








Worldwide scientific production on obsessive-compulsive disorders in times of COVID-19 pandemic

Producción científica mundial sobre los trastornos obsesivo-compulsivos en tiempos de la pandemia de COVID-19

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Abstract

Introduction: This study aimed to analyze the scientific production on Obsessive-Compulsive Disorder in times of COVID-19.

Materials and methods: A descriptive, retrospective study was conducted where the unit of analysis was worldwide Obsessive-Compulsive Disorder publications in journals indexed in the Scopus database between January 2020 and October 2021.

Results: The results show that, out of 391 published manuscripts, 61.4% are original. The United States leads the scientific production by country with 24.55%. Australian institutions have produced 16 articles, and 90% of the articles on Obsessive-Compulsive Disorder in times of COVID-19 have been published in Q1 journals.

Conclusions: Scientific production on Obsessive-Compulsive Disorder in times of COVID-19 has been studied in different countries of the world, thus making it possible to learn about progress on this topic and to create policies and lines of research that support the evidence and benefit for the psychological discipline.

Keywords: Scientific production, Obsessive-Compulsive Disorder, COVID-19, Scopus.

Resumen

Introducción: Este estudio tuvo como objetivo analizar la producción científica sobre el Trastorno Obsesivo-Compulsivo en tiempos de COVID-19.

Material y métodos: Se realizó un estudio descriptivo y retrospectivo donde la unidad de análisis fueron las publicaciones mundiales sobre Trastorno Obsesivo-Compulsivo en revistas indexadas en la base de datos Scopus entre enero de 2020 y octubre de 2021.

Resultados: Los resultados muestran que, de los 391 manuscritos publicados, el 61,4% son originales. Estados Unidos lidera la producción científica por países con un 24,55%. Las instituciones australianas han producido 16 artículos, y el 90% de los artículos sobre el Trastorno Obsesivo-Compulsivo en tiempos de COVID-19 han sido publicados en revistas Q1.

Conclusiones: Se ha estudiado la producción científica sobre el Trastorno Obsesivo-Compulsivo en tiempos de COVID-19 en diferentes países del mundo, lo que permite conocer los avances en este tema y crear políticas y líneas de investigación que apoyen la evidencia y el beneficio para la disciplina psicológica.

Palabras clave: Producción científica, Trastorno Obsesivo-Compulsivo, COVID-19, Scopus.



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Introduction

The COVID-19 pandemic has caused a global health crisis¹, and much of the population has been affected psychologically². Thus, since the beginning of 2020, one of the measures taken by public health authorities to contain the outbreak of the new coronavirus (PAHO 2020) has been to implement prevention measures such as social distancing, confinement, use of masks, hand washing, among others³. While it is true that these actions emerged as a strategy to avoid contagion⁴, they may have also become a risk factor for some vulnerable groups, such as those suffering from obsessive-compulsive disorder, better known as OCD⁵

In regard to this disorder, the literature demonstrates that OCD is a neuropsychiatric disorder⁶ and people with OCD usually have persistent unwanted thoughts and impulses, developing excessive and systematic behaviors, such as hand washing or ordering, or mental acts, such as repeating words silently, causing anxiety and psychological discomfort⁷. In this regard, during the COVID-19 pandemic, the health crisis has caused some people to be more susceptible to OCD. For example, some research reports an increase in general symptoms, especially obsessions and compulsions related to contamination⁸ as something that has characterized the beginning of the pandemic has been personal hygiene care due to the widespread fear of contagion⁸. In the same vein, other studies consider that people with OCD worsened their symptoms during the health emergency⁹. Thus, for example, a study concluded, based on longitudinal data in clinical settings, a marked increase in symptoms in 2020 to 65% of patients with OCD¹⁰. Likewise, another study highlights that the worsening effect was immediate in age groups such as children and adolescents¹¹.

These findings reflect the psychological effects intensified by the pandemic in patients with anxiety-related disorders, including OCD, and consequently, the need to intervene psychologically with evidence-based strategies for fear-focused issues, which will continue during and after the COVID-19 pandemic^{12,13}.

In light of this situation⁵, report that despite the increased research on the effect of COVID-19 on people with OCD, there are still limitations to the studies conducted so far, and there are still huge knowledge gaps. Therefore, the authors of this study deem it appropriate to address the topic through a bibliometric analysis, which is characterized by knowing the trends in global research on combinatorial optimization mechanisms that helps researchers identify and assist in the relevant issues regarding an expanding and transforming research area¹⁴.

Taking into account the effect of the COVID-19 pandemic is still latent, specialists foresee psychiatric and neuropsychiatric problems following illness from SARS-CoV infections¹⁵. Consequently, it is vital to identify relevant issues concerning the post-pandemic impact on people with obsessive-compulsive disorder, which, as seen in the previous analysis, is an expanding and transforming research

area. Thus, the study aimed to describe the characteristics of scientific publications on obsessive-compulsive disorder in times of COVID-19 with authors affiliated to institutions in all countries of the world.

Materials and methods

Study design: A descriptive, retrospective study that considered as the unit of analysis the publications on Obsessive-Compulsive Disorder in times of pandemic in journals indexed in Scopus from January 2020 to October 2021 and whose authors are affiliated to global institutions.

Data collection: Scopus includes more than 40,804 journals in science, technology, social sciences, arts, humanities, and medicine. It was decided to use this database as it includes a large number of journals and has a rigorous journal selection process, which allows collection of the most relevant studies on the topic.

Data analysis: The search included all published and indexed articles, using the fields Article Title, Abstracts, Keywords, using in the search terms the word “obsessive-compulsive disorder” OR “obsessive-compulsive responses” OR “obsessive-compulsive symptomatology” OR “obsessive-compulsive behavior” OR “OCD” OR “compulsive behavior” OR “obsessive behavior” OR “obsessive disorder” OR “compulsive disorder” OR “compulsive disorder” and its relation with the terms: “2019-nCoV” OR “SARS-CoV-2” OR “2019 novel coronavirus” OR “Covid-19” OR “Coronavirus disease 2019”. With the extracted documents, a database was organized in Microsoft Excel that included the following data: name of the signing authors, the title of the publication, type of publication, institutions of affiliation of the signing authors, journal of publication, and country of publication. Finally, a network with the main thematic areas associated with the keywords of the publications was created using the VOSviewer software.

Results

A total of 391 articles published and indexed in Scopus with authors affiliated to institutions worldwide were found. Seven types of publishable papers were included in the analysis. Research articles account for the highest amount of paper production (n=240; 61.4 %) (Table 1).

Table 1. Types of documents in OCD and COVID-19 publications.

Document type	N	%
Research article	240	61.4
Review article	73	18.7
Letters to editor	39	10.0
Notes	19	4.9
Editorials	14	3.6
Conference article	4	1.0
Book chapter	2	0.5
Total	391	100.0

N=Frecuencia; %=Porcentaje.

The United States is the country that contributes with the highest scientific production on OCD, accounting for 24.6% of the world production, followed by the United Kingdom, Italy, and China, countries with more than 30 publications during the evaluation period. (Table 2).

Country	N	%
United States	96	24.55
United Kingdom	49	12.53
Italy	41	10.49
China	37	9.46
Canada	28	7.16
India	26	6.65
Australia	25	6.39
Spain	23	5.88
Iran	17	4.35
Brazil	12	3.07
Other countries	37	3.45

N=Frecuencia; %=Porcentaje.

In terms of productivity by institution, 118 international institutions have participated in the global production on OCD during COVID-19. However, only two have produced ten or more articles. Table 3 presents the results of institutions with a publication frequency of six or more papers, among which institutions from Australia, Italy, United Kingdom, among others, stand out. (Table 3).

Institution	Country	N
Monash University	Australia	16
Sapienza Università di Roma	Italy	10
Università degli Studi di Firenze	Italy	9
University College London	United Kingdom	8
Baylor College of Medicine	United States	7
The University of British Columbia	Canada	7
King's College London	United Kingdom	7
Stanford University	United States	7
University of Cambridge	United Kingdom	7
Universidade Federal do Rio de Janeiro	Brazil	6

N=Frecuencia.

Table 4 lists the most productive journals, among which *Frontiers in Psychiatry* (n=17) stands out. Ninety percent of the journals rank in quartile 1 of the SJR. Scientific production is concentrated in European and North American journals.

Table 5 shows the authors who to date have contributed the highest number of studies on OCD during COVID-19. Of the 391 papers analyzed, Eric Storch is the author with the highest number of publications. Additionally, Vahid Khosravani is the Asian author with the highest production of papers in his region.

The following table lists the seven most cited articles on OCD during COVID-19, with more than 100 citations. They all are research articles and were published in 2020 (Table 6).

Journal	Country	Quartile	Thematic areas	Papers
<i>Frontiers in Psychiatry</i>	Switzerland	Q1	Psychiatry and Mental Health	17
<i>International Journal of Environmental Research and Public Health</i>	Switzerland	Q2	Public Health, Environmental and Occupational Health	14
<i>Psychiatry Research</i>	Ireland	Q1	Psychiatry and Mental Health	14
<i>Journal of Anxiety Disorders</i>	United Kingdom	Q1	Psychiatry and Mental Health	14
<i>Frontiers in Psychology</i>	Switzerland	Q1	Psychology	10
<i>Journal of Obsessive Compulsive and Related Disorders</i>	United Kingdom	Q2	Psychiatry and Mental Health	10
<i>Asian Journal of Psychiatry</i>	United Kingdom	Q2	Psychiatry and Mental Health	7
<i>Journal of Psychiatric Research</i>	United Kingdom	Q1	Psychiatry and Mental Health	7
<i>Irish Journal of Psychological Medicine</i>	United Kingdom	Q2	Psychiatry and Mental Health	6
<i>Psychiatria Danubina</i>	Croatia	Q3	Psychiatry and Mental Health	6

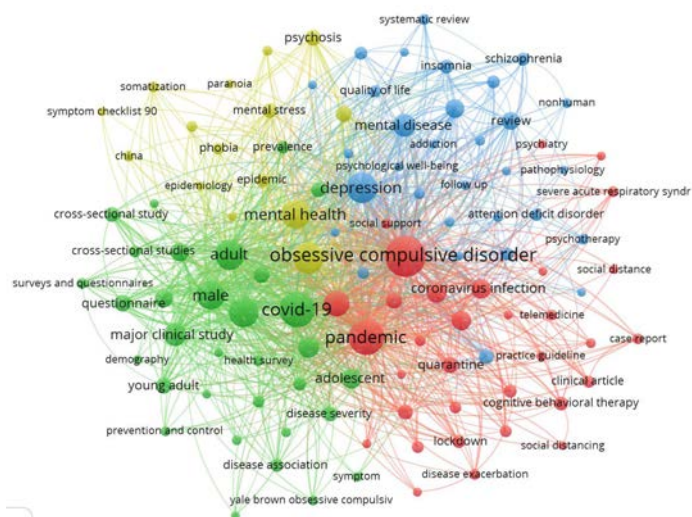
Author	Institution	Country	H Index	Papers
Storch, Eric A.	Baylor College of Medicine	United States	66	7
Chamberlain, Samuel Robin	University of Southampton	United Kingdom	52	6
Fontenelle, Leonardo F.	Monash University	Australia	39	6
Aardema, Frederick	University of Montreal	Canada	28	5
Asmundson, Gordon J.G.	University of Regina	Canada	72	4
Fineberg, Naomi Anne	University of Hertfordshire	United Kingdom	55	4
Khosravani, Vahid	SBUMS Behavioral Science Research Center	Iran	11	4
Marazziti, Donatella	Brain Research Foundation	Italy	43	4
McKay, Dean	Fordham University	United States	44	4
Mucci, Federico	Università degli Studi di Siena	Italy	9	4

Table 6. The most cited articles on OCD and COVID-19

Title	Journal	Document type	Authors	Citations
COVID-19 pandemic and mental health consequences: Systematic review of the current evidence	Brain, Behavior, and Immunity	Research article	Vindegard, N., Benros, M.E.	669
Mental Health and Psychosocial Problems of Medical Health Workers during the COVID-19 Epidemic in China	Psychotherapy and Psychosomatics	Research article	Wen-Rui Zhang, et al.,	483
Psychosocial impact of COVID-19	Diabetes and Metabolic Syndrome: Clinical Research and Reviews	Research article	Souvik Dubeym et al.	424
Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors	Brain, Behavior, and Immunity	Research article	Mazza, M.G, et al	233
Psychological symptoms of ordinary Chinese citizens based on SCL-90 during the level I emergency response to COVID-19	Psychiatry Research	Research article	Tian, F. et al	145
Neurobiology of COVID-19	Journal of Alzheimer’s Disease	Research article	Fotuhi, M., et al	122
COVID 19 and its mental health consequences	Journal of Mental Health	Research article	Kumar, A., Nayar, K.R	112

Figure 1 shows the descriptors with the highest frequency, being obsessive-compulsive disorder with the highest number of occurrences (n=276). The number of word co-occurrences shows the number of publications in which they appear in the selected documents, and the colors shows the keyword groups relatively related to each other according to the strength of association obtained by the VOSviewer program, in addition to the visual difference of clusters. The thematic focus of each group was analyzed using the 134 descriptors in the 391 retrieved documents and the four clusters. Cluster 1 (red) studies the relationship between COVID-19 and OCD and the creation of practical guidelines to improve mental health services. Cluster 2 (green) discusses COVID-19 topics and the various cross-cutting studies on obsession and compulsion. Cluster 3 (blue) shows the different mental health disorders associated with OCD and the relationship with the psychotherapeutic approach. Finally, cluster 4 (yellow) shows the factors associated with the mental health of primary care personnel affected by the pandemic.

Figure 1. Visualization of a keyword occurrence network



Discussion

The response in most countries to the COVID-19 pandemic has included severe blocking measures and social distancing¹⁶ leading to increased isolation, decreased participation in cultural and religious activities, causing significant mental health implications for individuals¹⁷. The symptoms of many people with OCD reportedly worsened during the pandemic¹⁰. In this regard, this research aimed to describe the characteristics of obsessive-compulsive disorder scientific publications in times of COVID-19, with authors affiliated to institutions in all countries of the world.

Findings report that, of the 391 articles, 61.4% are original articles. This result is similar to areas such as health services, 52%¹⁸, sports sciences, 90.8%¹⁹, solid waste, 94.5%²⁰, among others^{21,22}. The majority production of original articles is explained since most scientific journals only accept original studies²³.

The country with the highest production is the United States, which is similar to what is found in the area of mental health, where the United States evidently stays ahead^{2,24}, which is similar to what is reported in areas such as artificial intelligence²⁵, but different to what is reported in COVID-19 studies, where China keeps one step ahead²⁶. Australia keeps the lead in the area of mental health literacy²⁷

In terms of institutions, Monash University is leading the production as a result of the different grant funds financed by the university¹⁶ and other types of support that researchers receive²⁸. Also, this university has developed different support competencies for its researchers²⁹. Also, the journal *Frontiers in Psychiatry* is the most productive journal in this area, unlike the COVID-19 topic, where the *Lancet* journal is the most relevant². It should be noted some observations made to the group of journals of the publisher *Frontiers* which has received various negative comments over the past years³⁰.

Among the most published authors are Eric Storch from the Anglo-Saxon continent and Vani Khosravani from the Asian one. Storch is known for his contribution to a number of studies as part of the International OCD Foundation (IOCDF)¹⁰. Although this result shows two authors with a greater presence in the field, the so-called Matthew effect prevails, which is construed in terms of enhancement of the position of already eminent scientists who are given disproportionate credit in cases of collaboration or multiple independent discoveries³¹.

Among the most cited articles is the systematic review of the consequences of the pandemic by Vindegaard & Benros³², who found increased symptoms of depression in health care workers and lower levels of psychological well-being in patients due to COVID-19.

Regarding the different clusters, the first cluster (red) analyzes the relationship between COVID-19 and OCD concerning the mental health service as it is understandable due to the difficulties in pandemic times to access mental health services³³. Many services have had to adapt, and patients have had to follow distance therapies, making it difficult for elderly and less technologically resourceful people³⁴. Several studies report significant interruption of various treatment pathways in mental health services³⁵.

The second cluster (green) is related to cross-cutting studies on obsession and compulsion. This result is in line with the different calls of scientific journals for studies on COVID-19. Therefore, cross-cutting studies are more feasible than longitudinal studies. Also, cross-cutting studies show some advantages because the pandemic has given rise to certain OCD-related phenotypes that can only be analyzed cross-sectionally^{10,16}. The third cluster (blue) is related to mental health disorders associated with OCD and the psychotherapeutic approach. Psychotherapeutic and pharmacological approaches are the two main types of OCD³⁶ and are among the most widely used³⁷. Different studies report 61.2% of patients enrolled in psychotherapy³⁸. The last cluster (yellow) shows mental health factors of primary care personnel affected by the pandemic. Several studies have transcended the impact of COVID-19 on the mental health of frontline workers³² and a percentage of more than 70% of health care workers affected by anxiety and depressive symptoms^{39,40}. Frontline health care workers in China were classified as the first level requiring psychological intervention^{41,42}.

This study has some limitations. First, although the Scopus database is more comprehensive, several specialized databases such as APA Psycnet are not likely represented, which would mean a loss of relevant information. Additionally, this analysis did not include the Web of Science (WoS) database, so several studies may not have been included. Likewise, it is important to recognize that OCD studies are constantly growing, so we are cautious in recognizing the time window in which the data were collected.

We conclude that the worldwide scientific production on obsessive-compulsive disorders in times of the COVID-19 pandemic between January 2020 and October 2021 was 391

published articles, of which the highest percentage are original articles (61.4%) from the United States, United Kingdom, Italy, and China, respectively. The leading institution in scientific production is Monash University and the journal with the highest production is *Frontiers Psychiatry*. The author with the highest production is Eric Storch from Baylor College of Medicine. The most representative topics were OCD and health services, OCD and cross-cutting studies on obsession and compulsion, OCD and psychotherapeutic approach, OCD and mental health of primary care staff, all these studies in the context of the COVID-19 pandemic.

CONCLUSION

We conclude that there is a significant contribution of the scientific community to OCD studies with a large number of Anglo-Saxon studies.

Conflict of interests

The authors declare that they have no conflicts of interest.

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