/vigitel/vigitel-2006-2023-estado-nutricional-e-consumo-alimentar/view
35. Forney KJ, Buchman-Schmitt JM, Keel PK, Frank GKW. The medical complications associated with purging. Intl J Eating Disorders 2016;49:249–59. https://doi.org/10.1002/eat.22504.
36. Rosenbaum DL, Kimerling R, Pomernacki A, Goldstein KM, Yano EM, Sadler AG, et al. Binge Eating among Women Veterans in Primary Care: Comorbidities and Treatment Priorities. Women's Health Issues 2016;26:420–8. https://doi.org/10.1016/j.whi.2016.02.004.
37. Moraes CEF de, Hay P, Sichieri R, Fazzino TL, Mourilhe C, Appolinario JC. Hyperpalatable Foods Consumption in a Representative Sample of the General Population in Brazil: Differences of Binge and Non-Binge Eating Meals. Behav Sci (Basel) 2023;13:149. https://doi.org/10.3390/bs13020149.
38. Figueiredo N, Kose J, Srour B, Julia C, Kesse-Guyot E, Péneau S, et al. Ultra-processed food intake and eating disorders: Cross-sectional associations among French adults. Journal of Behavioral Addictions 2022;11:588–99. https://doi.org/10.1556/2006.2022.00009.
39. Mendoza K, Smith-Warner SA, Rossato SL, Khandpur N, Manson JE, Qi L, et al. Ultra-processed foods and cardiovascular disease: analysis of three large US prospective cohorts and a systematic review and meta-analysis of prospective cohort studies. The Lancet Regional Health - Americas 2024;37:100859. https://doi.org/10.1016/j.lana.2024.100859.
40. Wondmkun YT. Obesity, Insulin Resistance, and Type 2 Diabetes: Associations and Therapeutic Implications. Diabetes Metab Syndr Obes 2020;13:3611–6. https://doi.org/10.2147/DMSO.S275898.
41. Wu H, Ballantyne CM. Metabolic Inflammation and Insulin Resistance in Obesity. Circulation Research 2020;126:1549–64. https://doi.org/10.1161/CIRCRESAHA.119.315896.
42. Criscitelli K, Avena NM. The neurobiological and behavioral overlaps of nicotine and food addiction. Preventive Medicine 2016;92:82–9. https://doi.org/10.1016/j.ypmed.2016.08.009.
43. Bin Abdulrahman KA, Alenazi NS, Alshehry HZ, Albishri SB. Prevalence of Binge-Eating Disorder and Its Association with Nicotine Dependence Among Under-Graduate Students at a Saudi Public University. JMDH 2021;Volume 14:3233–42. https://doi.org/10.2147/JMDH.S339007.
44. McCabe RE, McFarlane T, Polivy J, Olmsted MP. Eating disorders, dieting, and the accuracy of self-reported weight. Intl J Eating Disorders 2001;29:59–64. https://doi.org/10.1002/1098-108X(200101)29:1<59::AID-EAT9>3.0.CO;2-#.
45. White MA, Masheb RM, Grilo CM. Accuracy of Self-reported Weight and Height in Binge Eating Disorder: Misreport Is Not Related to Psychological Factors. Obesity 2010;18:1266–9. https://doi.org/10.1038/oby.2009.347.
46. Ferriani LO, Coutinho EDSF, Silva DA, Bivanco-Lima D, Benseñor IJM, Viana MC. Validade de medidas autorrelatadas de peso corporal e estatura em participantes do estudo São Paulo Megacity. Cad Saúde Colet 2019;27:225–33. https://doi.org/10.1590/1414-462x201900020242.
47. Kessler RC, Abelson J, Demler O, Escobar JI, Gibbon M, Guyer ME, et al. Clinical calibration of DSM-IV diagnoses in the World Mental Health (WMH) version of the World Health Organization (WHO) Composite International Diagnostic Interview (WMH-CIDI). Int J Methods Psych Res 2004;13:122–39. https://doi.org/10.1002/mpr.169.
48. Haro JM, Arbabzadeh-Bouchez S, Brugha TS, De Girolamo G, Guyer ME, Jin R, et al. Concordance of the Composite International Diagnostic Interview Version 3.0 (CIDI 3.0) with standardized clinical assessments in the WHO World Mental Health Surveys. Int J Methods Psychiatr Res 2006;15:167–80. https://doi.org/10.1002/mpr.196.
49. Rickwood DJ, Coleman-Rose CL. The effect of survey administration mode on youth mental health measures: Social desirability bias and sensitive questions. Heliyon 2023;9:e20131. https://doi.org/10.1016/j.heliyon.2023.e20131.

50. Gross EB, Gelman SA. Research With the Reluctant: Challenges and Strategies. Advances in Methods and Practices in Psychological Science 2025;8:25152459241304775. https://doi.org/10.1177/25152459241304775.

Resumo

Introdução: transtornos e comportamentos de compulsão alimentar (BEDB, na sigla em inglês) estão frequentemente associados a múltiplas condições comórbidas, incluindo obesidade, distúrbios metabólicos e doenças cardiovasculares, que frequentemente resultam em prejuízo funcional significativo e impõem uma carga substancial à saúde. Diante da relevância clínica e de saúde pública dessas associações, este estudo teve como objetivo estimar a prevalência ao longo da vida, nos últimos 12 meses e nos últimos 30 dias de BEDB - abrangendo bulimia nervosa (BN), transtorno da compulsão alimentar (BED) e quaisquer transtornos/comportamentos de compulsão alimentar (ABEDB) - além de examinar suas associações com condições somáticas crônicas e características sociodemográficas.

Métodos: o estudo utilizou dados do Inquérito de Saúde Mental "São Paulo Megacity", um estudo populacional que avaliou uma amostra representativa de 2.942 adultos residentes na região metropolitana de São Paulo. Os diagnósticos foram avaliados por meio do Composite International Diagnostic Interview (CIDI 3.0), aplicado em entrevistas presenciais, para determinar as taxas de prevalência ao longo da vida, nos últimos 12 meses e nos últimos 30 dias de BN e BED, conforme definidos pelo DSM-IV. Dados adicionais incluíram características demográficas e medidas antropométricas (peso, altura), além de condições crônicas de saúde autorrelatadas, como doenças reumáticas, dor cervical/lombar, cefaleia, outras dores crônicas, doenças cérebro/cardiovasculares, hipertensão, doença pulmonar crônica, diabetes/intolerância à glicose, úlcera gastrointestinal e doenças da tireoide. A análise estatística empregou tabelas de contingência para avaliar a distribuição da prevalência por variáveis sociodemográficas e comorbidade com condições crônicas e sobrepeso, enquanto análises bivariadas e modelos de regressão de Poisson (STATA 17.0) avaliaram as associações, com significância estabelecida em $p < 0,05$.

Resultados: as estimativas de prevalência ao longo da vida, nos últimos 12 meses e nos últimos 30 dias foram, respectivamente, 2,0% (EP 0,3), 0,9% (EP 0,2) e 0,4% (EP 0,1) para BN; 4,7% (EP 0,3), 1,8% (EP 0,3) e 1,2% (EP 0,2) para BED; e 9,0% (EP 0,5), 3,4% (EP 0,4) e 2,0% (EP 0,3) para ABEDB. Mulheres apresentaram taxas significativamente maiores de BEDB, exceto para BN nos últimos 12 meses. Embora a prevalência tenha sido consistentemente maior em coortes mais jovens para todas as condições relacionadas à alimentação, as diferenças relacionadas à idade atingiram significância estatística apenas para ABEDB ao longo da vida. Não foram observadas diferenças significativas quanto ao estado civil, escolaridade ou renda. Análises de comorbidade revelaram que a BN ao longo da vida foi mais prevalente entre indivíduos com úlcera gastrointestinal (8,2%, EP 2,8), cefaleia (3,5%, EP 0,6), dor cervical/lombar (3,3%, EP 0,6) e hipertensão (3,1%, EP 0,7). BED ao longo da vida apresentou taxas elevadas naqueles com doença pulmonar crônica (13,2%, EP 6,0), artrite/reumatismo (10,0%, EP 2,1), úlcera gastrointestinal (9,2%, EP 2,6), dor cervical/lombar (8,9%, EP 1,3), outras dores crônicas (7,7%, EP 1,2) e cefaleia (6,6%, EP 0,9). Da mesma forma, ABEDB ao longo da vida foi mais prevalente entre os entrevistados que relataram úlcera gastrointestinal (18,1%, EP 3,1), dor cervical/lombar (14,0%, EP 1,9), cefaleia (12,8%, EP 1,2) e outras dores crônicas (11,7%, EP 1,5).

Conclusão: transtornos e comportamentos de compulsão alimentar são mais prevalentes em mulheres e demonstram alta comorbidade com condições crônicas de saúde, particularmente distúrbios gastrointestinais, musculoesqueléticos e relacionados à dor. Esses achados destacam a necessidade de estratégias integradas de saúde pública e intervenções clínicas para abordar a dupla carga dos BEDB e condições somáticas crônicas, garantindo cuidados abrangentes aos indivíduos afetados.

Palavras-chave: Transtornos alimentares; transtorno da compulsão alimentar periódica; comportamentos de compulsão alimentar; bulimia nervosa; comorbidade; doenças crônicas; IMC.