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Mapping the Recent Scientific Literature on Physiotherapy and Exercise in Mental Health

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Background

Bibliometrics is a research area that applies mathematical and statistical methods to study quantitative data from scientific publications and their citation links in order to study the impact of science, and the mapping of scientific fields [1,2]. Physiotherapy in Mental Health is a specific field within the large area of Physiotherapy. Its importance is growing due to the increasing burden of mental disorders around the world. In this study, we carry out a bibliometric study to systematically describe the thematic landscape of this research field. We also want to identify who (authors, countries, and organisations) is researching Physiotherapy in Mental Health, and which journals are interested in this topic. Thus, we can establish a baseline to understand its evolution and provide researchers and stakeholders with information to make decisions.

Purpose

To identify: 1. Current research areas composing the thematic structure of scientific literature related to Physiotherapy and Exercise in Mental Health. 2. Main producers of publications: authors, countries, and organisations. 3. Journals publishing in this topic.

Methods

This is a bibliometric, descriptive, and retrospective study. We identified, and included in the study, all publications (articles and reviews) from Web of Science database mentioning terms related to physiotherapy and exercise (p*hysiotherapy, physical therapy, exercise, exercise therapy*), and mental health disorders (*mental health, mental disorders, anxiety, bipolar disorder, conduct disorder, dissociative disorder, eating disorders, anorexia nervosa, bulimia nervosa, depression, neurocognitive disorders, neurodevelopmental disorder, personality disorder, schizophrenia, somatoform disorder, substance-related disorder, mood disorder*) in either the title, abstract, or keywords assigned, published in the period 2012-2021. Truncators were also used to get a higher recall.

Keyword co-occurrence was analysed and visualised using VOSviewer software 1.6.17. On the basis of titles and abstracts of the publications gathered, VOSviewer software extracted and selected the most representative terms. It also created a visualisation, using a technique for clustering terms into "research areas", such as the most important topics studied in the literature. This visualisation was interpreted by an expert in the field who gave a name to the "research area" based on the frequency of the terms and the network detected by the software.

Co-authorship networks of authors, countries, and organisations have also been analysed with this software, along with the most representative journals related to the topic. Data were provided by Web of Science database.

Results

We identified 19,588 publications. The thematic structure is composed of 5 main research areas: "Physical activity in eating disorders and addiction", "Mental health in aging, chronic diseases, and cancer", "Exercise and neurological diseases", "Interventions in chronic pain", and "Severe mental disorders". The most

productive and cited authors are Davy Vancampfort, Brendon Stubbs, and Simon Rosenbaum. The ten most productive countries are (descending order) the United States, United Kingdom, Australia, Canada, China Germany, Spain, Brazil, Italy and the Netherlands, but Northern European countries and Australia received more citations on average. The most productive organisations are Kings College London, the University of Toronto, University of Melbourne, University of Sydney, Karolinska Institute, Harvard Medicine School, University of Queensland, University of British Columbia, University of Sao Paulo and The Katholieke University Leuven. "International Journal of Environmental Research and Public Health" is the journal with more publications, but the most cited is "PLOS One".

Limitations

Bibliometric studies based only on keywords are not as comprehensive as those using journals and citation networks as well, especially in a not well-defined research field such as Physiotherapy and Exercise in Mental Health. Also, the coverage of Web of Science database in health sciences is not as wide as other databases.

Conclusion and Implication

We can describe the landscape of research in Physiotherapy in Mental Health, and its social dynamics by means of advanced bibliometric techniques. This kind of visualisation provides stakeholders with useful information that can be used by researchers, policy-makers, and funders to support their decisions regarding posible new directions of research, the allocation of funds, and the design of future collaborations. Also to analyse the result of past research policies and redesign the future ones.

Keywords: Bibliometrics, physiotherapy, exercise, mental health, VOSviewer

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