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The *Jornal Brasileiro de Psiquiatria*: A Bibliometric Survey of the one hundred most cited articles in the last 15 years

Jornal Brasileiro de Psiquiatria: *Uma Pesquisa Bibliométrica sobre os 100 artigos mais citados nos últimos 15 anos*

ABSTRACT

Objective: Bibliometrics is a group of statistical and mathematical methods employed to measure and analyze the quantity and the quality of scientific articles, books, and other forms of publications. The objective of the present study was to conduct a bibliometric analysis of the *Jornal Brasileiro de Psiquiatria* (JBP) by listing its 100 most highly cited articles in the scientific literature and identifying their main characteristics in terms of authorship and research topics and design. **Methods:** The 100 top-cited references in the JBP were identified through a search with Google Scholar. The main author, last author, corresponding author, the total number of authors, gender of the authors, year of publication, research institution, geographic origin, language, and the research design and subject of each reference were recorded and analyzed. **Results:** A marked increase in the number of citations in the last 15 years, a relatively balanced distribution of publications among the Brazilian states and research centers, absence of gender bias among authors, and a varied range of published topics suggest a good current editorial performance by the JBP. Relative lack of systematic reviews and longitudinal studies, dearth of articles published in the English language, and modest participation of foreign authors were points requiring improvement. **Conclusion:** The present study suggests that a survey of the 100 most cited articles in the JBP can provide a historical overview of the progress of this journal, as well as highlight the main obstacles, constraints, and challenges faced by its editors and authors.

KEYWORDS

Bibliometrics, bibliometric analysis, bibliographic databases, periodicals as topic, gender bias, publication bias.

RESUMO

Objetivo: Bibliometria é um grupo de métodos estatísticos e matemáticos empregados para medir e analisar a quantidade e a qualidade de artigos científicos, livros e outras formas de publicações. O objetivo do presente estudo foi realizar uma análise bibliométrica do *Jornal Brasileiro de Psiquiatria* (JBP), relacionando seus 100 artigos mais citados na literatura científica e identificando suas principais características em termos de autoria e questões de pesquisa e delineamento experimental. **Métodos:** As 100 referências mais citadas no JBP foram identificadas por meio de uma busca no Google Scholar. Foram registradas e analisadas as seguintes informações: autor principal, último autor, autor correspondente, número total de autores, gênero dos autores, ano de publicação, instituição de pesquisa, origem geográfica e idioma de cada referência e seu tema de investigação e delineamento metodológico. **Resultados:** O aumento acentuado no número de citações nos últimos 15 anos, a boa distribuição das publicações entre os estados e centros de pesquisa brasileiros, a ausência de viés de gênero entre os autores e a variada gama de tópicos publicados sugerem um bom desempenho editorial atual do JBP. A relativa falta de revisões sistemáticas e estudos longitudinais, os poucos artigos publicados em inglês e a pequena participação de autores estrangeiros são pontos que requerem melhorias. **Conclusão:** O presente estudo sugere que o levantamento dos 100 artigos mais citados no JBP pode fornecer um panorama histórico da evolução dessa revista, bem como destacar os principais obstáculos, restrições e desafios enfrentados por seus editores e autores.

PALAVRAS-CHAVE

Bibliometria, análise bibliométrica, bases de dados bibliográficas, periódicos como assunto, viés de gênero, viés de publicação.

INTRODUCTION

Bibliometrics is a group of statistical and mathematical methods employed to measure and analyze the quantity and the quality of scientific articles, books, and other forms of publications[1]. In the scientific field, it is customarily considered that the number of times a published article is cited reflects how important that study is within its discipline[2-4]. Evaluating the most cited articles is one of the key strategies currently used to monitor influential scientific research. Identifying the most highly cited articles and determining the characteristics that make them citable can provide the scientific community with valuable information[5].

Bibliometric analysis has many relevant implications, such as identifying which research areas are most influential, helping the researchers understand what makes a scientific contribution significant for their area, finding the authors who have most contributed to the field, and highlighting regional differences, among others. This data set can ultimately provide an overview of the trends and directions that a given area has been following in the recent past and is likely to follow in the future[6-10]. Recently, several studies have attempted to identify the most relevant or influential articles in areas as diverse as terrorism[11], neuroscience[12], transplantation[13], astronomy[14], and vaccines[15] by listing the 100 top-cited articles on each specific topic and conducting a bibliometric analysis.

The *Jornal Brasileiro de Psiquiatria* (JBP) is one of the most traditional psychiatric journals in Brazil, being published uninterruptedly since 1938 by the Institute of Psychiatry (IPUB) of the Universidade Federal do Rio de Janeiro (UFRJ). The JBP is indexed in the Scopus, Google Scholar, SciELO, PsychINFO, and other scientific journals search and indexing databases. However, it is still not indexed in the two most important citation databases, ISI of Web Science and PubMed. This fact limits its scientific influence, which is not commensurate with its historical role.

The main objective of the present study was to conduct a bibliometric analysis of the *Jornal Brasileiro de Psiquiatria* by listing its 100 most highly cited articles in the scientific literature and identifying their main characteristics in terms of authorship and research issues and design. It is expected that these observations will highlight the main strengths and weaknesses of the scientific literature published in the JBP and will guide editors and authors in their search for excellence.

METHODS

The 100 most cited psychiatric articles published in the *Jornal Brasileiro de Psiquiatria* were identified on January 6th, 2021, using the Google Scholar. Other searching tools, such as Scopus or ISI Web of Science, tend to underestimate the impact of the authors' academic citation by counting only the citations in the scientific journals indexed in their base. We opted instead for using Google Scholar, a free online reference indexing system made available by Google, which has a much larger scope of indexing academic sources[16]. Google Scholar now represents a major competitor for other databases in the field of bibliometrics and citation analysis since it provides extensive coverage of books, theses, dissertations, preprints, technical and periodical reports[17,18]. Google Scholar displays search matches in approximately descending order of citation counts, but some inconsistencies in that ordering impose the need of checking and manually ordering the data to organize the collected information[17]. Therefore, to ensure the correct identification of the 100 most cited articles, we checked the citation count of the 243 most cited references in 100 sequential pages shown by Google Scholar using the query "*Jornal Brasileiro de Psiquiatria.*"

The 100 top-cited references were classified by the decreasing number of citations and rest was discarded. The main author, last author, corresponding author, the total number of authors, gender of the authors, year of publication, research institution, geographic origin, language, the research design and the subject of each of the hundred top-cited references were recorded. The place of origin and institution were defined based on the address of the first author. The articles were divided into two categories, "review articles," which could be systematic and non-systematic, and "original studies," which were classified as cross-sectional clinical studies, validation studies (psychometry), randomized clinical trials, longitudinal studies, case reports, and opinion pieces. Finally, we looked at the mental disorders, pathological behaviors, and impaired functional status that were investigated, which we classified as follows: schizophrenia, mood disorders, suicide, anxiety, professional burnout, social phobia, sleep and sleep disorders, feeding and eating disorders, body image, drug dependence, impulse control disorders, internet addiction disorder, cognitive changes, dementia, and quality of life.

RESULTS

The number of citations for the 100 most highly cited articles in the JBP on January 6th, 2021, according to Google Scholar, ranged from 45 to 241 (Table 1).

The 23 most-cited articles were cited, each one more than a hundred times, and the four most-cited articles were cited each one more than 200 times. The years of publication of the 100 most cited articles ranged from 1983 to 2017. In 10 years only – from 2005 to 2015 – we found the largest proportion of top-cited publications: 80 articles among the 100 most cited ones (Figure 1). The average number of citations per article in the list was 83.84.

Table 1. Citation ranking of the 100 most-cited articles published by the *Jornal Brasileiro de Psiquiatria* according to the Google Scholar

Rank	Article	Citations
1	Bosi, M. L., Luiz, R. R., Morgado, C. M., Costa, M. L., & Carvalho, R. J. (2006). Self-perception of body image among nutrition students: a study in the city of Rio de Janeiro. Jornal Brasileiro de Psiquiatria, 55(2), 108-113.	241
2	Gouveia, V. V., Barbosa, G. A., Almeida, H., & Gaião, A. A. (1995). Children's depression inventory-CDI: adaptation study with students of João Pessoa. Jornal Brasileiro de Psiquiatria, 44, 345-349.	239
3	Bandeira, M., Calzavara, M. G. P., & Castro, I. (2008). Estudo de validade da escala de sobrecarga de familiares cuidadores de pacientes psiquiátricos. Jornal Brasileiro de Psiquiatria, 57(2), 98-104.	228
4	Santos, E. D., & Siqueira, M. D. (2010). Prevalence of mental disorders in the Brazilian adult population: a systematic review from 1997 to 2009. Jornal Brasileiro de Psiquiatria, 59(3), 238-46.	211
5	Alvarenga, M. D. S., Philippi, S. T., Lourenço, B. H., Sato, P. D. M., & Scagliusi, F. B. (2010). Body image dissatisfaction in female Brazilian university students. Jornal Brasileiro de Psiquiatria, 59(1), 44-51.	157
6	Machado, D. B., & Santos, D. N. D. (2015). Suicide in Brazil, from 2000 to 2012. Jornal Brasileiro de Psiquiatria, 64(1), 45-54.	156
7	Bosi, M. L. M., Luiz, R. R., Uchimura, K. Y., & Oliveira, F. P. D. (2008). Eating disorders and body image among physical education students. Jornal Brasileiro de Psiquiatria, 57(1), 28-33.	151
8	Carlini, E. A. (2006). A história da maconha no Brasil. Jornal Brasileiro de Psiquiatria, 55(4), 314-317.	151
9	Scherer, F. C., Martins, C. R., Pelegrini, A., Matheus, S. C., & Petroski, E. L. (2010). Body image among adolescents: association with sexual maturation and symptoms of eating disorders. Jornal Brasileiro de Psiquiatria, 59(3), 198-202.	144
10	Torres, G. D. V., Reis, L. A. D., Reis, L. A. D., & Fernandes, M. H. (2009). Quality of life and associated factors in functionally dependent elderly in the hinterland of Northeast Brazil. Jornal Brasileiro de Psiquiatria, 58(1), 39-44.	137
11	Pietro, D., & Tavares, M. (2005). Risk factors for suicide and suicide attempt: incidence, stressful events and mental disorders. Jornal Brasileiro de Psiquiatria, 54(2), 146-54.	136
12	Botega, N. J., Pondé, M. P., Medeiros, P., Lima, M. G., & Guerreiro, C. A. M. (1998). Validação da escala hospitalar de ansiedade e depressão (HAD) em pacientes epilépticos ambulatoriais. Jornal Brasileiro de Psiquiatria, 47(6), 285-289.	130
13	Ribeiro, L. A., Sanchez, Z. M., & Nappo, S. A. (2010). Strategies developed by crack users to deal with the risks resulting from the consumption. Jornal Brasileiro de Psiquiatria, 59(3), 210-218.	125
14	Aguiar, S. M., Vieira, A. P. G. F., Vieira, K. M. F., Aguiar, S. M., & Nóbrega, J. O. (2009). Prevalence of stress symptoms among medical students. Jornal Brasileiro de Psiquiatria, 58(1), 34-38.	121
15	Cavestro, J. M., & Rocha, F. L. (2006). Depression prevalence among university students. Jornal Brasileiro de Psiquiatria, 55(4), 264-7.	121
16	Fiorotti, K. P., Rossoni, R. R., Borges, L. H., & Miranda, A. E. (2010). Common mental disorders in medical students: Prevalence and associated factors. Jornal Brasileiro de Psiquiatria, 59(1), 17-23.	119
17	Converso, M. E. R., & Iartelli, I. (2007). Analysis and characterization of functional capacity and mental state in residents in old folk s home. Jornal Brasileiro de Psiquiatria, 56(4), 267-272.	118
18	Malloy-Diniz, L. F., Mattos, P., Leite, W. B., Abreu, N., Coutinho, G., Paula, J. J. D., ... & Fuentes, D. (2010). Translation and cultural adaptation of Barratt Impulsiveness Scale (BIS-11) for administration in Brazilian adults. Jornal Brasileiro de Psiquiatria, 59(2), 99-105.	116
19	Fonseca, F. D. C. A., Coelho, R. Z., Nicolato, R., Malloy-Diniz, L. F., & Silva Filho, H. C. D. (2009). The influence of emotional factors on the arterial hypertension. Jornal Brasileiro de Psiquiatria, 58(2), 128-134.	113
20	Vidal, C. E. L., Bandeira, M., & Gontijo, E. D. (2008). Psychiatric reform and assisted residential services. Jornal Brasileiro de Psiquiatria, 57(1), 70-79.	113
21	Araújo, R. B., da Silva Oliveira, M., Pedroso, R. S., Miguel, A. C., & de Castro, M. G. T. (2008). Craving and chemical dependence: concept, evaluation and treatment. Jornal Brasileiro de Psiquiatria, 57(1), 57-3.	105
22	Jatobá, J. D., & Bastos, O. (2007). Depression and anxiety in adolescents from public and private schools. Jornal Brasileiro de Psiquiatria, 56(3), 171-179.	104
23	Dunker, K. L. L., Fernandes, C. P. B., & Carreira Filho, D. (2009). Socioeconomic influence on eating disorders risk behaviors in adolescents. Jornal Brasileiro de Psiquiatria, 58(3), 156-161.	102
24	Maciel, A. C. C., & Guerra, R. O. (2006). Prevalence and associated factors of depressive symptomatology in elderly residents in the Northeast of Brazil. Jornal Brasileiro de Psiquiatria, 55(1), 26-33.	97
25	Floriano, P. D. J., & Dalgalarrondo, P. (2007). Saúde mental, qualidade de vida e religião em idosos de um Programa de Saúde da Família. Jornal Brasileiro de Psiquiatria, 56, 162-170.	97
26	Rocha, V. M., & Fernandes, M. H. (2008). Quality of life elementary school teachers: a perspective for health promotion of worker. Jornal Brasileiro de Psiquiatria, 57, 23-7.	97
27	Viana, G. N., Zenkner, F. D. M., Sakae, T. M., & Escobar, B. T. (2008). Prevalence of suicide in the South of Brazil, 2001-2005. Jornal Brasileiro de Psiquiatria, 57, 38-43.	95
28	Ronzani, T. M., & Furtado, E. F. (2010). Estigma social sobre o uso de álcool. Jornal Brasileiro de Psiquiatria, 59(4), 326-332.	95
29	De Marco, P. F., Cítero, V. D. A., Moraes, E., & Nogueira-Martins, L. A. (2008). Job impact on mental health workers: minor psychiatric disorders, quality of life and job satisfaction. Jornal Brasileiro de Psiquiatria, 57(3), 178-183.	94

Rank	Article	Citations
30	Gonçalves, T. D., Barbosa, M. P., Rosa, L. C. L. D., & Rodrigues, A. M. (2008). Comportamento anoréxico e percepção corporal em universitários. Jornal Brasileiro de Psiquiatria, 57(3), 166-170.	93
31	Lima, M. T. D. R., Silva, R. D. S., & Ramos, L. R. (2009). Depressive symptomatology and its associated factors in an urban cohort of elderly. Jornal Brasileiro de Psiquiatria, 58(1), 1-7.	90
32	Gomes, M., Palmini, A., Barbirato, F., Rohde, L. A., & Mattos, P. (2007). Knowledge about attention-deficit hyperactivity disorder in Brazil. Jornal Brasileiro de Psiquiatria, 56(2), 94-101.	89
33	Elbreder, M. F., Laranjeira, R., Siqueira, M. M. D., & Barbosa, D. A. (2008). Profile of female alcohol users in specialized outpatient clinic. Jornal Brasileiro de Psiquiatria, 57(1), 9-15.	87
34	Peixoto, C., Prado, C. H. D. O., Rodrigues, C. P., Cheda, J. N. D., Mota, L. B. T. D., & Veras, A. B. (2010). Impact of clinical and socio-demographic profiles in treatment adherence of patients attending a day hospital for alcohol and drug abuse. Jornal Brasileiro de Psiquiatria, 59(4), 317-321.	87
35	Bandeira, M., Pitta, A. M. F., & Mercier, C. (2000). The Brazilian mental health services: patients. Jornal Brasileiro de Psiquiatria, 8, 293-300.	87
36	Miranda, V. P. N., Filgueiras, J. F., Neves, C. M., Teixeira, P. C., & Ferreira, M. E. C. (2012). Body dissatisfaction in college students of different study areas. Jornal Brasileiro de Psiquiatria, 61(1), 25-32.	85
37	Souza, V. S., Alves, M. S., Silva, L. A., Lino, D. C. S. F., Nery, A. A., & Casotti, C. A. (2011). Suicide attempts and suicide mortality in a countryside Bahia city. Jornal Brasileiro de Psiquiatria, 60 (4): 294-300.	81
38	Pereira, D. S., Souza, R. S., Buaiz, V., & Siqueira, M. M. (2008). Psychoactive substance use among medicine students from Espirito Santo Federal University. Jornal Brasileiro de Psiquiatria, 57(3), 188-95.	78
39	Thiengo, D. L., Cavalcante, M. T., & Lovisi, G. M. (2014). Prevalence of mental disorders among children and adolescents and associated factors: a systematic review. Jornal Brasileiro de Psiquiatria, 63(4), 360-372.	78
40	Hoffmann, E. J., Ribeiro, F., Farnese, J. M., & Lima, E. W. B. (2010). Depressive symptoms and associated factors among elders dwelling in a community in the North of Minas Gerais state, Brazil. Jornal Brasileiro de Psiquiatria, 59(3), 190-197.	77
41	Cantilino, A., Zambaldi, C. F., Albuquerque, T. L. C. D., Paes, J. A., Montenegro, A. C. P., & Sougey, E. B. (2010). Postpartum depression in Recife-Brazil: prevalence and association with bio-socio-demographic factors. Jornal Brasileiro de Psiquiatria, 59(1), 1-9.	77
42	Neves, M. C. C., & Dalgalarrondo, P. (2007). Self-referred mental disorders in university students. Jornal Brasileiro de Psiquiatria, 56(4), 237-244.	76
43	Paula, J. D. A. D., Roque, F. P., & Araújo, F. S. D. (2008). Quality of life of Alzheimer's disease caregivers' people. Jornal Brasileiro de Psiquiatria, 57(4), 283-287.	75
44	Romano, F., & Elkis, H. (1996). Translation and adaptation of the Brief Psychiatric Rating Scale-anchored version (BPRS-A). Jornal Brasileiro de Psiquiatria, 45(1), 43-9.	74
45	Almeida, A. D. M., Godinho, T. M., Bitencourt, A. G. V., Teles, M. S., Silva, A. S., Fonseca, D. C., ... & Oliveira, I. R. D. (2007). Common mental disorders among medical students. Jornal Brasileiro de Psiquiatria, 56(4), 245-251.	74
46	Bandeira, M., Calzavara, M. G. P., & Varella, A. A. B. (2005). Family burden scale for caregivers of psychiatric patients: Transcultural adaptation to Brazil (FBIS-BR). Jornal Brasileiro de Psiquiatria, 54, 206-214.	74
47	Versiani, M., Nardi, A. E., Figueira, I., Mendlowicz, M., & Marques, C. (1997). Double-blind placebo controlled trial with bromazepam in social phobia. Jornal Brasileiro de Psiquiatria, 46(3), 167-171.	72
48	Araújo, R. S., & Pondé, M. P. (2006). Efficacy of memantine in moderate to severe Alzheimer disease. Jornal Brasileiro de Psiquiatria, 55(2), 148-153.	72
49	Álvarez, A. M. A. (2007). Risk factors that favor the relapse in alcoholism. Jornal Brasileiro de Psiquiatria, 56(3), 188-193.	71
50	Bosi, M. L. M., Uchimura, K. Y., & Luiz, R. R. (2009). Eating behavior and body image among psychology students. Jornal Brasileiro de Psiquiatria, 58(3), 150-155.	70
51	Noto, A. R., Moura, Y. G., Nappo, S. G., Galduroz, J. C. F., & Carlini, E. A. (2002). Admissions for mental and behavioural disorders due to the use of psychoactive substances: a national epidemiological survey between 1988 and 1999. Jornal Brasileiro de Psiquiatria, 51(2), 113-22.	69
52	Miranda, V. P. N., Conti, M. A., Bastos, R., & Ferreira, M. E. C. (2011). Insatisfação corporal em adolescentes brasileiros de municípios de pequeno porte de Minas Gerais. Jornal Brasileiro de Psiquiatria, 60(3), 190-197.	68
53	Bandeira, M., Calzavara, M. G. P., & Castro, I. (2008). Burden of care in relatives of psychiatric patients: Validity study of the Family Burden Interview Scale. Jornal Brasileiro de Psiquiatria, 57(2), 98-104.	68
54	Suzuki, F. T. I., Matias, M. V., Silva, M. T. A., & Oliveira, M. P. M. T. D. (2009). The use of video, computer and internet games by a sample of college students from the University of São Paulo. Jornal Brasileiro de Psiquiatria, 58(3), 162-168.	68
55	Mardegan, P. S., Souza, R. S. D., Buaiz, V., & Siqueira, M. M. D. (2007). Psychoactive substance use between students of the nursing. Jornal Brasileiro de Psiquiatria, 56(4), 260-266.	68
56	Horta, R. L., Horta, B. L., & Pinheiro, R. T. (2006). Drugs: families that protect and that expose teenagers to risk. Jornal Brasileiro de Psiquiatria, 55(4), 268-72.	67
57	Carvalho, P. H. B., Filgueiras, J. F., Neves, C. M., Coelho, F. D., & Ferreira, M. E. C. (2013). Body-checking, inappropriate eating attitudes and body image dissatisfaction among young students. Jornal Brasileiro de Psiquiatria, 62(2), 108-114.	64
58	Lira, A. G., Ganen, A. D. P., Lodi, A. S., & Alvarenga, M. D. S. (2017). Social media consume, media influence and body dissatisfaction among Brazilian female adolescents. Jornal Brasileiro de Psiquiatria, 66(3), 164-171.	64

Rank	Article	Citations
59	Bernardo, M. P. S. L., Pereira, É. F., Louzada, F. M., & D'Almeida, V. (2009). Sleep duration in adolescents of different socioeconomic status. Jornal Brasileiro de Psiquiatria, 58(4), 231-237.	63
60	Sousa, R. L. D., Medeiros, J. G. M. D., Moura, A. C. L. D., Souza, C. L., & Moreira, I. F. (2007). Validade e fidedignidade da Escala de Depressão Geriátrica na identificação de idosos deprimidos em um hospital geral. Jornal Brasileiro de Psiquiatria, 56(2), 102-107.	63
61	Tockus, D., & Gonçalves, P. S. (2008). Detection of drugs abuse among Medicine students in a private university. Jornal Brasileiro de Psiquiatria, 57(3), 184-187.	62
62	Ludermir, A. B. (2005). Associação dos transtornos mentais comuns com a informalidade das relações de trabalho. Jornal Brasileiro de Psiquiatria, 54(3), 198-204.	62
63	Duncan, M. T. (2006). Assessment of normative data of Stroop test performance in a group of elementary school students in Niterói. Jornal Brasileiro de Psiquiatria, 55, 42-48.	61
64	Bandeira, M., Pitta, A. M. F., & Mercier, C. (1999). The WHO mental health services satisfaction and burden scales: psychometric qualities of the Brazilian versions. Jornal Brasileiro de Psiquiatria, 48, 233-244.	61
65	Gouveia, V. V., Barbosa, G. A., de Oliveira, A. E., & Carneiro, M. B. (2005). Measuring life satisfaction among physicians in Brazil. Jornal Brasileiro de Psiquiatria, 54(4), 298-305.	61
66	Gouveia, V. V., Barbosa, G. A., de Oliveira, A. E., & Carneiro, M. B. (2005). Measuring life satisfaction among physicians in Brazil. Jornal Brasileiro de Psiquiatria, 54(4), 298-305.	61
67	Zeni, T. C. D., &Araujo, R. B. (2011). Relationship between craving for tobacco and craving for crack in patients hospitalized for detoxification. Jornal Brasileiro de Psiquiatria, 60(1), 28-33.	60
68	de Almeida-Filho, N., Souza Santana, V., & Rubim de Pinho, A. (1984). Estudo Epidemiológico dos Transtornos Mentais em uma População de Idosos – Área Urbana de Salvador – BA. Jornal Brasileiro de Psiquiatria, 33(2), 114–120.	59
69	Laus, M. F., Costa, T. M. B., & Almeida, S. S. (2011). Body image dissatisfaction and its relationship with physical activity and body mass index in Brazilian adolescents. Jornal Brasileiro de Psiquiatria, 60(4), 315-320.	58
70	Souza, L. D. D. M., Ores, L., Oliveira, G. T. D., Cruzeiro, A. L. S., Silva, R. A., Pinheiro, R. T., & Horta, B. L. (2010). Suicidal ideation in adolescence: Prevalence and associated factors. Jornal Brasileiro de Psiquiatria, 59(4), 286-292.	58
71	Moraes, P. A. C. D., & Dalgalarrondo, P. (2006). Incarcerated women in São Paulo: mental health and religiosity. Jornal Brasileiro de Psiquiatria, 55(1), 50-56.	58
72	Ramos, G. C. F., Carneiro, J. A., Barbosa, A. T. F., Mendonça, J. M. G., & Caldeira, A. P. (2015). Prevalence of depressive symptoms and associated factors among elderly in northern Minas Gerais: a population-based study. Jornal Brasileiro de Psiquiatria, 64(2), 122-31.	58
73	Versiani, M., Reis, R., & Figueira, I. (2000). Diagnóstico do transtorno depressivo na infância e adolescência. Jornal Brasileiro de Psiquiatria, 49(10-12), 367-382.	58
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84	Cesar, B. A. L. (2006). Alcoholism in women: a study of its peculiarities. Preliminary results. Jornal Brasileiro de Psiquiatria, 55(3), 208-211.	51
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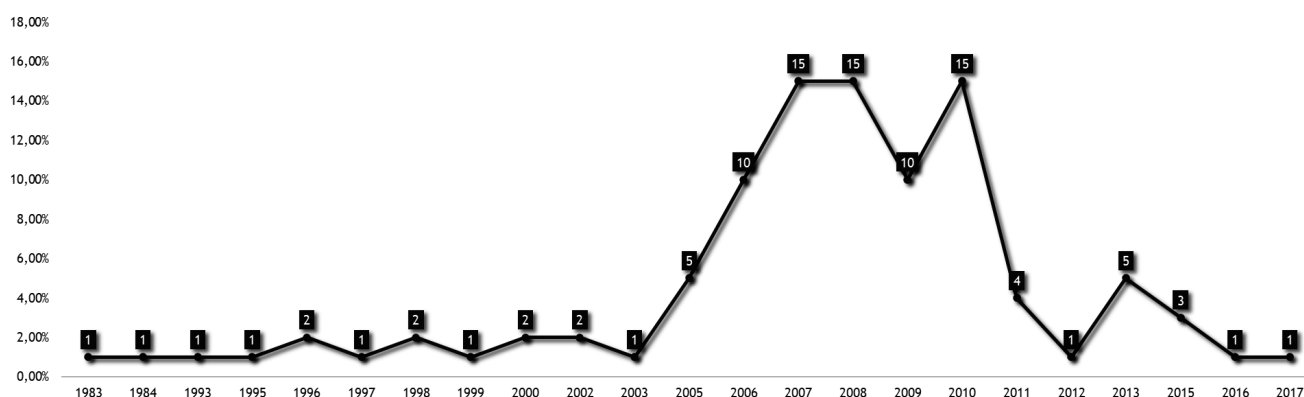| Rank	Article	Citations
87	Bandeira, M., Freitas, L. C., & Carvalho Filho, J. G. T. D. (2007). Assessment of common mental disorders in the Programa de Saúde da Família's users. Jornal Brasileiro de Psiquiatria, 56(1), 41-47.	50
88	Carvalho, C. N., Melo-Filho, D. A. D., Carvalho, J. A. G. D., & Amorim, A. C. G. D. (2013). Prevalence and factors associated with common mental disorders in medical and multiprofessional health residents. Jornal Brasileiro de Psiquiatria, 62(1), 38-45.	50
89	Leal, G. V. D. S., Philippi, S. T., Polacow, V. O., Cordás, T. A., & Alvarenga, M. D. S. (2013). What is adolescents' eating disorder risk behavior? Jornal Brasileiro de Psiquiatria, 62(1), 62-75.	49
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96	Rodrigues-Neto, J. F., Figueiredo, M. F. S., Faria, A. A. D. S., & Fagundes, M. (2008). Common mental disorders and the use of complementary and alternative medicine: population-based survey. Jornal Brasileiro de Psiquiatria, 57(4), 233-239.	47
97	Botti, N. C. L., Castro, C. G. D., Silva, M. F. D., Silva, A. K., Oliveira, L. C. D., Castro, A. C. H. O. A. D., & Fonseca, L. L. K. (2010). Prevalência de depressão entre homens adultos em situação de rua em Belo Horizonte. Jornal Brasileiro de Psiquiatria, 59(1), 10-16.	47
98	Bandeira, M., Mercier, C., Perreault, M., Libério, M. M. A., & Pitta, A. M. F. (2002). Escala de avaliação da satisfação de familiares com os serviços de saúde mental: SATIS-BR.). Assessment of common mental disorders in the Programa de Saúde da Família's users. Jornal Brasileiro de Psiquiatria, 56(1), 41-47, 51(3), 153-66.	46
99	Busnello, E., Lima, B., & Bertolote, J. M. (1983). Aspectos Interculturais de Classificação e Diagnóstico – Tópicos Psiquiátricos e Psicossociais na Vila São José do Murialdo. Jornal Brasileiro de Psiquiatria, 32(4), 207-210.	46
100	Dratcu, L., & Lader, M. (1993). Ansiedade-conceito, classificação e biologia: uma interpretação contemporânea da literatura. Jornal Brasileiro de Psiquiatria, 42(1), 19-32.	45

Figure 1. Year of publication of the 100 most cited articles in the JBP.

São Paulo and Minas Gerais were the states with the largest number of articles in this list, 28 and 20 respectively, followed by the Rio Grande do Sul and Espírito Santo with eight. Still, in general, the articles were well distributed by the states. Three articles had the first author's addresses in foreign cities, namely Montreal, Havana, and London (Table 2).

The distribution of research centers follows, as expected, the distribution by states, with São Paulo research institutions in prominent positions, particularly the Universidade Federal de São Paulo (Unifesp) and the Universidade de São Paulo (USP). There were no highly-cited articles originating from research institutions in the northern region of Brazil (Figure 2).

The number of authors per article ranged from one to 13, with an average of 3.65. Six articles had a single author. The proportion of female authors exceeded that of male ones, for both the categories of the first authors and the total number of authors (Figure 3).

We divided the articles into two large groups, review articles, and original articles. Despite the large number of original studies, these were entirely cross-sectional, with no cohort study found. There were 14 review articles: three systematic reviews (Table 1: articles 4, 39 and 43) and eleven non-systematic reviews (Table 1: articles 19-21, 28, 44, 48, 66, 83, 89, 94 and 100). Portuguese was the language of publication for most studies. Only eight articles were published in English (Table 1: articles 18, 35, 41, 45, 47, 50, 69 and 90).

Table 2. States ranked according to the number of top-cited studies published in the *Jornal Brasileiro de Psiquiatria*

States	Articles
São Paulo	28
Minas Gerais	20
Rio Grande do Sul	8
Espírito Santo	8
Rio de Janeiro	7
Pernambuco	7
Bahia	5
Foreign countries	3
Ceará	3
Paraíba	3
Santa Catarina	2
Paraná	2
Distrito Federal	1
Rio Grande no Norte	1
Mato Grosso do Sul	1
Alagoas	1

Figure 2. Number of articles per research center.

Among the various mental disorders, pathological behaviors and impaired functional status investigated in the articles, alcohol and drug dependence; feeding and eating disorders and body image disturbances; mental health issues; quality of life; and major depression were, in that order, those with the largest proportion of studies among the 100 most cited articles in the JBP (Figure 4).

Regarding the studied population, adults of both genders, elderly of both genders, university students of both genders, adolescents of both genders, and epidemiological samples were the five most often studied populations (Figure 5).

DISCUSSION

This study aimed to identify the 100 articles most cited in the *Jornal Brasileiro de Psiquiatria* and highlight the characteristics that made them citable. Although the importance of citation analysis has been hotly debated, we assumed that there is currently no better marker to take as a reference in the bibliometric evaluation.

It was expected that the older articles in the JBP would be more highly cited than the newer ones by the mere fact that, since more time has elapsed since their publication, there would be more possibilities for them to be cited. Nevertheless, we found that 80% of the top-cited articles were published between 2005 and 2015. The lack of highly cited articles after 2016 is understandable due to the short time elapsed since their publication. Citations tend to be scarce during the first years after publication and become more common only three to ten years later[19]. We suggest that the peak in highly cited articles in the period 2005-2015 should then be ascribed to an editorial improvement that the JBP has been experiencing in recent years, with a more rigorous selection of manuscripts and a higher quality of the published articles, which led to an increased number of citations.

Our results indicate that the JBP has been fulfilling its role of being a journal accessible to researchers from different institutions and regions of Brazil, with several states represented among the 100 most cited articles, and within the larger states, several of its research institutions. Although the JBP is published by a research institute of the Universidade
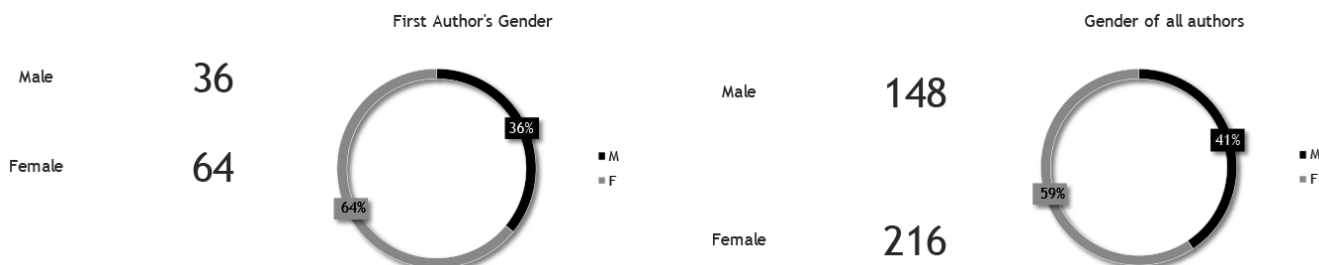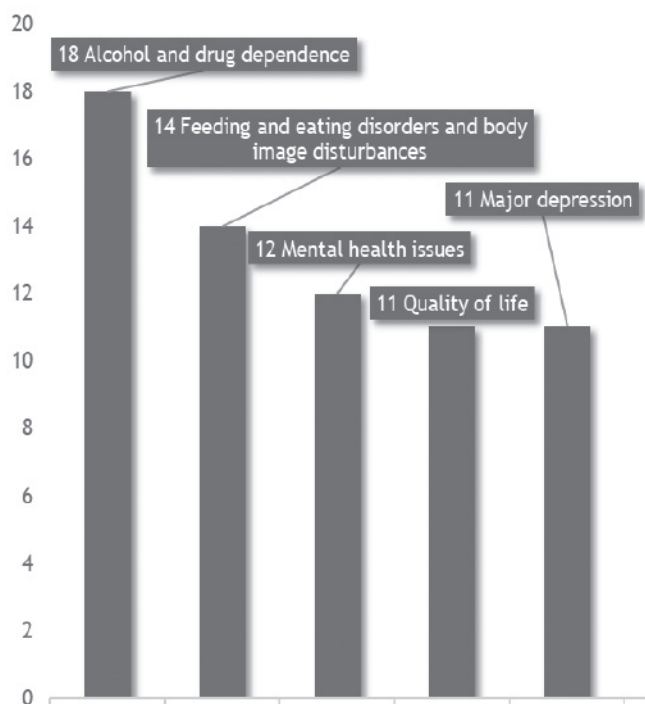

Figure 3. Distribution of authors of top cited articles in the *Jornal Brasileiro de Psiquiatria* by sex.

Figure 4. The five mental or behavioral disorders with more studies published among the 100 top cited articles in the JBP.
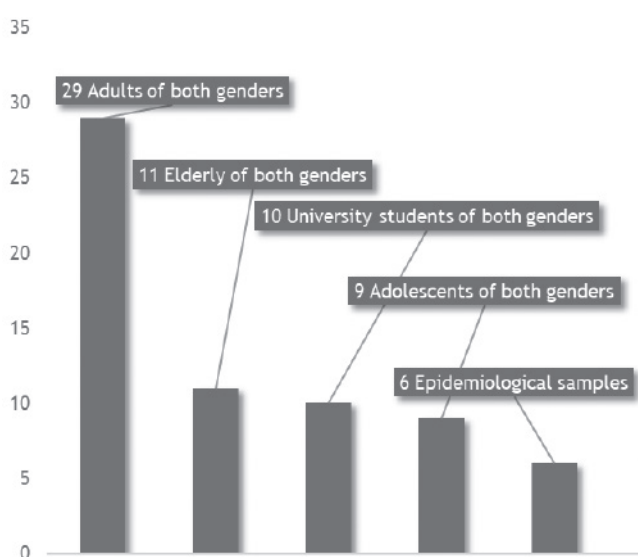

Figure 5. The five more studied populations in the 100 top cited articles in the JBP.

Federal do Rio de Janeiro (UFRJ), this university occupies only the number five ranking position in the list of top published articles in the JBP. This finding suggests that there were no biases toward the manuscripts that originated from the UFRJ and highlights the degree of editorial independence of the JBP editors. On the other side, the list of top-cited articles in the JBP included only three studies from countries other than Brazil. Additionally, only eight articles were published in the English language, limiting the JBP's potential readership. To foster its impact and representativeness, the JBP needs to increase its international projection, and publishing more articles in the English language would be an essential step.

At the regional level, the total absence of articles from the northern region of Brazil among the most cited ones in the JBP is a worrying trend and a significant source of concern. Strategic investment should be made to stimulate research efforts in the states and regions of Brazil with less scientific resources and tradition.

Gender inequality has been observed across medical specialties[20]. Citation-based metrics are systematically used to evaluate the relative scientific merits of a researcher. The probing of gender inequalities in citation impact is currently one of the most critical aspects of the modern bibliometric analysis[21]. The facts that the proportions of female authors exceeded that of male ones for both the first authors and the total number of authors' categories in the list of top-cited articles indicate no gender bias in the JBP publications.

Most articles featured in the top-cited list were original studies (86%). However, they all had a cross-sectional research design. Among the reviews, only three were systematic ones. These two limitations may have contributed to reducing the number of citations per paper. More rigorous screening of the study designs is likely to reverse this untoward trend.

We wondered why topics such as alcohol and drug dependence; feeding and eating disorders and body image disturbances; mental health issues; quality of life; and major depression featured prominently in the list of the top-cited articles in the JBP. We hypothesize that these studies reported the prevalence and characteristics of these disorders in specific populations in Brazil. This type of data may not be particularly enticing for international journals' editors but is potentially highly relevant for Brazilian researchers and health planners.

The present study has several limitations. The main one is that it was based on a Google Scholar search only. However, since the JBP is still no indexed in the ISI Web of Science or the PubMed, there were no other high-level alternatives to complement it. We acknowledge that our findings reflect a reality that can change extremely fast. We, therefore, suggest that comparable studies be conducted every few years to detect and monitor emerging trends. Finally, citation analysis is one among several academic performance metrics and must be corroborated by other methods of analysis.

CONCLUSIONS

The present study suggests that a survey of the 100 most cited articles in the *Jornal Brasileiro de Psiquiatria* can provide a historical overview of the progress of this psychiatric

journal and highlight the main obstacles, constraints, and challenges faced by its editors.

A marked increase in the number of citations in the last 15 years, a good distribution of publications among the Brazilian states and research centers, and various published topics are extremely positive findings. There is, however, much room for improvement, particularly in the study designs, use of the English language, and participation of foreign authors.

INDIVIDUAL CONTRIBUTIONS

Taylor Reis and Márcio Gekker – Study conception and design.

Helena Garcia Maia, Ruth Pires Oliveira and Rafael Queiroz Henriques Almeida – Acquisition of data.

Liliane Vilete and Victoria Mendlowicz – Analysis and interpretation of data.

Mariana Pires da Luz and Alexandre Xavier Gomes de Araújo – Drafting of manuscript.

Mauro Vitor Mendlowicz and William Berger – Critical revision.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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