Cogitare Enfermagem

ORIGINAL ARTICLE

PREVALENCE OF THE PROBABILITY OF MENTAL DISORDER AND ASSOCIATED FACTORS AMONG INDIVIDUALS AFTER BARIATRIC SURGERY*

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ABSTRACT

Objective: To estimate the prevalence of the probability of common mental disorder and associated factors among individuals undergoing bariatric surgery.

Methods: A cross-sectional study carried out with 303 individuals in the central region of Brazil. An instrument for tracking mental disorders was applied and logistic regression analysis was performed, calculating the prevalence ratios.

Results: 50.2% were likely to have common mental disorder. In the multiple analysis, the following remained associated with the common mental disorder: insomnia (prevalence ratio: 1.132; 95% CI 1.020-1.256; p=0.020), binge eating (prevalence ratio: 1.429; 95% CI 1.244-1.641; p=0.000), having seen or heard things that did not exist in alcohol abstinence (prevalence ratio: 1.130; 95% CI 1.033-1.236; p=0.007), always having alcoholic beverages nearby (prevalence ratio: 1.330; 95% CI 1.182-1.518; p=0.000) and having been an obese child/adolescent (prevalence ratio: 0.885; 95% CI 0.786-0.997; p=0.046).

Conclusion: The results reinforce the importance of systematizing Nursing care in health actions in a multidisciplinary team.

DESCRIPTORS: Bariatric Surgery; Mental disorders; Nursing; Alcoholism; Obesity.

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PREVALÊNCIA DA PROBABILIDADE DE TRANSTORNO MENTAL E FATORES ASSOCIADOS ENTRE INDIVÍDUOS PÓS CIRURGIA BARIÁTRICA

RESUMO

Objetivo: estimar a prevalência da probabilidade de transtorno mental comum e fatores associados entre indivíduos submetidos à cirurgia bariátrica.

Métodos: estudo transversal, realizado em 303 indivíduos na região central do Brasil. Aplicou-se instrumento para rastreamento de transtornos mentais e realizou-se análise de regressão logística, com cálculo das razões de prevalência.

Resultados: 50,2% apresentaram probabilidade de transtorno mental comum. Na análise múltipla, permaneceram associadas ao transtorno mental comum insônia (razão de prevalência: 1,132; IC95% 1,020-1,256; p=0,020), compulsão alimentar (razão de prevalência: 1,429; IC95% 1,244-1,641; p=0,000), ter visto ou ouvido coisas que não existiam na abstinência de álcool (razão de prevalência: 1,130; IC95% 1,033-1,236; p=0,007), ter sempre bebida alcoólica por perto (razão de prevalência: 1,330; IC95% 1,182-1,518; p=0,000) e ter sido criança/adolescente obeso (razão de prevalência: 0,885; IC95% 0,786-0,997; p=0,046).

Conclusão: os resultados reforçam a importância da sistematização do cuidado de Enfermagem nas ações de saúde em equipe multidisciplinar.

DESCRITORES: Cirurgia Bariátrica; Transtornos mentais; Enfermagem; Alcoolismo; Obesidade.

PREVALENCIA DE LA PROBABILIDAD DE PADECER TRASTORNO MENTAL Y FACTORES ASOCIADOS ENTRE INDIVIDUOS LUEGO DE SER SOMETIDOS A CIRUGÍA BARIÁTRICA

RESUMEN:

Objetivo: estimar la prevalencia de la probabilidad de padecer trastorno mental común y factores asociados entre individuos sometidos a cirugía bariátrica.

Métodos: estudio transversal realizado con 303 individuos en la región central de Brasil. Se aplicó un instrumento para el seguimiento de trastornos mentales y se realizó un análisis de regresión logística, con cálculo de las razones de prevalencia.

Resultados: el 50,2% presentó probabilidad de padecer trastorno mental común. En el análisis múltiple, las siguientes variables permanecieron asociadas al trastorno mental común: insomnio (razón de prevalencia: 1,132; IC95% 1,020-1,256; p=0,020), alimentación compulsiva (razón de prevalencia: 1,429; IC95% 1,244-1,641; p=0,000), haber visto u oído cosas que no existían durante la abstinencia alcohólica (razón de prevalencia: 1,130; IC95% 1,033-1,236; p=0,007), tener siempre alguna bebida alcohólica cerca (razón de prevalencia: 1,330; IC95% 1,182-1,518; p=0,000) y haber sido obeso en la niñez y/o en la adolescencia (razón de prevalencia: 0,885; IC95% 0,786-0,997; p=0,046).

Conclusión: los resultados refuerzan la importancia de sistematizar los cuidados de Enfermería en las acciones de atención a la salud del equipo multidisciplinar.

DESCRIPTORES: Cirugía bariátrica; Trastornos mentales; Enfermería; Alcoholismo; Obesidad.

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INTRODUCTION

Common Mental Disorder (CMD) represents approximately 12% of the total mental illnesses in the world and constitutes a frequent problem in the world and Brazilian population, covering one third of the population in the different age groups[1,2]. It is characterized by depressive symptoms, anxiety, insomnia, irritability, fatigue, difficulty concentrating, forgetfulness, and somatic complaints[3].

Several other chronic health problems are associated with CMD; among these, recent studies have postulated the association between obesity and symptoms of mental disorders[4-6]. Obesity is a nutritional disease considered a public health problem, and Bariatric Surgery (BS), in turn, has been considered the most effective treatment form[7], attributing the success of this procedure to the permanent and permanent weight loss, being the most common technique the Y Roux gastric bypass. However, there has been the development of eating and psychiatric disorders, mostly resulting from the frustration of expectations around the desired weight loss, that is, when the objectives of the patient after BS are not reached[4,5].

Despite the literature postulating the relationship between obesity and symptoms of mental disorders, especially anxiety and depression[8,9], the investigations whether these disorders and symptoms remain or cease after the surgical procedure in individuals is still scarce[6], evidencing a knowledge gap.

A study carried out among individuals using Primary Health Care (PHC) in the central region of Brazil detected a prevalence of 31.47% of probability for developing CMD before BS. In the meantime, obesity affects approximately 29.4% of the population served in PHC[2]. In view of the high CMD and obesity rates found in a previous study carried out with other populations, it is important to track CMD in post-BS individuals, as well as the postoperative outcomes.

In addition, other diseases have also been considered risk factors for developing CMD, such as smoking, alcohol abuse, and changes in sleep patterns. Recent studies have found an association between alcohol consumption in post-BS patients, with a prevalence of postoperative time between six months and three years, mostly male, and a prevalence of 16.5% of tobacco consumption in the last 30 days[9,10]. Regarding changes in sleep patterns, the occurrence of these disorders in individuals with mental disorders after BS is scarce. The discreet investigations carried out found the presence of sleep apnea, with consequent sleep deprivation, daytime sleepiness, and alteration in the metabolism in individuals candidates for BS[11] with a 60% remission rate after BS[12].

This investigation aims to estimate the prevalence of the probability of CMD and of associated factors among individuals undergoing BS.

METHOD

A cross-sectional study carried out in a medium-sized municipality of relevant economic and social importance in central Brazil and a reference in the scope of primary health care in the community.

The study sample consisted of post-BS individuals who underwent the procedure by Y Roux gastric bypass techniques, sleeve and partial gastrectomy with outpatient care for patients with supplementary resources (health insurances) and private individuals in the minimum period of 60 days after BS aged ≥18 years old. Those who had during pregnancy, severe mental illness assessed by the Self-Reporting Questionnaire (SRQ-20) and carcinogenic diseases were excluded. The choice for this specific population by the

supplementary and private systems stems from the growing evolution in the number of surgical procedures in Brazil, in addition to currently being a knowledge gap, since most studies are carried out by public health services. Exponential growth in the number of surgeries by the supplementary system is estimated to be ten times greater than those performed by the Unified Health System (*Sistema Único de Saúde*, SUS)[13].

The sample was calculated with a statistical power of 80% (β=20%), 5% significance level (α=0.05), design effect of 3.0, and anticipated frequency of problematic alcohol use of 6.5% in a post-BS population[14]. A 10% increase was considered for possible sample losses, resulting in N=309 individuals. Sampling was done for convenience.

The individuals were recruited by telephone contact between March 2015 and March 2016. Face-to-face in a private environment, an instrument was applied built by experienced professionals in the area, previously validated, containing sociodemographic data, health status, family history, life habits, and condition after BS. To track possible CMD cases, SRQ-20 was used in the version validated for the Brazilian population, made up by 20 dichotomous questions (yes, equivalent to one point; no, corresponding to zero point), with a resulting score ≥7 for CMD probability[15]. The study's dependent variable was defined as the SRQ-20 score dichotomized in presenting probability for CMD (no vs. yes) and the independent variables listed in Chart 1.

Chart 1 - Variables addressed and possibilities of answer in the applied questionnaire. Central Brazil, BR, 2015-2016 (continues)

N	Variables	Possible answers
1	Gender	female vs. male
2	Income	>R$1,581.00 vs. ≤R$1,581.00
3	Marital status	lives with partner vs. lives without a partner
4	Having children	no vs. yes
5	Being religious	no vs. yes
6	Having insomnia	no vs. yes
7	Diagnosis of depression - having already been diagnosed by a physicians or having been treated for depression	no vs. yes
8	Anxiety diagnosis - having already been diagnosed by a physician or having been treated for anxiety	no vs. yes
9	Physical activity ≥3 times a week	no vs. yes
10	Vitamin B12 deficiency - having received test results with vitamin B12 deficiency after BS	no vs. yes
11	Vitamin D deficiency - having already received test results with vitamin D deficiency after BS (values below the biochemical parameters of vitamin D <10 ng/ml were considered as a diagnosis of deficiency)[7]	no vs. yes
12	Iron deficiency - having received test results with post-BS iron deficiency (values below serum iron biochemical parameters <60 µg/dl were considered as a deficiency diagnosis)[7]	no vs. yes
13	Binge eating after BS, understanding binge eating as excessive consumption of food in a short period of time after BS	no vs. yes
14	Having been an obese child or adolescent	no vs. yes

15	Having an obese relative	no vs. yes
16	Having a relative who attempted suicide	no vs. yes
17	Drinking daily - at least one serving of alcohol per day	no vs. yes
18	Alcohol abstinence	no vs. yes
19	Having seen or heard things that didn't exist	no vs. yes
20	Trying to stop drinking and failing	no vs. yes
21	Always having some alcoholic drink nearby	no vs. yes

Data were entered in double check and analyzed using the Statistics/Data Analysis (Stata) software, version 14.0. For the answers of the SRQ-20 instrument, the Cronbach's alpha reliability test was performed.

The categorical variables were expressed as absolute and relative frequencies, prevalence, and 95% confidence interval (95% CI). The continuous variables were expressed in means and Standard Deviation (SD). Bivariate and multiple statistical analyses were obtained by the Prevalence Ratio (PR) with measurement of Poisson effect and 95% CI. The variables with $p<0.10$ were selected for the multiple model. In the multiple analysis, the variables with $p<0.05$ were considered associated.

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RESULTS

The study sample consisted of 317 post-BS individuals, subtracting 14 losses due to inconsistent data, totaling 303 individuals. There was a prevalence of females, with 76.2% (n=231; 95% CI 71.0-80.9), with a mean age of 37.2 years old (95% CI 36.1-38.3; SD ±9.78), white ethnicity/skin color 67.7% (n=205; 95% CI 62.0-73.3), followed by brown/brunet/mulatto 26.4% (n=80; 95% CI 21.5-31.4); 47.9% (n=145; 95% CI 46.5-58.1) had over 8 years of study, a mean income of R$ 3,625.29 (95% CI 19.7-25.3; SD ±24.8), and a mean time from surgery of 22.5 months (95% CI 19.7-25.3; SD ±24.8).

Of the 303 individuals, 50.2% had a score of prevalence of probability for CMD, according to the SRQ-20. To verify the reliability of the answers to the instrument, Cronbach's alpha was 0.822. Table 1 shows the factors associated with the prevalence of the probability of CMD in bivariate and multiple analyses.

Table 1 - Bivariate and multiple analysis of the probability of common mental disorder among individuals after bariatric surgery, according to the Self-Reporting Questionnaire. Central Brazil, BR, 2015-2016 (continues)

Variable	CMD		Gross PR		Adjusted PR	
	n/total* N=303	%	95% CI	p-value	95% CI	p-value
Gender						
Male	30/151	19.7	1.0			
Female	122/152	80.3	1.078 4 (0.984-1.181)	0,121	-	-
Income, R$						
>1.581	29/53	54.7	1.0			
≤1.581	123/250	49.2	0.802 (0.465-1.498)	0,466	-	-
Marital status						
With partner	43/88	48.8	1.0			
Without partner	107/215	49.7	1.009 (0.929-1.095)	0,829	-	-
With children						
No	39/86	45.3	1.0			
Yes	113/217	52.1	1.046 (0.961-1.138)	0,295	-	-
Religious						
No	11-17	64.7	1.0			
Yes	141/286	49.3	0.080 (0.955-1.273)	0,180	-	-
Presents insomnia						
No	57/137	41.6	1.0		1.0	
Yes	95/166	57.2	1.110 (1.029-1.197)	0.007	1.132 (1.020-1.256)	**0.020**
Physical activity ≥3 times a week						
Yes	41/107	38.3	1.0		1.0	
No	111/196	56.6	1.132 (1.045-1.293)	0.002	1.041 (0.935-1.158)	0.458
Vitamin B12 deficiency						
No	85/189	45.2	1.0		1.0	
Yes	67/115	58.2	1.089 (1.010-1.175)	0.025	1.038 (0.936-1.150)	0.476
Vitamin D deficiency						
No	103/219	47.0	1.0		1.0	
Yes	49/84	58.3	1.076 (0.9935-1.167)	0.071	1.019 (0.929-1.118)	0.687
Iron deficiency						
No	96/217	44.2	1.0		1.0	
Yes	56/86	65.1	1.144 (1.060-1.235)	0.001	1.082 (0.978-1.197)	0.123
Compulsive eating after BS?						
No	149/298	49.6	1.0		1.0	
Yes	4-4	100	1.336 (1.286-1.388)	0.000	1.429 (1.244-1.641)	**0.000**

Was an obese child/adolescent?						
No	119/215	55.3	1.0	0.005	1.0	**0.046**
Yes	33/88	37.5	0.484 (0.284-0.803)		0.885 (0.786-0.997)	
Has an obese relative?						
No	37/51	72.5	1.0	0.000	1.0	0.073
Yes	115/252	45.6	0.318 (0.145-0.555)		0.903 (0.808-1.009)	
Family member attempted suicide?						
No	25/151	16.6	1.0	0.000	1.0	0.353
Yes	53/152	34.9	2.698 (1.638-4.970)		1.052 (0.944-1.172)	
Drinks daily?						
No	146/296	49.3	1.0	0.003	1.0	0.701
Yes	6-7	85.7	1.243 (1.075-1.437)		0.948 (0.722-1.244)	
In alcohol abstinence, did you see or hear things that did not exist?						
No	133/281	47.3	1.0	0.000	1.0	**0.007**
Yes	19/22	86.4	7.048 (2.680-26.622)		1.130 (1.033-1.236)	
Tried to stop drinking and failed?						
No	0/151	0.0	1.0	0.008	1.0	0.062
Yes	7/152	4.6	42.628 (1.869-21.127)		0.858 (0.731-1.007)	
There is always some alcoholic nearby?						
No	57/131	43.5	1.0	0.000	1.0	**0.000**
Yes	15/15	100	1.393 (1.313-1.478)		1.339 (1.182-1.518)	

Caption: In bold, the numbers with p-value ≤ 0.05. *The "n" variation analyzed for each variable is due to the refusal to answer by some participants. Model: presents insomnia, diagnosis of depression, diagnosis of anxiety, physical activity ≥3 times/week, vitamin B12 deficiency, vitamin D deficiency, iron deficiency, compulsive eating after BS, having been an obese child/adolescent, having an obese relative, a relative attempted suicide, drinks daily, during alcohol abstinence you saw or heard things that do not exist, tried to stop drinking and failed, there is always alcohol around. The following variables were controlled: vitamin B12 deficiency and iron deficiency, as they are confusing with insomnia and having been an obese child/adolescent. PR: Prevalence Rate; 95% CI: 95% Confidence Interval; BS: Bariatric Surgery.

After the multiple analysis, the prevalence of the probability of CMD with the insomnia (PR: 1,132; 95% CI 1.020-1.256; p = 0.020), binge eating after BS (PR: 1,492; CI 1.244-1.641; p = 0.000), in alcohol abstinence (PR: 1,130; 95% CI 1.033-1.236; p = 0.007), and always having alcoholic drinks nearby (PR: 1,339; 95% CI 1.182-1.518; p=0.000) variables remained associated. Having been an obese child/adolescent was negatively associated with CMD (PR: 0.885; 95% CI 0.786-0.997; p=0.046).

In Figure 1, the frequency of yes answers to the 20 questions of the SRQ-20 instrument is observed. The questions in which positive answers predominated were the following: "Did you have unpleasant feelings in your stomach?"; "Did you feel nervous, tense or worried?", "Are you tired easily?", and "Did you sleep badly?".

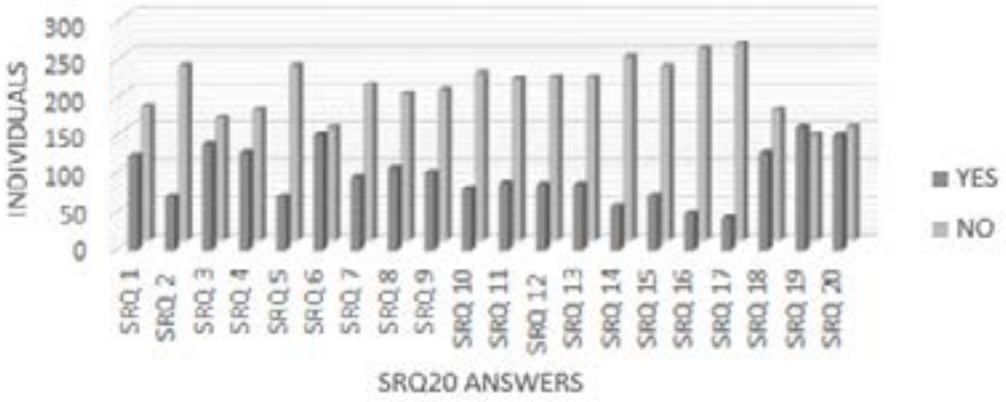

Figure 1 - Yes answers to the 20 questions in the Self-Reporting Questionnaire (SRQ-20). Catalão, GO, Brazil, 2015-2016

Caption: SRQ1: Did you have frequent headaches?; SRQ2: Did you lose your appetite?; SRQ3: Did you sleep badly? SRQ4: Were you scared easily? SRQ5: Did you have hand tremors?; SRQ6: Did you feel nervous, tense or worried? SRQ7: Did you have poor digestion?; SRQ8: Did you have difficulty thinking clearly?; SRQ9: Have you been feeling sad lately?; SRQ10: Have you cried more than usual?; SRQ11: Did you find it difficult to carry out with satisfaction some daily activity?; SRQ12: Did you have difficulty making decisions?; SRQ13: Did you have difficulty in the service?; SRQ14: Were you unable to perform a useful role in your life?; SRQ15: Did you lose interest in things?; SRQ16: Do you feel that you are a worthless person without help? SRQ17: Have you had any idea of ending your own life?; SRQ18: Do you feel tired all the time?; SRQ19: Did you have unpleasant feelings in your stomach?; SRQ20: Do you get tired easily?

DISCUSSION

This study evaluated the factors associated with the prevalence of the probability of CMD in patients post-BS by the supplementary (health insurance) and private systems, since it identified mental disorders in the population that presented obesity and that, even after BS, the prevalence of symptoms which fall within the CMD scope persisted. This fact corroborates the health care practices for this population, involving the multidisciplinary team and nursing actions, such as care planning, aimed at vulnerability to psychic morbidity in individuals after BS[2].

In addition, this study innovates by investigating a population for which there is currently a gap in the scientific production. There is a growing demand for this surgical procedure from the population with medical plans[13], since mostly the largest number of research studies on BS are carried out among the public linked to the SUS, recruited from university hospitals[15-19].

The findings in this study revealed a high prevalence of the probability of CMD (50.2%) when compared to Brazilian studies with a PHC population, with values that varied between 20.2[2] and 31.4%[17]. On the other hand, a research study carried out in Taiwan with 841 pre-bariatric individuals eligible for BC found a prevalence of CMD of 54.1%[19]. In this sense, the high CMD prevalence found both in pre-BS (54.1%) and in post-BS individuals allows us to assert that BS does not seem to guarantee symptom control among the CMD groups[7].

Other health problems resulting from CMD that may come to affect the individual's quality of life after BS were found in this study. Insomnia was positively associated (p=0.020) to individuals with suspected CMD, which corroborated with a previous study that related obesity with complaints of insufficient sleep and insomnia[20]. Even after BS, the patients had a high prevalence of insomnia, and sleep duration was associated with the signs characterizing the disorder[19]. In addition, short sleep duration (<6 hours/day) increases the

chances for developing CMD compared to longer sleep time (>6 hours/day)[16]. Changes in the sleep pattern may come to decrease the concentrations of the leptin hormone and cause higher concentrations of the ghrelin hormone[21], indicating, in turn, an alteration in the endocrine profile, stimulating greater hunger and less satiety[20].

Regarding the food profile, the individual who maintained the compulsive eating behavior after BS (p=0.000) was associated with CMD. Binge eating is a disorder that can be linked to psychiatric disorders, such as anxiety and depression, commonly occurring in the obese and post-BS population[18]. The higher prevalence found for this disorder reinforces the vulnerability of this population in the psychic sphere, in which the individual is affected by changes in the eating behavior, redefining food as an emotional buffer, that is, a kind of relief, which tends to increase the risk of weight gain in the obese individual and of weight regain during the post-BS period[22].

In addition, changes in the functioning of the nervous system are frequent in this population, indicating that decreased food intake may come to reduce central serotonergic tone and predispose the individual to binge eating. The decrease in food intake and characteristics such as rigidity of thought, impulsivity, and difficulty in elaborating emotions could be associated with the manifestation of the compulsive behavior after BS[23].

On the other hand, in the results of this study, having been an obese child or adolescent (p=0.046) was negatively associated with CMD. The findings are innovative and diverge from other studies conducted with an obese population, which indicate that dissatisfaction with the image itself, the increased risk of victimization, eating disorder associated with bullying, and the outcomes of depressive symptoms related to anxiety, loneliness, social isolation, and behavioral problems such as internalization, stress, and school dropout are associated with an increased risk for suicide[24-26]. However, the past history of childhood obesity would protect the obese adult from CMD, who may have received treatment and obtained significant improvements in physiological measures, health behaviors, and psychosocial results[27]. It was also observed that those who reported having alcoholic beverages nearby (p=0.000) had a 33.9% greater chance of CMD compared to those who did not. In agreement with the findings of this investigation, the literature documents that post-BS individuals are susceptible to alcohol dependence. One of the justifications is impulsive behavior, which makes the individual vulnerable to the transfer of binge eating to alcohol abuse[28]. This behavior has been frequent among people with difficulty in weight control treatments, especially impulsivity detected by eating disorders.

In addition, the literature points out that alcohol consumption can act in the mobilization of suffering, providing functional impairment in social relationships, and alcohol intake quickly relieves the feeling of distress[28]. This, in part, justified the need to keep the drink close at hand, which in this study was associated with the CMD.

Diseases related to greater sensitivity to alcohol are seen in individuals post-BS, providing metabolic changes, leading them to a greater risk of alcohol intoxication and vulnerability, potentiating the harmful effects, such as uncontrolled alcohol consumption and ethanol intoxication, related to the serum levels[21]. Patients who use alcohol after BS tend to take longer to return to sobriety. Furthermore, the excessive use of alcohol could act as a substitute for binge eating after surgery in individuals with obesity-related history[28,29].

The trying to stop drinking, always having a drink close by, and having sense-perceptual changes in abstinence variables need further investigation, as they configure symptoms and behaviors that reinforce disorders related to alcohol abuse, which tends to increase alcohol consumption, inducing the person to always have the drink close by. In cases of disorders caused by alcohol abuse, abstinence represents a way to face unpleasant sensations and, in the search for relief, the individual reinforces the pattern of recurrent and intense consumption[30].

The following facts can be mentioned ass limitations of this study: the type of sample with individuals who have undergone BS, through medical insurance and own resources,

and the negative association between a past history of obesity and CMD, a fact that is suggestive for further and more robust research studies, with longitudinal methods, which assess the relationship between causality and effect.

CONCLUSION

Given the significant prevalence of the probability of common mental disorders estimated in this study and the associated factors such as insomnia, binge eating, and past history of obesity and alcohol abuse, the importance of developing actions aimed at preventing mental illness in this population was verified.

The importance is emphasized of the systematic intervention of the multidisciplinary health team and, in particular, the nursing professional, from the planning of pre-surgical care to post-BS monitoring. Health promotion actions should focus on screening for common mental disorders, especially in the two years of postoperative follow-up. These aspects aim to contribute to the improvement and standardization of the evaluation, which will provide better care of the short and BS-related long term effects.

The instruments used are easy to handle and interpret, low-cost, and employable, and can be widely used, filling a gap found in patient care after BS, in addition to providing alternatives for patient care as a nursing intervention. Further studies should assess the impact of surgery on common mental disorders during the course of gastroplasty.

REFERENCES

1. Knudsen AK, Harvey SB, Mykletun A, Øverland S. Common mental disorders and long-term sickness absence in a general working population. The Hordaland Health Study. Acta psychiatr. scand. [Internet]. 2012 [accessed 07 jan 2019]; 127(4). Available from: http://dx.doi.org/10.1111/j.1600-0447.2012.01902.x.

2. Lucchese R, Sousa K de, Bonfin S do P, Vera I, Santana FR. Prevalência de transtorno mental comum na atenção primária. Acta paul. enferm. [Internet]. 2014 [accessed 01 fev 2019]; 27(3). Available from: http://dx.doi.org/10.1590/1982-0194201400035.

3. Skapinakis P, Bellos S, Koupidis S, Grammatikopoulos I, Theodorakis PN, Mavreas V. Prevalence and sociodemographic associations of common mental disorders in a nationally representative sample of the general population of Greece. BMC psychiatry. [Internet]. 2013 [accessed 07 jan 2019]; 13(163). Available from: http://dx.doi.org/10.1186/1471-244X-13-163.

4. Santos MM dos, Nascimento FF do, Cabral S de MR, Oliveira ES de, Santos RM dos, Carvalho L de S. Relação bilateral entre excesso de peso e transtornos mentais. Rev Bras Promoç Saúde [Internet]. 2018 [accessed 15 abr 2020]; 31(1). Available from: http://dx.doi.org/10.5020/18061230.2018.6740.

5. Lin HY, Huang CK, Tai CM, Lin HY, Kao YH, Tsai CC, et al. Psychiatric Disorders of patients seeking obesity treatment. BMC Psychiatry. [Internet]. 2013 [accessed 15 abr 2020]; 13(1). Available from: https://doi.org/10.1186/1471-244X-13-1.

6. Kalarchian, MA, King WC, Devlin MJ, Marcus MD, Yanovski SZ, Mitchell JE, et al. Mental disorders and weight change in a prospective study of bariatric surgery patients: 7 years of follow-up. Surg Obes Relat Dis [Internet]. 2019 [accessed 15 abr 2020]; 15(5). Available from: https://doi.org/10.1016/j.soard.2019.01.008.

7. Dawes AJ, Maggard-Gibbons M, Maher AR, Booth MJ, Miake-Lye BAi, Beores JM, et al. Mental health conditions among patients seeking and undergoing bariatric surgery: a meta-analysis. JAMA. [Internet]. 2016 [accessed 07 jan 2019]; 315(2). Available from: http://dx.doi.org/10.1001/jama.2015.18118.

8. Luppino FS, Wit LM de, Bouvy PF, Stijnen T, Cuijpers P, Penninx BWJH, et al. Overweight, obesity and depression: a systematic meta-analysis of longitudinal studies. Arch Gen Psychiatry. [Internet]. 2010 [accessed 15 abr 2020]; 67(3). Available from: http://dx.doi.org/10.1001/archgenpsychiatry.2010.2.

9. Gregorio VD, Lucchese R, Vera I, Silva GC, Silva A, Moraes RCC. The alcohol consumption is amended after bariatric surgery? An integrative review. ABCD, arq. bras. cir. dig. [Internet]. 2016 [accessed 07 jan 2019]; 29(suppl.1). Available from: http://dx.doi.org/10.1590/0102-67202016００S10027.

10. Gregorio VD, Ramalho MF, Santiago JB, Lucchese R, Vera I, Lemos MF, et al. Fatores associados ao tabagismo em pacientes pós-cirurgia bariátrica. Rev Bras Promoç Saúde [Internet]. 2018 [accessed 15 abr 2020]; 31(1). Available from: http://dx.doi.org/10.5020/18061230.2018.7112.

11. Lage-Hansen PR, Holm J, Gram J, Larsen K. Sleep apnoea in patients undergoing bariatric surgery. Dan. Med. J. [Internet] 2018 [accessed 15 abr 2020]; 65(2). Available from: https://www.ncbi.nlm.nih.gov/pubmed/29393036.

12. Nagendran M, Carlin AM, Bacal D, Genaw JA, Hawasli AA, Birkmeyer NJ, et al. Self-reported remission of obstructive sleep apnea following bariatric surgery: cohort study. Surg. obes. relat. dis. [Internet]. 2015 [accessed 07 jan 2019]; 11(3). Available from: http://dx.doi.org/10.1016/j.soard.2014.10.011.

13. Instituto de Estudo de Saúde Suplementar (IEES), org. Cirurgia bariátrica. Pareceres técnicos-científicos [Internet]. Rio de Janeiro: IESS; 2012 [accessed 04 abr 2019]. Volume 1. Available from: https://pt.scribd.com/document/220309638/phpiuO8fP#fullscreen&from_embed.

14. Saules KK, Wiedemann A, Ivezaj V, Hopper JA, Foster-Hartsfield J, Schwarz D. Bariatric surgery history among substance abuse treatment patients: prevalence and associated features. Surg. obes. relat. dis. [Internet]. 2010 [accessed 07 jan 2019]; 6(6). Available from: http://dx.doi.org/10.1016/j.soard.2009.12.008.

15. Gonçalves DA, Mari J de J, Bower P, Gask L, Dowrick C, Tófoli LF, et al. Brazilian multicentre study of common mental disorders in primary care: rates and related social and demographic factors. Cad. Saúde Pública. [Internet]. 2014 [accessed 07 jan 2019]; 30(3). Available from: https://doi.org/10.1590/0102-311X00158412.

16. Lima MG, Barros MB de A, Alves MCGP. Sleep duration and health status self-assessment (SF-36) in the elderly: a population-based study (ISA-Camp 2008). Cad. Saúde Pública. [Internet]. 2012 [accessed 07 jan 2019]; 28(9). Available from: http://dx.doi.org/10.1590/S0102-311X2012000900007.

17. Silva TM da, Aguiar OB de, Fonseca M de JM da. Associação entre sobrepeso, obesidade e transtornos mentais comuns em nutricionistas. J. bras. psiquiatr. [Internet]. 2015 [accessed 07 jan 2019]; 64(1). Available from: http://dx.doi.org/10.1590/0047-2085000000053.

18. Machado CE, Zilberstein B, Cecconello I, Monteiro M. Compulsão alimentar antes e após a cirurgia bariátrica. ABCD, arq. bras. cir. dig. [Internet]. 2008 [accessed 07 jan 2019]; 21(4). Available from: https://doi.org/10.1590/S0102-67202008000400007.

19. Lent MR and Swencionis C. Addictive personality and maladaptive eating behaviors in adults seeking bariatric surgery. Eat. behav. [Internet]. 2012 [accessed 07 jan 2019]; 13(1). Available from: http://dx.doi.org/10.1016/j.eatbeh.2011.10.006.

20. Cronlein T. Insomnia and obesity. Curr Opin Psychiatry. [Internet]. 2016 [accessed 07 jan 2019]; 29(6):409-12. Available from: http://dx.doi.org/10.1097/YCO.0000000000000284.

21. Qian J, Morris CJ, Caputo R, Garaulet M, Scheer FAJL. Ghrelin is impacted by the endogenous circadian system and by circadian misalignment in humans. Int. J. obes. [Internet]. 2018 [accessed 07 jan 2019]; 43. Available from: http://dx.doi.org/10.1038/s41366-018-0208-9.

22. Meany G, Conceição E, Mitchell JE. Binge eating, binge eating disorder and loss of control eating: effects on weight outcomes after bariatric surgery. Eur. Eat. Disord. Rev [Internet]. 2014 [accessed 15 abr

2020]; 22(2). Available from: http://dx.doi.org/10.1002/erv.2273.

23. Lluch A, Herbeth B, Méjean L, Siest G. Dietary intakes, eating style and overweight in the Stanislas Family Study. Int J Obes Relat Metab Disord [Internet] 2000 [accessed 15 abr 2020]; 24(11). Available from: https://www.nature.com/articles/0801425.

24. Small L, Aplasca A. Child Obesity and Mental Health: a complex interaction. Child Adolesc Psychiatr Clin N Am. [Internet]. 2016 [accessed 07 jan 2019]; 25(2). Available from: https://doi.org/10.1016/j.chc.2015.11.008.

25. Adams RE, Bukowski WM. Peer victimization as a predictor of depression and body mass index in obese and non-obese adolescents. J Child Psychol Psychiatry [Internet] 2008 [accessed 15 abr 2020]; 49(8). Available from: https://doi.org/10.1111/j.1469-7610.2008.01886.x.

26. Eisenberg ME, Neumark-Sztainer D, Story M. Associations of weight-based teasing and emotional well-being among adolescents. Arch Pediatr Adolesc Med [Internet]. 2003 [accessed 15 abr 2020]; 157(8). Available from: http://doi.org/10.1001/archpedi.157.8.733.

27. Russell-Mayhew S, McVey G, Bardick A, Ireland A. Mental health, wellness, and childhood overweight/obesity. J obes. [Internet]. 2012 [accessed 07 jan 2019]; (ID281801). Available from: https://doi.org/10.1155/2012/281801.

28. Wee CC, Mukamal KJ, Huskey KW, Apovian CM, Jones DBM, Blackburn GL, et al. High-risk alcohol use after weight loss surgery. Surg Obes Relat Dis [Internet]. 2014 [accessed 15 abr 2020]; 10(3). Available from: http://doi.org/10.1016/j.soard.2013.12.014.

29. Conason A, Teixeira J, Hsu C-H, Puma L, Knafo D, Geliebter A. Substance use following bariatric weight loss surgery. JAMA surgery [Internet]. 2013 [accessed 15 abr 2020]; 148(2). Available from: http://doi.org/10.1001/2013.jamasurg.265.

30. Gabert DL, Majumdar SR, Sharma AM, Rueda-Clausen CF, Klarenbach SW, Birch DW, et al. Prevalence and predictors of self-reported sexual abuse in severely obese patients in a population-based bariatric program. J Obes. [Internet]. 2013 [accessed 07 jan 2019]; (ID374050). Available from: http://dx.doi.org/10.1155/2013/374050.

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