Original Article

Bibliometric analysis of publications on stigmatization in psychiatric nursing literature

 Gül Dikeç,[1] Merve Sarıtaş,[2] Volkan Oban[3]

[1]Department of Nursing, Nursing Program in English Fenerbahçe University, Faculty of Health Sciences, İstanbul, Türkiye
[2]Department of Psychiatric Nursing, University of Health Sciences, Hamidiye Faculty of Nursing, İstanbul, Türkiye
[3]Department of Management Information Systems, Gedik University Faculty of Economics, Administrative and Social Sciences, İstanbul, Türkiye

Abstract

Objectives: In the past two decades, the number of publications on stigma has increased in the literature. This study aimed to conduct a bibliometric analysis of publications related to stigmatization in the psychiatric nursing literature.

Methods: In this study, a search was performed on the PubMed database on September 11, 2022, with the Medical Searching Terms "(Stigmatization [Title OR Abstract] OR Social Stigma [Title OR Abstract]) OR (Stigma [Title OR Abstract] OR Stereotyping [Title OR Abstract] OR Discrimination [Title OR Abstract]) AND (Psychiatric Nursing [Title OR Abstract] OR Nursing [Title OR Abstract])." Between 1990 and 2022, 10,571 studies published in English, available in full text, and published in journals indexed with SCI, SSCI, and ESCI were found.

Results: The number of published articles reached the highest number in 2020, with an increase of 4.05 times in 30 years; it was determined that 92.8% of the publications were of the descriptive study, and Happell was the most productive author in this field. Frequently, articles were published in the Journal of Psychiatric and Mental Health Nursing (n=762), Journal of Psychosocial Nursing and Mental Health Services (n=550), International Journal of Mental Health Nursing (n=480), Issues in Mental Health Nursing (n=445), and Journal of Advanced Nursing (n=429). It was determined that the top five most frequently repeated keywords were humans, female, psychiatric nursing, male, and adult, respectively.

Conclusion: The findings obtained from this study can provide information about the number of publications, research types, researchers, and institutions, as well as give ideas for new research strategies in psychiatric nursing literature. Establishing cooperation between institutions and authors can guide psychiatric nurses in creating projects to reduce stigma.

Keywords: Bibliometric analysis; mental disorder; psychiatric nursing; stigma.

According to the World Health Organization's definition, health, mental, and physical health are two inseparable elements.[1] Despite increasing developments in psychiatry, mental disorders are still among the most common causes of disability in the world. In 2030, it is predicted that the most important cause of disability will be mental disorders.[2] Early diagnosis of mental disorders, treatment, and rehabilitation of symptoms can minimize this disability.[3] However, due to the negative attitudes and pre-judices prevalent in societies toward mental disorders, individuals with mental disorders

and their relatives are stigmatized, they do not start treatment due to stigmatization, and even if they start, they cannot maintain it.[2,4-7]

Stigmatization is a dynamic process and consists of many mental stages. The beginning of the process is labeling. Labels lead to stereotypes, and stereotypes lead to pre-judices. These pre-judices cause individuals with mental disorders to be characterized as dangerous, unpredictable, unreliable, untrustworthy, and marginalized by discrediting them.[8,9] Pre-judices cause emotional responses in individuals. These

emotions are often anger, fear, pity, and anxiety. When emotions are reflected in behaviors, discrimination occurs. Society's desire to distance itself from these individuals causes them to stigmatize themselves or to hold themselves back in the areas of housing, employment, and education and gradually lose their social status.[2,6-8,10,11] Individuals who experience many social and structural stigmatization experiences live an isolated life from society.[6,10] This leads to non-adherence to treatment, re-hospitalizations, self-harm or environmental harm, impaired functionality, and increased health-care costs.[6] For this reason, stigmatization is defined by many researchers as a second condition or disease that needs to be dealt with.[2]

Many types of stigmatization have been defined in the stigmatization literature. These are experienced and expected/perceived stigma, social stigma, internalized stigma, and structural stigma. Experienced stigmatization is when an individual is exposed to and experiences these adverse reactions in many areas. Societal stigmatization is the stigmatization of individuals with mental disorders by society by evaluating them with negative beliefs, stereotypes, pre-judices, and negative emotions.[12] Expected or perceived stigmatization is the individual's expectation of negative beliefs, stereotypes, or exclusion. Internalized stigmatization is when these beliefs, common in society, are directed toward the individual.[12,13] Social stigmatization predicts internalized stigmatization.[12] Structural stigmatization is systematic stigmatization associated with social rules and regulations.[14]

Stigmatization is a concept that has become one of the research topics of health sciences and social sciences in the past two decades.[10] The most frequent studies on this subject are conducted in the research fields of psychology, psychiatry, and psychiatric nursing. Studies conducted in Türkiye have determined that psychiatric nurses have considerable work on this issue.[15,16] Psychiatric nurses are the people who spend the most time with individuals with mental disorders and provide holistic care to patients.[17] Psychiatric nurses contribute to the scientific literature to inform society and empower patients in the fight against stigmatization.

Since stigmatization has negatively affected the lives of individuals with mental disorders and their families in recent years, this issue has been underlined, and many studies have been conducted on this issue.[12] In addition to mental disorders, stigmatization associated with migrants and infectious diseases is frequently studied in the literature.[13,18,19] In the systematic review examining stigmatization in all infectious diseases, including COVID-19, it is stated that stigmatization in infectious diseases is as important a public health problem as infectious diseases and that comprehensive and effective interventions should be developed to reduce stigmatization in these diseases.[19] In addition to studies examining social stigmatization in mental disorders, studies examining the stigmatizing attitudes of mental health professionals are also included in the literature. In the bibliometric analysis

What is presently known on this subject?
- Stigmatization is a concept that has become one of the research topics of health sciences and social sciences in the past two decades
- Bibliometric studies examine the relationship between people and institutions and the studies conducted on a specific topic in a certain period.

What does this article add to the existing knowledge?
- This bibliometric analysis aimed to reveal the scientific map, themes, and several studies on stigmatization in psychiatric nursing literature
- It was determined that the number of studies examined within the scope of this bibliometric analysis increased in recent years; descriptive studies were frequently conducted; the keywords human, woman, psychiatric nursing, male, and adult were frequently used; and they were published in journals with high impact score related to psychiatric nursing.

What are the implications for practice?
- This study was the first bibliometric analysis of the studies on stigma in psychiatric nursing, which was examined with the bibliometrix program
- It may be recommended that psychiatric nurses should conduct more randomized controlled trials, systematic reviews, and meta-analyses to determine evidence-based practices in preventing all types of stigma.

study conducted by Jauch et al.[20] (2023) on this subject, it is stated that 20.30% of the studies examined included psychiatric nurses, studies were mainly conducted on all mental disorders, stigmatization related to schizophrenia spectrum disorders, depressive disorders, and substance use disorders mainly were studied; most of the studies mentioned individual differences on stigmatization (occupation, gender, age, etc.); and these studies mainly did not provide guidance to combat stigmatization.

The number of scientific studies is increasing rapidly in the world, academic literacy is becoming more critical with this increase; and on the other hand, this increase makes it challenging to follow the scientific literature. Both academicians and clinicians must follow evidence-based practices in line with the current literature and keep themselves constantly updated. The number of bibliometric studies has recently increased in line with these requirements. Bibliometric studies examine the relationship between people and institutions and the studies conducted on a specific subject in a certain period. These studies are carried out by analyzing the data obtained from specified databases, providing quantitative information about the performance of the subject, discipline, researcher, or documents studied, and visualizing this information with the programs used.[10,21,22] Thus, in addition to quantitative and visual information on the specified subject, it provides the discovery of information about the impact of the studies on global outputs. For this reason, bibliometric analyses are used in many scientific fields.[10]

Bibliometric analysis of the studies on stigmatization may be critical in examining the scientific accumulation on this subject, identifying possible deficiencies, determining the relationships between researchers and research areas, revealing quantitative numbers, and establishing laws and policies. In this direction, this bibliometric analysis aimed to reveal the scientific map, themes, and several studies on stigmatization in psychiatric nursing literature.

Materials and Method

Aim

This study aimed to conduct a bibliometric analysis of the articles published on stigmatization in psychiatric nursing.

Obtaining the Data

The study searched the PubMed database because it is accepted worldwide in health and life sciences and facilitates access to many quality scientific studies. Two researchers independently screened all words in the title and abstract to identify the studies to be analyzed bibliometrically. The PubMed database was searched using the keywords of the Medical Search Terms-MesH (Stigmatization or Social Stigma) or (Stigmatization or Stereotyping or Discrimination) and "(Psychiatric Nursing [Title OR Abstract] OR Nursing [Title OR Abstract])" in English. Then, the number of articles accessed by two researchers was checked, and one of them was saved as a text file and added to the R program.

Inclusion Criteria

The date of access to the database was September 11, 2022. In the inclusion of the articles in the study, the criteria of being published in English as of 1990, accessibility of the complete text, and publication in journals indexed by SCI, SSCI, and ESCI among the indexes were considered. For the inclusion criteria, year, index, and language were selected through the advanced filtering feature in PubMed. The flowchart of the study is shown in Figure 1.

Data Analysis

The study reached 10,571 articles published in full text between 1990 and 2022 containing the keywords determined due to the filtering. The bibliometric analysis of the articles was performed through the R 4.0.1 Program Bibliometrix (Comprehensive Science Mapping Analysis) library. Bibliometrix is a program developed in the R language that creates graphs simultaneously as statistical analysis according to a logical workflow. It is open access and software. Bibliometrix includes basic bibliometric analysis methods and is also used for science mapping.[23] Within the descriptive analysis, the characteristics of the downloaded articles, such as publication year, authors, authors' interactions, institutions, journals published, and keywords, were examined and visualized. However, the visualizations were given in English due to the program. A bibliometric collaboration analysis was performed. Collaboration visualization was performed for keywords and authors with a relationship between them. A word cloud was created with the most frequently used words. The search word groups analyzed frequency distribution (author, journal).

Ethical Considerations

Because PubMed was an open-access database, no ethics committee or informed consent was obtained since the study did not involve human or animal studies.

Results

The distribution of 10,571 articles according to their publication years is shown in Figure 2. When Figure 2 is examined, it is seen that the number of articles reached the highest number in 2020, with a 4.05-fold increase in 30 years, and there has been a decrease in the number of articles since 2020.

When the distribution of the articles according to their designs is examined, 9817 (92.8%) were descriptive studies, 304 (2.8%) were case reports, and 179 (1.69%) were experimental studies including interventions to reduce stigmatization (Fig. 3).

When the authors working in the related field were analyzed, the first 25 authors are shown in Figure 4. The top three authors who published the most on stigmatization were Happell (n=196), Cleary M (n=60), and Bowers L (n=53) (Fig. 4). The authors' collaboration network is shown in Figure 5. When the network structure was analyzed, it was seen that there were nine different clusters, except for three clusters, and there was cooperation between other clusters. Happell had the most collabo-
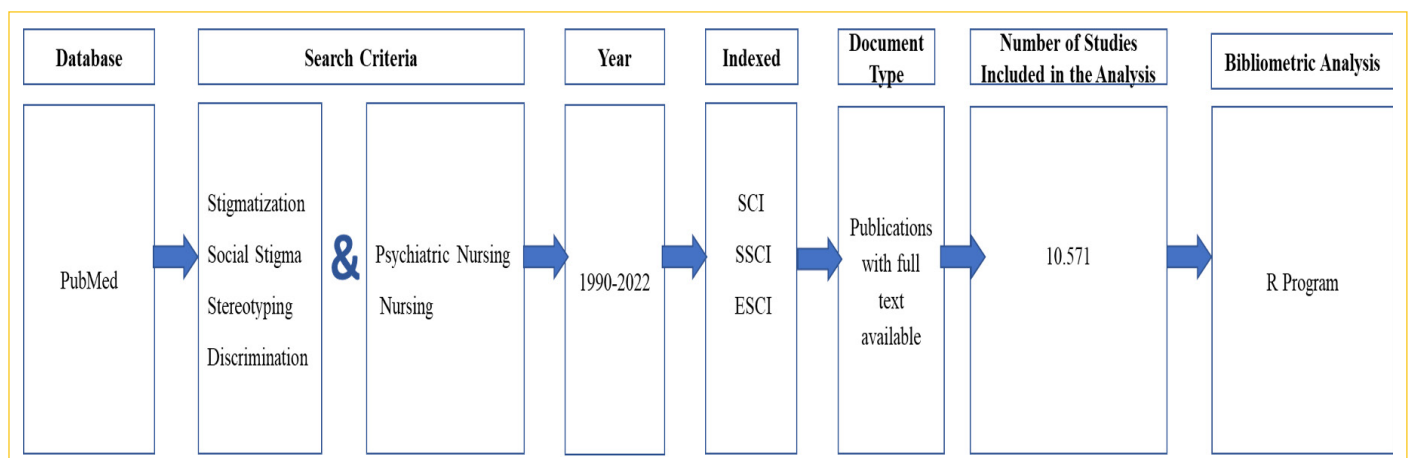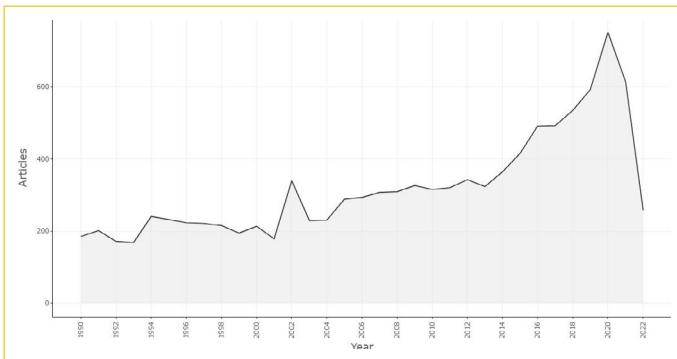

Figure 1. Dataset working tree.

Figure 2. Number of articles by year of publication.

Figure 3. Types of published studies.

ration network and was also at the center of the largest cluster.

When the institutions of the authors were analyzed, the three institutions with the highest number of studies were the School of Nursing and Midwifery, University College Cork in Ireland (n=54), Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo in Brazil (n=43), and School of Nursing and Human Sciences, Dublin City University in Ireland (n=32), respectively (Fig. 6).

It is seen that their studies were published in a total of 1354 journals. The top five journals with the highest number of studies were the Journal of Psychiatric and Mental Health Nursing (n=762), Journal of Psychosocial Nursing and Mental Health Services (n=550), International Journal of Mental Health Nursing (n=480), Issues in Mental Health Nursing (n=445), and Journal of Advanced Nursing (n=429). The number of psychiatric nursing studies on stigmatization published by the top five journals according to years is shown in Figure 7.
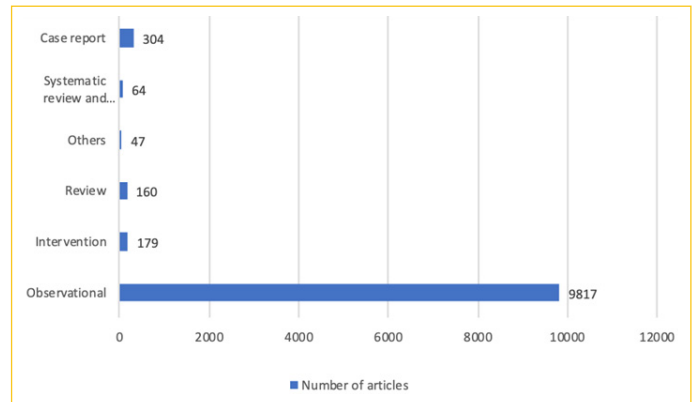
The most frequently used keywords are shown in Figure 8. The top five most frequently repeated keywords, which were also the most prominent in the visuals, were humans, female, psychiatric nursing, male, and adult (humans [9504], female [4416], psychiatric nursing [4301], male [3912], and adult [2065]), respectively. The relationships between the most frequently used keywords and their formation network are shown in Figure 9. In the visual created using the Louvain Clustering Algorithm, each shape represents a keyword, and the frequency of the lines between the shapes expressed the density of the relationship between the words. It was determined that the keywords were divided into three different clusters; the cluster with the highest centrality was the blue cluster. It was observed that the keywords humans in the center of the blue cluster were also related to the keywords in the center of the other clusters. It was determined that the most frequently used keyword in the red
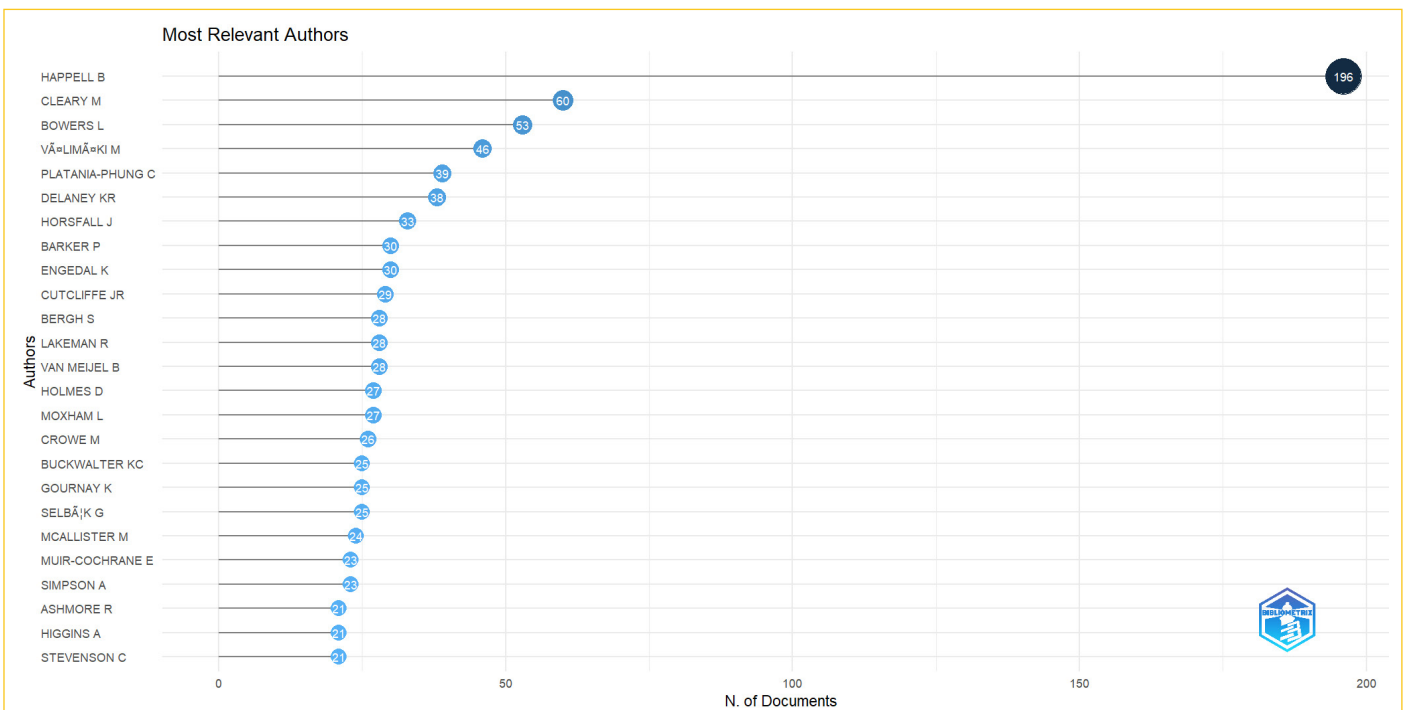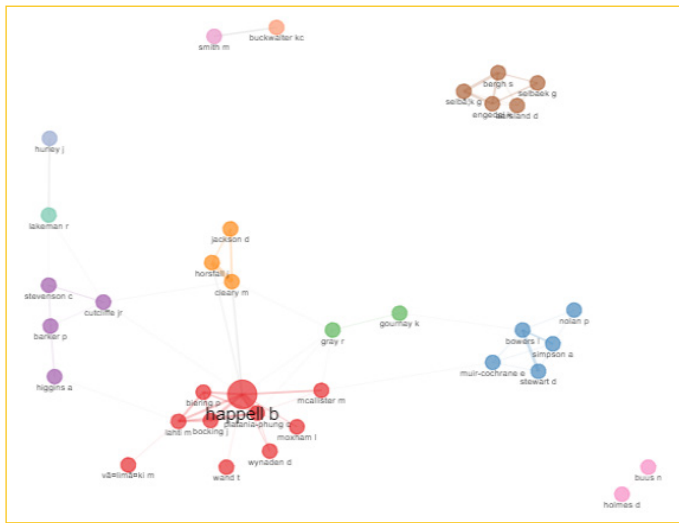

Figure 4. Top publishing authors.

Figure 5. Collaboration between authors.

cluster (aged) was used less frequently compared to the other cluster centers (humans and psychiatric nursing).

The thematic form of the keywords of the studies published according to years is shown in Figure 10. Accordingly, it was determined that the keywords female, humans, and psychiatric nursing were frequently used between 1990 and 2011. These words evolved into humans, age, students, nursing, and female.

Discussion

In this study, in which a bibliometric analysis of the studies on stigmatization in the psychiatric nursing literature was conducted, it was observed that the number of studies was relatively low compared to previous years because the 2022 studies were not yet completed or published; however, the number of studies on stigmatization in the psychiatric nursing literature has increased over the years. Trushhelev (2009), in his bibliometric analysis of stigmatization in mental disorders, found 570 studies in PubMed in 2008.[24] The significant increase in articles published over the years shows that the subject is an up-to-date and needed field of study. At this point, it can be said that the global campaign titled "Global Program Against Stigma and Discrimination Because of Schizophrenia – Open the Doors" launched by the World Psychiatric Association (WPA) in 1998,[10] the reports published by WHO in 2003 and 2005, and the solution proposals published by the European Commission (European Commission) have dramatically increased the awareness of stigma and the number of studies on stigma.[2]

When the literature was examined, it was determined that bibliometric studies on nurses and nursing students,[2] mental health professionals,[20] general stigmatization,[10] and HIV-related studies[18] were examined in the field of stigmatization. Since psychiatric nurses are mental health professionals who contribute significantly to the fight against stigmatization,[2,15] a bibliometric analysis of the studies conducted in this field is critical.

When the types of studies published were examined, it was determined that descriptive studies were frequently conducted, and interventional studies were limited. Descriptive studies on stigmatization are fundamental in determining the current situation, examining related factors, obtaining infor-
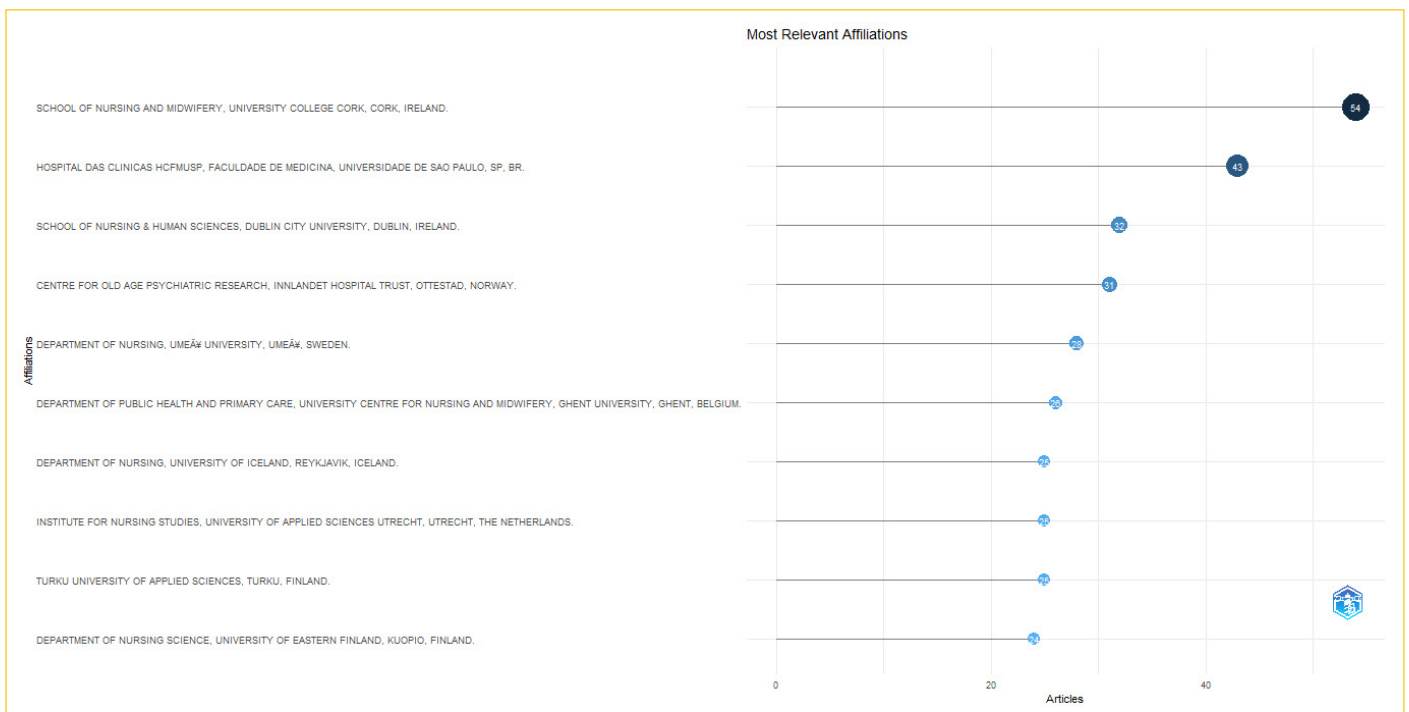

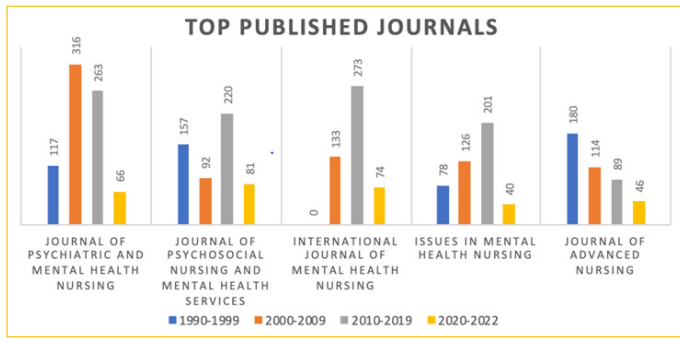**Figure 6.** Institutions of authors in published articles.

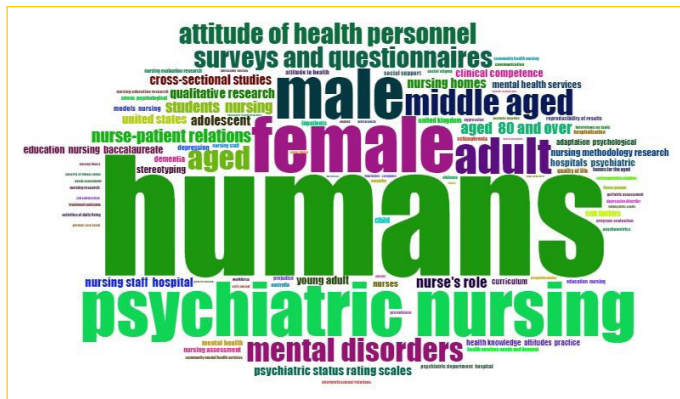**Figure 7.** Journals with the most published articles by years.

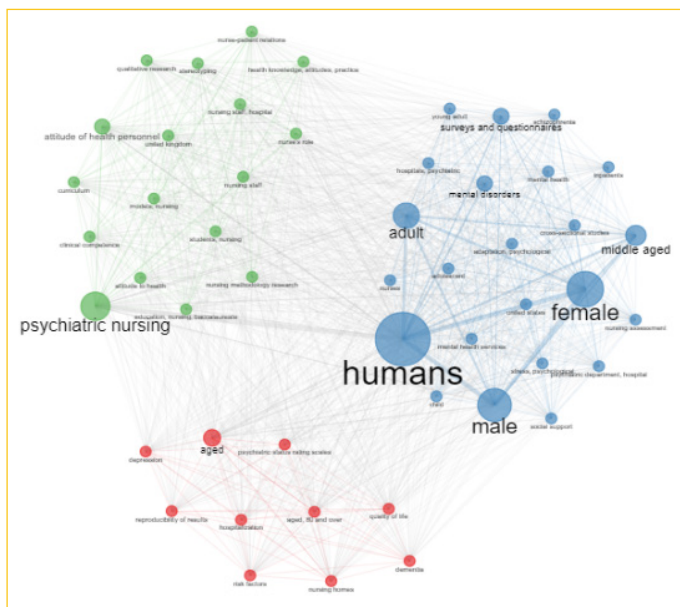**Figure 8.** Word cloud of most frequently used keywords.

Figure 9. Keywords formation network.

mation about social stigmatization, internalized stigmatization and individuals' experiences of stigmatization, and developing standardized measurement tools.[10] When systematic reviews and meta-analyses are examined, it is recommended to provide informative training on mental disorders, ensure contact with people with mental disorders, protest stigmatization and discrimination, and engage in social activism to
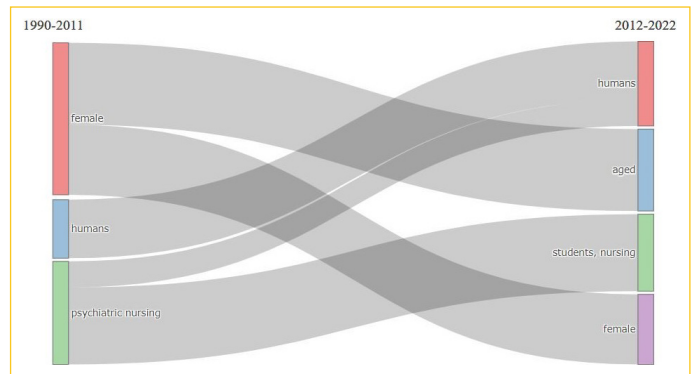

Figure 10. Themes of the keywords used by years.

reduce stigmatization.[8,25] In systematic reviews and meta-analyses, although there are data that education and contact intervention are effective against stigmatization, it has been stated that the protest strategy is not practical.[26] A systematic review and meta-analysis determined that education is an effective method of combating stigmatization.[26] Two different meta-analyses determined that contact-based and educational interventions had similar effects in reducing stigmatization and were not superior to each other.[8,25] Furthermore, stated that intervention components need to be evaluated to sustain the long-term effect of educational interventions and maximize their effectiveness.[8] In addition, different types of simulations are also used in terms of empathy with patients.[8] In this direction, it may be recommended to test the effectiveness of these different types of interventions, conduct randomized controlled studies that measure their effect, and conduct systematic review and meta-analysis studies that are effective in developing evidence-based practices.

The current study determined that publications on stigmatization were published in psychiatric nursing and nursing journals, which are the most productive in the field and high in the ranking according to journal impact scores (Journal Impact Rank 2022). The bibliometric analysis of the studies on stigmatization among nursing students and professionals determined that the most frequently published journals were the Journal of Psychiatric and Mental Health Nursing, International Journal of Mental Health Nursing, Archives of Psychiatric Nursing, and Journal of Advance Nursing.[2] The bibliometric analysis of the studies in which mental health professionals were included in the sample stated that 52.76% of the studies were included in Q1 journals.[20] In addition, in this study, it was observed that Brenda Happel was an influential author who contributed to the field of stigmatization in psychiatric nursing literature and collaborated with other authors. Similarly, in the study conducted by Martinez-Martinez et al.[2] (2022), it was determined that Dr. Happel was the author who contributed to the literature and received citations most frequently and collaborated the most. In this direction, the study results are in parallel with the study of Martinez-Martinez et al. A bibliometric analysis of stigmatization in mental disorders determined that the most productive authors were Thornicoft and

Corrigan.[10] Thornicoft and Corrigan are psychologists who have made significant contributions to the field of stigmatization since the 1990s.

When the authors' institutions were examined in the study, it was determined that most of the studies were from Ireland and Brazil. This suggests that the number of nurse researchers in these regions or these institutions' collaborations and project resources may be higher. In the study in which bibliometric analysis of publications on stigmatization in mental disorders was performed, it was determined that America, England, and Australia were the most productive countries in the stigmatization literature, respectively.[10] In Sweileh's (2019) study, it was found that studies on HIV and stigmatization were most frequently addressed in America.[18] The authors explained this situation with the number of researchers and opportunities in these countries.[10,18] It may also be recommended to examine publications on stigmatization within the scope of the country map in future studies.

When the keywords were analyzed within the scope of the study, it was determined that the most frequently repeated words were people, women, psychiatric nursing, men, and adults. It was determined that these words changed over time as people, age, students, nursing, and women. In their bibliometric analysis, Chen et al.[10] (2020) found that the keywords most frequently used with stigmatization were people, attitude, exclusion, women, and care. Sweileh (2019) found that the most frequently used keywords in the bibliometric analysis of HIV-related stigma studies were mental disorder, treatment adherence, adolescents, women, coming out, and Africa.[18] In similar stigma bibliometric analyses, the frequent presence of the keyword woman is striking. In this study, the use of the keyword psychiatric nursing in the screening strategy and the recent research on stigmatization among nurses and student nurses[2] may explain the evolution of keywords such as student and nursing. On the other hand, it is an important finding that the concepts of humans and nurses, which are the basic concepts of nursing, are similar to the keywords in this study.[27]

Limitations

This study's use of more than one database constitutes a significant limitation. In addition, the number of citations could not be examined in this study due to the high number of studies. In future studies, it may be recommended to examine the number of citations and cited fields to determine the performance of publications. It is also essential to identify self-cited authors among the authors. Another limitation of the study was that the authors' countries, the collaboration between countries, and the number of authors who changed institutions among the authors could not be determined. It may be recommended to consider these parameters in future studies. On the other hand, since it was determined that bibliometric analysis of the studies published in the psychiatric nursing literature with the R-based Bibliometrix program was not performed, this study is likely to contribute to the literature in this regard.

Conclusion

This study is the first bibliometric analysis of the studies on stigmatization in the field of psychiatric nursing examined with the Bibliometrix program. It was determined that the number of studies increased in recent years, descriptive studies were frequently conducted, the keywords human, woman, psychiatric nursing, male, and adult were frequently used, and they were published in journals with high impact scores related to psychiatric nursing. It was determined that the most prolific researcher was Happell, and the number of publications with European addresses was higher. The findings obtained from this study provide information about the number of publications, types of research, researchers, and institutions and may also provide ideas for new research strategies. Establishing cooperation between institutions and authors can guide psychiatric nurses in creating projects to reduce stigmatization. On the other hand, psychiatric nurses may be recommended to conduct more randomized controlled trials, systematic reviews, and meta-analysis studies to determine evidence-based practices in preventing social, internalized, and structural types of stigma. In addition, in future studies, it may be recommended that other mental health professionals working on stigma benefit from bibliometric analyses in determining trends in specific topics such as social stigma, internalized stigma, and the types of studies, collaborations, and productivity.

References

1. World Health Organization. Mental health action plan 2013–2020. Available at: https://www.who.int/publications/i/item/9789241506021. Accessed Oct 27, 2020.

2. Martínez-Martínez C, Esteve-Claramunt F, Prieto-Callejero B, Ramos-Pichardo JD. Stigma towards mental disorders among nursing students and professionals: A bibliometric analysis. Int J Environ Res Public Health 2022;19:1839.

3. Gültekin BK. Ruhsal bozuklukların önlenmesi: Kavramsal çerçeve ve sınıflandırma. Psikiyatr Güncel Yaklaşımlar [Article in Turkish] 2010;2:583–94.

4. Kamış GZ, Erden Aki ŞÖ, Yıldız Mİ, Doğan Varan H, Dolgun AB. Depresyonda kendini damgalama ölçeği: Türkçe formu, geçerlilik ve güvenilirlik çalışması. Türk Psikiyatri Derg [Article in Turkish] 2019;30:200–9.

5. van Weeghel J, van Zelst C, Boertien D, Hasson-Ohayon I. Con-

ceptualizations, assessments, and implications of personal recovery in mental illness: A scoping review of systematic reviews and meta-analyses. Psychiatr Rehabil J 2019;42:169–81.

6. Abdisa E, Fekadu G, Girma S, Shibiru T, Tilahun T, Mohamed H, et al. Self-stigma and medication adherence among patients with mental illness treated at Jimma University Medical Center, Southwest Ethiopia. Int J Ment Health Syst 2020;14:56.

7. Gaiha SM, Taylor Salisbury T, Koschorke M, Raman U, Petticrew M. Stigma associated with mental health problems among young people in India: A systematic review of magnitude, manifestations and recommendations. BMC Psychiatry 2020;20:538.

8. Morgan AJ, Reavley NJ, Ross A, Too LS, Jorm AF. Interventions to reduce stigma towards people with severe mental illness: Systematic review and meta-analysis. J Psychiatr Res 2018;103:120–33.

9. Bekiroğlu S. Ruhsal hastalığa sahip bireylere yönelik damgalama: Etkileyen faktörlere ve bireyler üzerindeki etkilerine dair kavramsal bir çalışma. OPUS Uluslararası Toplum Araşt Derg [Article in Turkish] 2021;17:595–618.

10. Chen S, Lu Q, Bai J, Deng C, Wang Y, Zhao Y. Global publications on stigma between 1998-2018: A bibliometric analysis. J Affect Disord 2020;274:363–71.

11. Maunder RD, White FA. Intergroup contact and mental health stigma: A comparative effectiveness meta-analysis. Clin Psychol Rev 2019;72:101749.

12. Degnan A, Berry K, Humphrey C, Bucci S. The relationship between stigma and subjective quality of life in psychosis: A systematic review and meta-analysis. Clin Psychol Rev 2021;85:102003.

13. Eylem O, de Wit L, van Straten A, Steubl L, Melissourgaki Z, Danışman GT, et al. Stigma for common mental disorders in racial minorities and majorities a systematic review and meta-analysis. BMC Public Health 2020;20:879.

14. Özmen S, Erdem R. Damgalamanın kavramsal çerçevesi. Süleyman Demirel Üniversitesi İİBF Derg [Article in Turkish] 2018;23:185–208.

15. Çam O, Bilge A. Türkiye'de ruhsal hastalığa/hastaya yönelik

inanç, tutum ve damgalama süreci: Sistematik derleme. Psikiyatr Hemşire Derg [Article in Turkish] 2013;4:91–101.

16. Dikeç G, Sarıtaş M, Oban V. Bibliometric analysis of publications on stigmatization in Turkiye according to the association rules. Curr App Psychiatr 2022;14(Supp 1):121–7.

17. Şimşek Arslan B, Buldukoğlu K. Psikiyatri kliniğinde çalışan hemşire olmak: Niteliksel bir çalışma. Psikiyatr Hemşire Derg [Article in Turkish] 2021;12:67–75.

18. Sweileh WM. Bibliometric analysis of literature in AIDS-related stigma and discrimination. Transl Behav Med 2019;9:617–28.

19. Yuan K, Huang XL, Yan W, Zhang YX, Gong YM, Su SZ, et al. A systematic review and meta-analysis on the prevalence of stigma in infectious diseases, including COVID-19: A call to action. Mol Psychiatry 2022;27:19–33.

20. Jauch M, Occhipinti S, O'Donovan A. The stigmatization of mental illness by mental health professionals: Scoping review and bibliometric analysis. PLoS One 2023;18:e0280739.

21. Železnik D, Blažun Vošner H, Kokol P. A bibliometric analysis of the Journal of Advanced Nursing, 1976-2015. J Adv Nurs 2017;73:2407–19.

22. Akyüz S. Sağlık okuryazarlığı araştırmalarının bibliyometrik analizi. Genel Tıp Derg [Article in Turkish] 2021;31:402–16.

23. Aria M, Cuccurullo C. Bibliometrix: An R-tool for comprehensive science mapping analysis. J Informetr 2017;11:959–75.

24. Trushchelev S. Stigma in psychiatry: A bibliometric study. Psyhiatrike 2009;20:152.

25. Xu Z, Rüsch N, Huang F, Kösters M. Challenging mental health related stigma in China: Systematic review and meta-analysis. I. Interventions among the general public. Psychiatry Res 2017;255:449–56.

26. Lien YY, Lin HS, Lien YJ, Tsai CH, Wu TT, Li H, et al. Challenging mental illness stigma in healthcare professionals and students: A systematic review and network meta-analysis. Psychol Health 2021;36:669–84.

27. Ünsal A. Hemşireliğin dört temel kavramı: İnsan, çevre, sağlık & hastalık, hemşirelik. Kırşehir Ahi Evran Üniv Sağlık Bil Derg [Article in Turkish] 2017;1:11–28.