Brazilian Journal of Psychiatry
bjp
Revista Brasileira de Psiquiatria

Braz J Psychiatry. 2025;47:e20254188
Brazilian Psychiatric Association

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LETTER TO THE EDITORS

Suicidal ideation and medical comorbidity: a hidden problem

Braz J Psychiatry. 2025;47:e20254188
doi:10.47626/1516-4446-2025-4188

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Suicide is responsible for over 700,000 deaths each year worldwide, with approximately seventy-seven percent of global suicides occurring in low- and middle-income countries, such as Brazil.[1] One known predictor for suicide is suicidal ideation (SI), which increases the risk of suicide by four times.[2] Multiple studies have linked specific sociodemographic and psychiatric aspects with SI, while fewer studies[3] have investigated its association with somatic (medical) conditions. In addition, most of the available data comes from high-income countries, showing the importance of exploring this association in other populations.[3,4]

We conducted an in-person population-based study in Rio de Janeiro, Brazil from September 2019 to February 2020. This was a representative study of the general population of Rio de Janeiro, Brazil that assessed 2,297 individuals. It was designed to estimate the prevalence of binge-eating disorder, bulimia nervosa, and recurrent binge eating and to explore potential correlates.[5] The 9-item Patient Health Questionnaire, a well-known scale that assesses depression symptoms, was utilized to evaluate SI, since it is known that higher scores are indicative of an increased risk of suicide attempts and deaths.[6] Medical comorbidity was assessed using adapted questions from the Brazilian National Health Survey, along with specific questions about clinical conditions related to eating disorders (e.g., "Has any doctor ever diagnosed you with [disease X]?"). In addition, the 12-item Short Form Health Survey was used to measure physical and mental health aspects of quality of life.[5]

We found an overall SI prevalence of 8.92% (95%CI [7.2-10.5]) in this sample. Further details regarding demographics and psychiatric aspects are being considered for publication elsewhere. SI was associated with the following somatic conditions: chronic headache, chronic muscle pain, and gastroesophageal reflux (Table 1). In addition, individuals experiencing SI reported significantly lower quality of life, impairing both physical and mental health.

Empirical research is increasing our understanding of the relationship between SI and some medical conditions. For example, a recent systematic review found that individuals with migraine and non-migraine headaches (especially cluster and tension headaches) have a higher chance of experiencing SI and attempting suicide.[4] It has also been observed that chronic headaches are more associated with suicidal behavior than episodic headache.[4] While the amount of data is limited compared to

Table 1 Weighted frequencies and means of clinical comorbidities and health-related quality of life according to the presence of suicidal ideation (n=2297)

	Suicidal ideation						
	Present (n=227)			Not present (n=2070)			
Variable	n	%	95%CI	n	%	95%CI	p*
Arterial hypertension	46	17.6	9.7-25.5	481	20.0	17.6-22.3	0.59
Diabetes	19	4.7	1.9-7.5	153	6.4	4.6-8.2	0.36
Heart disease†	18	6.3	2.1-10.5	108	4.8	3.7-5.8	0.44
Stroke	6	2.4	0.0-4.9	31	1.4	0.7-2.0	0.32
Asthma	22	10.6	5.4-15.9	154	6.7	5.0-8.3	0.10
Arthritis	11	4.7	1.1-8.3	118	4.2	3.1-5.3	0.80
Spine problems‡	46	19.9	12.3-27.4	372	16.5	13.7-19.4	0.32
WMSD§	8	1.9	0.4-3.5	62	3.1	2.0-4.3	0.26
Chronic headache	**49**	**23.6**	**16.6-30.6**	**260**	**11.0**	**9.2-12.7**	**<0.0001**
Chronic muscle pain	**57**	**27.8**	**19.3-36.3**	**329**	**14.2**	**11.9-16.4**	**0.0002**
Fibromyalgia	3	0.7	0.0-1.4	21	1.0	0.4-1.6	0.56
Gastroesophageal reflux	**22**	**8.8**	**4.0-13.6**	**83**	**3.4**	**2.4-4.3**	**0.0005**
Irritable bowel syndrome	3	1.2	0.0-2.8	20	1.0	0.4-1.7	0.84
	Mean	SE	95%CI	Mean	SE	95%CI	p**
Health-related quality of life							
Physical health	50.3	1.1	48.1-52.5	54.0	0.2	53.6-54.4	**0.0011**
Mental health	34.6	1.1	32.4-36.8	47.5	0.3	46.9-48.0	**<0.0001**
Overall	84.9	1.8	81.4-88.4	101.5	0.4	100.7-102.2	**<0.0001**

* Chi-square test; ** t-test
† Heart disease (myocardial infarction, angina, heart failure, or other).
‡ Spine problems such chronic back or neck pain, lumbago, sciatic pain, vertebra, or disc trouble.
§ WMSD: Work-related musculoskeletal disorders.

high-income countries, the association between chronic pain and SI is well-known, even when accounting for psychiatric comorbidities.[3] Although most research on chronic pain focuses on back/neck pain and chronic migraines, it seems that people with medically unexplained pain are more likely to report suicidal behavior than individuals whose pain has a clear medical cause.[7] The association between gastroesophageal reflux and SI has been less studied than that between SI, chronic pain, and headache. A meta-analysis indicates a likely bidirectional causal relationship between anxiety/depression and gastroesophageal reflux disease, which could be an underlying mechanism for the association we found between gastroesophageal reflux and SI.[8] The use of proton pump inhibitors to treat gastroesophageal reflux appears to be associated with both SI and depression, which could also explain this finding.[9]

Our findings presented in this letter provide valuable insights into the currently limited literature regarding the association between SI and medical comorbidities in a middle-income population. Future research should further explore this association, considering the high community prevalence of medical conditions such as chronic headache, chronic muscle pain, and gastroesophageal reflux. Shedding light on this problem can raise awareness among health care professionals about the need to address SI in patients in clinical settings and could help governments develop strategies and policies to improve medical care for this population.

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Submitted Feb 23 2025, accepted Mar 28 2025.

Acknowledgements

PH has received sessional fees and lecture fees from the Australian Medical Council, Therapeutic Guidelines publication and New South Wales Institute of Psychiatry; she has also received research support from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), National Health and Medical Research Council (NHMRC), and the Australian Research Council (ARC); she is chair of the National Eating Disorders Collaboration in Australia (2019-). JCA has received a research grant from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq).

Disclosure

The overall project received financial support from the Investigator Initiated Research Program of Takeda Pharmaceuticals. The funding organization did not participate in any part of the study (design, conduction, or the collection, management, analysis, or interpretation of the data). Manuscript preparation, review, approval, and the decision to submit for publication were also independent from the funding organization.

PH has received royalties from Hogrefe and Huber, McGraw Hill Education, and Blackwell Scientific Publications; and is a consultant to Takeda Pharmaceuticals. JCA has received research grants, consultancy fees, and advisory board fees from Takeda Pharmaceuticals; and receives/has received royalties/honoraria from Artmed Panamericana Editora. The other authors report no conflicts of interest.

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CEFM: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – review & editing.
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Handling Editor: João Castaldelli-Maia

How to cite this article: Gonçalves WS, Moraes CEF, Sichieri R, Hay P, Appolinario JC. Suicidal ideation and medical comorbidity: a hidden problem. Braz J Psychiatry. 2025;47:e20254188. http://doi.org/10.47626/1516-4446-2025-4188

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