



**BIBLIOMETRIC ANALYSIS OF FAMILY BURDEN IN CARING FOR SCHIZOPHRENIC PATIENTS: A LITERATURE REVIEW**

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**ABSTRACT**

Research on the topic of family burden in caring for schizophrenic patients is very high. In future research studies, the researcher needs information about new innovations and trends for this topic. Objective: The purpose of this research is to explore the number of publication trends and citation trends with the highest number of publications, as well as which fields are approved for publication, network visualization, overlay visualization, and density visualization through bibliometric analysis. Method: Notes are identified through a database search <https://app.dimensions.ai/>, followed by a PRISMA flowchart. Publications are limited from 2019-2023, focusing on Psychology, Human Society, Health Services And Systems, and Nursing. Type of publication is article, data is analyzed using VOSviewer, then reviewed by co-occurrence and co-author. Results: Publication search with the topic of family burden in caring for schizophrenic patients produced 255.461 articles. Then screening was carried out through predetermined criteria and the results obtained became 20.370. The highest publication is in 2022, while the lowest is in 2023. Trends with this topic are stigma, information, support, knowledge, anxiety. Density visualization shows that topics with low category visualization are uncertain effects, caregivers, facilitators, distress, self stigma. The majority of researchers are in Japan and India. Conclusions: The topic of family burden in caring for schizophrenic patients should be further developed in various countries, especially Japan and India. Suggestions for future researchers are to choose a theme with a low visualization category to develop further research updates.

Keywords: bibliometrics; family burden; schizophrenia

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**INTRODUCTION**

Schizophrenia is a clinical syndrome that is varied and very disturbing. This psychopathology of schizophrenia involves perception, cognition, emotion, and other aspects of behavior. The majority of schizophrenic clients require treatment and are often completely dependent on family caregivers for day-to-day care and support. Caregivers are very important in the lives of clients with schizophrenia (Christina et al., 2022; Hasan & Jaber, 2019; Issac et al., 2022; Nuralita et al., 2019; Prasad et al., 2023; Renwick et al., 2023). The burden on the family in caring for clients with schizophrenia is a research that has been extensively studied by academics and practitioners in developing countries (Basavaraju et al., 2020; Ding et al., 2023; Hahlweg & Baucom, 2023; Li & Reavley, 2020). Caregivers are often described as forgotten clients, side effects that are often reported by family caregivers are anxiety, lack of access, support for involvement, suffering from stress and even losing the ability to help

clients recover from schizophrenia (7,11–13 (Fitryasari et al., 2020; Huang et al., 2020; Li & Reavley, 2020; Syafwan et al., 2019).

The burden felt by the family in caring for clients with schizophrenia includes financial burden, social burden, emotional burden, and physical burden. Being able to understand the experiences, feelings, and needs of families living with schizophrenic clients can help reduce the burden on caregivers (Al-Sawafi et al., 2020; Fitryasari et al., 2020; Reynolds et al., 2022; Seamon et al., 2022). The needs needed by caregivers are rehabilitation and vocational centers, information and education, self-help groups, health services, communication and collaboration. Providing attention to caregivers' unmet needs and challenges can benefit the health system, and enable schizophrenic clients to receive good long-term care. (Issac et al., 2022). The purpose of this research is to explore the number of publication trends and citation trends with the highest number of publications, as well as which fields are approved for publication, network visualization, overlay visualization, and density visualization through bibliometric analysis.

## **METHOD**

The method used in the exploration of this publication is the study of bibliometric metrics. Bibliometric analysis is a field of study in library and information science because it has practical applications in measuring the scope and quality of books, journals and articles (Lubis et al., 2022). In a bibliometric analysis, the researcher shows the process of exploring quantified data through statistical analysis of published research and how the knowledge in that publication is used, and has been applied in various research fields to assess patterns of various institutions, journals, authors, countries, keywords related to type of publication (Machmuda et al., 2022). The approach used in bibliometric analysis is the citation analysis method, which can be used to see 1 article cited by another article, and the co-citation analysis approach to find 2 or more articles cited in 1 article. (Effendy et al., 2021) Sources used in data search via <https://app.dimensions.ai/>. Data collection was carried out on July 21, 2023. This literature search uses the steps according to the Preferred Reporting Items for Systematic Review and Meta Analysis (PRISMA) flowchart. (Sarkis-onofre et al., 2021) The publication deadline for this article is between 2019-2023 which focuses on the fields of Psychology, Human Society, Health Services and Systems, and Nursing. This publication type is articles selected according to the inclusion criteria. Data selection at this stage uses the PRISMA stages, namely identification, screening, and inclusion Figure 1. The first stage is identification, the results that appear are 255,461 by searching using keywords (family and burden and schizophrenia). The second stage is screening, the selected data range is between 2019 and 2023, resulting in a total of 172,933 that have been excluded, then selection is carried out according to the required category, 54,649 results are obtained that do not meet the categories of Psychology, Human Society, Health Services and Systems, and Nursing. Furthermore, publications that do not comply with articles are excluded from 7,509 articles. The third stage is included, the final results of articles that meet the inclusion criteria are 20,370 articles. The data selection process can be seen in Figure 1.

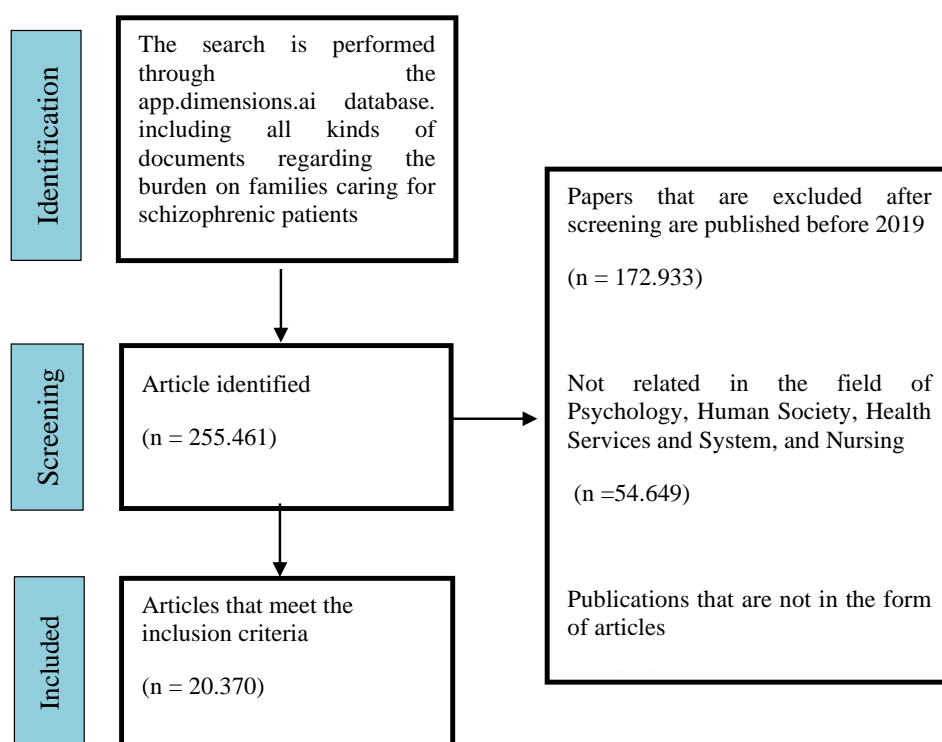


Figure 1. PRISMA flowchart

### Data analysis

The data was then analyzed using VOSviewer. VOSviewer is a program developed to create and display bibliometric maps, providing a function as a pattern extraction process in the form of information and knowledge that is useful for building and describing networks or relationships in article excerpts or publications. (Bibliometrik et al., 2022; Rostiani et al., 2022)

### Co-occurrence procedures

The co-occurrence analysis procedure goes through several steps, namely selecting a data source, reading data from the reference manager file, selecting "Fields from which terms will be extracted", and clicking "Title and abstract fields", checklist "Ignore structured abstract labels and ignore copyright statements", then select the calculation method "Full counting". The minimum threshold for the appearance of a selected term is 10, click "Next", then click "Number of terms to be selected: 203".

### Co-authors procedures

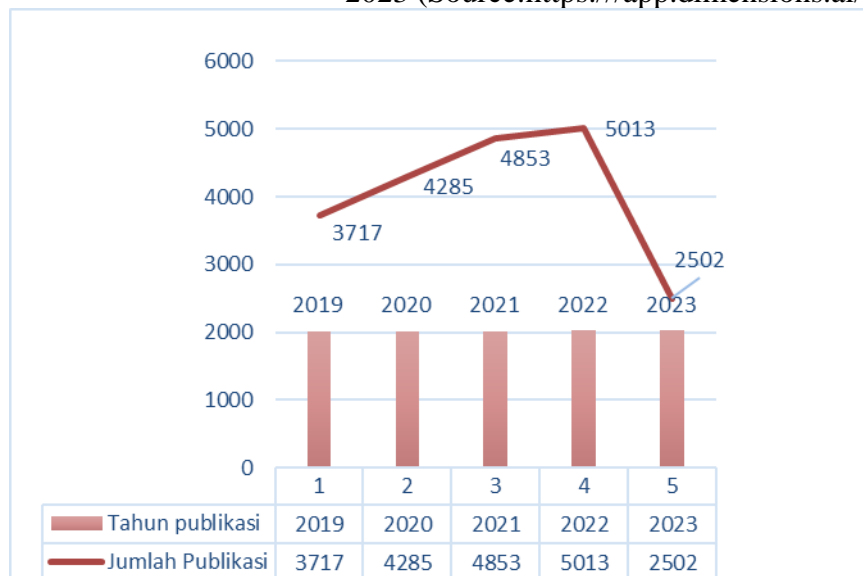
The procedure for *co-author analysis* includes several steps, namely choosing the type of data "Create a map based on bibliographic data". Then select the data source "Read data from reference manager files". Select a supported file type: RIS. Choose the type of analysis and calculation method: co-authorship analysis type and full calculation method. Select "Choose type of analysis and counting method", click "Co-authorship" as the type of analysis and click "Full counting" as the counting method. Choose "Maximum number of authors" per document as many as 2. Out of 105 authors, 105 also meet the threshold. Select author: for each of the 105 authors. Total co-author links with other authors are counted. The author with the largest total links will be selected. After verification, the number of selected authors remains 105 authors.

## RESULTS

### Publication Search Family Burden in Caring for Schizophrenia Patients

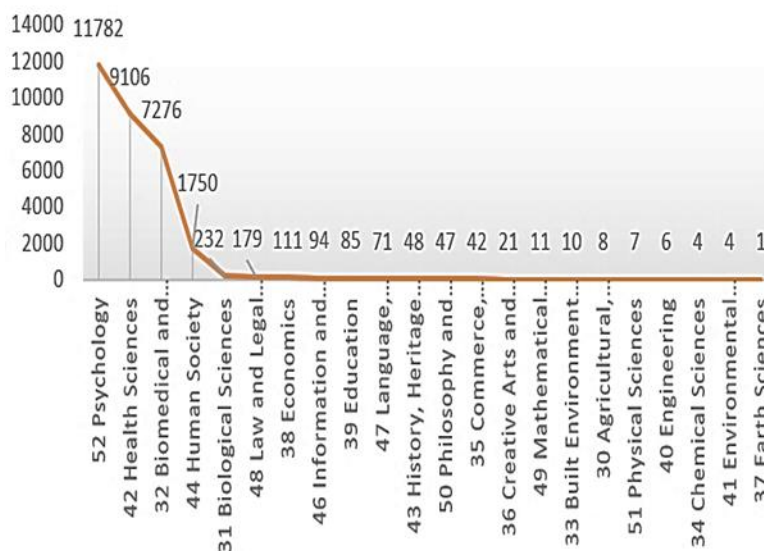
Figure 2.

Number of Publications on Family Burden in Caring for Schizophrenic Patients Year 2019-2023 (Source: <https://app.dimensions.ai/>)



### Amount Publication of Family Burden in Caring for Schizophrenia Patients by Research Category

Figure 3. Number of Publications by Research Category (Source: <https://app.dimensions.ai/>)







## **DISCUSSION**

The results of publications related to family burden in caring for schizophrenic patients are 255,461 articles. Then screening was carried out through inclusion criteria, the results obtained were 20,370 selected publication articles starting in 2019-2023. The highest number of publications related to family burden in caring for schizophrenic patients was in 2022 with 5,013 publications, while the lowest number was in 2023 with 2,502 publications. From 2019 to 2021 there will be an increase in publications every year, this is due to the COVID-19 pandemic situation which has made the schizophrenic family's burden even higher (Bartels et al., 2021; Gude et al., 2021; Javed et al., 2021; Mamom & Daovisan, 2022; Nooraeen et al., 2023; Ray et al., 2022; Rohilla et al., 2020; Senter et al., 2021). In 2023, not many publications can be found on the topic of family burden in caring for schizophrenic patients, because this literature search was conducted on July 21 2023, so there are still many of these topics that have not been published. The publication trend for 2019-2023 can be seen in Figure 2.

Number of publications related to family burden in caring for schizophrenic patients. Most are dominated by the field of Psychology, but this problem is also studied in other fields such as Psychology, Health Sciences, Biomedical and Clinical Sciences, Human Society, Biological Sciences, Law and Legal Studies, Economics, Information and Computing Sciences, Education, Language, Communication and Culture, History, Heritage and Archeology, Philosophy and Religious Studies, Commerce, Management, Tourism and Services, Creative Arts and Writing, Mathematical Sciences, Built Environment and Design, Agricultural, Veterinary and Food Sciences, Physical Sciences, Engineering, Chemical Sciences, Environmental Sciences, and Earth Sciences who participated in conducting research on the topic of family burden in caring for schizophrenic patients (Fitryasari et al., 2020; Issac et al., 2022; Nuralita et al., 2019; Vass et al., 2021). The results of the number of these publications, can be seen in Figure 3.

In Figure 4, it can be seen that there are 203 items divided into 5 clusters, with a total of 9178 links and a link strength of 7,611. Two elements connected by a line indicate that the two elements appear together in the title and abstract of each study. VOSviewer also provides an overlay visualization map. This map can be seen in Figure 5. This visualization provides an analysis based on the keywords family burden in caring for schizophrenia patients from 2019 to 2023. Based on the overlay visualization in Figure 5, the yellow nodes indicate keywords that are currently becoming popular research topics. Research on the topic of family burden in caring for clients with schizophrenia focuses on distress, anxiety, stigma, factors and experiences of family caregivers. (AL-Sawafi et al., 2021; Nuralita et al., 2019; Thein et al., 2021) Figure 6. shows a visualization of trending research on the topic of family burden in caring for schizophrenic patients which is often discussed in terms of anxiety, experience, stigma, knowledge, information, support, education, and motivation (AL-Sawafi et al., 2021; Fitryasari et al., 2020; Huang et al., 2020; Issac et al., 2022; Li & Reavley, 2020; Nuralita et al., 2019; Renwick et al., 2023; Reynolds et al., 2022; Syafwan et al., 2019). The yellow nodes indicate that there have been many published studies related to family burden in caring for schizophrenic patients. Visualization density describes topics with low visualization categories, namely uncertain effects, functional impairment, caregivers, facilitators, distress, self-stigmatism.

Suggestions for future researchers, can choose topics from the Low View category to find renewal of studies in further research. Figure 7. presents interesting information for researchers who study family psychoeducation on family burdens in caring for schizophrenic

patients. Figure 7. can be a guide for future researchers to work on the same topic to find partners in future research. Most of the burden on families in caring for schizophrenic patients are scattered in Japan and India (Pandya et al., 2020; Rohilla et al., 2020). This topic needs to be further developed in developing countries, especially in Japan and India.

## **CONCLUSION**

Top publication regarding family burden in caring for schizophrenic patients is in 2022 and will be lowest in 2023. This research is not only carried out by the fields of Psychology, Human Society, Health Services and System, Dan Nursing, but also by other fields such as Health Sciences, Biomedical and Clinical Sciences, Biological Sciences, Law and Legal Studies, Economics, Information and Computing Sciences, Education, Language, Communication and Culture, History, Heritage and Archeology, Philosophy and Religious Studies, Commerce, Management, Tourism and Services, Creative Arts and Writing , Mathematical Sciences, Built Environment and Design, Agricultural, Veterinary and Food Sciences, Physical Sciences, Engineering, Chemical Sciences, Environmental Sciences, and Earth Sciences. Apart from that, the topic trends are stigma, experience, information, support, knowledge, anxiety, education, and motivation.

## **REFERENCES**

- Al-Sawafi, A., Lovell, K., Renwick, L., & Husain, N. (2020). Psychosocial family interventions for relatives of people living with psychotic disorders in the Arab world: Systematic review. *BMC Psychiatry*, 20(1), 413. <https://doi.org/10.1186/s12888-020-02816-5>
- AL-Sawafi, A., Lovell, K., Renwick, L., & Husain, N. (2021). Exploring the experience of relatives living with individuals diagnosed with schizophrenia in Oman: A qualitative study. *Journal of Psychiatric and Mental Health Nursing*, 28(6), 1029–1040. <https://doi.org/10.1111/jpm.12786>
- Bartels, C., Hessmann, P., Schmidt, U., Vogelgsang, J., Ruhleder, M., Kratzenberg, A., Treptow, M., Reh-Bergen, T., Abdel-Hamid, M., Heß, L., Meiser, M., Signerski-Krieger, J., Radenbach, K., Trost, S., Schott, B. H., Wiltfang, J., Wolff-Menzler, C., & Belz, M. (2021). Medium-term and peri-lockdown course of psychosocial burden during the ongoing COVID-19 pandemic: a longitudinal study on patients with pre-existing mental disorders. *European Archives of Psychiatry and Clinical Neuroscience*, 272(5), 757–771. <https://doi.org/10.1007/s00406-021-01351-y>
- Basavaraju, V., Murugesan, M., Kumar, C. N., Gowda, G. S., Tamaraiselvan, S. K., Thirthalli, J., Nagabhushana, S. H., Manjunatha, N., Bada Math, S., Parthasarathy, R., Arunachalam, V., Kumar Ks, C., Am, A., & H, C. (2020). Care at door-steps for persons with severe mental disorders: A pilot experience from Karnataka district mental health program. *International Journal of Social Psychiatry*, 68(2), 273–280. <https://doi.org/10.1177/0020764020983856>
- Bibliometrik, A., Penelitian, P., & Publikasi, D. A. N. (2022). Analisis bibliometrik: perkembangan penelitian dan publikasi mengenai koordinasi program menggunakan vosviewer. 9(1), 1–8.
- Christina, M., Chichra, A., Kattula, D., Innamuri, R., & Akula, V. (2022). Maintenance electroconvulsive therapy: Are we clutching at straws? *Journal of Family Medicine and Primary Care*, 11(7), 4088–4093. [https://doi.org/10.4103/jfmpc.jfmpc\\_2389\\_21](https://doi.org/10.4103/jfmpc.jfmpc_2389_21)



- Ding, R., Zhao, M., Wang, Y., Wang, M., Guo, D., Liu, X., Wang, L., Wei, W., Zhang, W., & He, P. (2023). Community-based rehabilitation interventions on quality of care for people with schizophrenia in China (CRISC): study protocol for a cluster-randomized controlled trial. *BMC Psychiatry*, 23(1), 339. <https://doi.org/10.1186/s12888-023-04774-0>
- Effendy, F., Gaffar, V., Hurriyati, R., & Hendrayati, H. (2021). Analisis Bibliometrik Penggunaan Pembayaran Seluler dengan Vosviewer. 16, 10–17.
- Fitryasari, R., Nursalam, N., Yusuf, A., Hargono, R., Lin, E. C., & Tristiana, R. D. (2020). Development of a family resiliency model to care of patients with schizophrenia. *Scandinavian Journal of Caring Sciences*, 35(2), 642–649. <https://doi.org/10.1111/scs.12886>
- Gude, J., Subhedar, R. V, Zhang, M. H., Jain, P., Bhela, J., Bangash, F., Veluri, N., Hsieh, Y.-C., Sheikh, B. Z., Shah, M. R., Mansuri, Z., Aedma, K., Patel, U. K., Parikh, T., & Subhedar, R. (2021). Emerging Needs and Viability of Telepsychiatry During and Post COVID-19 Era: A Literature Review. *Cureus*, 13(8), e16974. <https://doi.org/10.7759/cureus.16974>
- Hahlweg, K., & Baucom, D. H. (2023). Family therapy for persons with schizophrenia: neglected yet important. *European Archives of Psychiatry and Clinical Neuroscience*, 273(4), 819–824. <https://doi.org/10.1007/s00406-022-01393-w>
- Hasan, A. A. H., & Jaber, A. A. (2019). The effect of a family intervention on primary caregivers psychological outcomes: Findings from the integrative literature review. *Perspectives in Psychiatric Care*, 55(2), 277–290. <https://doi.org/10.1111/ppc.12339>
- Huang, C., Lam, L., Plummer, V., & Cross, W. M. (2020). Feeling responsible: Family caregivers' attitudes and experiences of shared decision-making regarding people diagnosed with schizophrenia: A qualitative study. *Patient Education and Counseling*, 104(7), 1553–1559. <https://doi.org/10.1016/j.pec.2020.10.032>
- Issac, A., Nayak, S. G., Yesodharan, R., & Sequira, L. (2022). Needs, challenges, and coping strategies among primary caregivers of schizophrenia patient: A systematic review & meta-synthesis. *Archives of Psychiatric Nursing*, 41, 317–332. <https://doi.org/10.1016/j.apnu.2022.09.001>
- Javed, A., Lee, C., Zakaria, H., Buenaventura, R. D., Cetkovich-Bakmas, M., Duailibi, K., Ng, B., Ramy, H., Saha, G., Arifeen, S., Elorza, P. M., Ratnasingham, P., & Azeem, M. W. (2021). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry*, 58, 102601. <https://doi.org/10.1016/j.ajp.2021.102601>
- Li, W., & Reavley, N. (2020). Patients' and caregivers' knowledge and beliefs about mental illness in mainland China: A systematic review. *Asia-Pacific Psychiatry*, 13(2), e12423. <https://doi.org/10.1111/appy.12423>
- Lubis, I. H. B. I. P. S. P. A. M. J. S. S. B. S. E. S. B. S., Sari, I. P., Andini, P., Jannah, M., Saragih, S., Sinaga, B., Syahputra, E., & Lubis, B. S. (2022). Bibliometric Mapping on the Research “Merdeka Belajar” using VosViewer. 12(2), 477–486. <https://doi.org/10.23960/jpp.v12.i2.202207>

- Machmuda, A., Burhanudin, M. A., Ahman, E., Mulyadi, H., & Bisnis, P. (2022). Teaching Factory In Vocational Highschool : Bibliometric Analysis. 14(1), 63–71.
- Mamom, J., & Daovisan, H. (2022). Telenursing: How do caregivers treat and prevent pressure injury in bedridden patients during the COVID-19 pandemic in Thailand? Using an embedded approach. *Journal of Telemedicine and Telecare*, 1357633x221078485. <https://doi.org/10.1177/1357633x221078485>
- Nooraeen, S., Bazargan-Hejazi, S., Naserbakht, M., Vahidi, C., Shojaerad, F., Mousavi, S. S., & Malakouti, S. K. (2023). Impact of COVID-19 pandemic on relapse of individuals with severe mental illness and their caregiver's burden. *Frontiers in Public Health*, 11, 1086905. <https://doi.org/10.3389/fpubh.2023.1086905>
- Nuralita, N. S., Camellia, V., & Loebis, B. (2019). Relationship between Caregiver Burden and Expressed Emotion in Families of Schizophrenic Patients. *Open Access Macedonian Journal of Medical Sciences*, 7(16), 2583–2589. <https://doi.org/10.3889/oamjms.2019.394>
- Pandya, A., Shah, K., Chauhan, A., & Saha, S. (2020). Innovative mental health initiatives in India: A scope for strengthening primary healthcare services. *Journal of Family Medicine and Primary Care*, 9(2), 502–507. [https://doi.org/10.4103/jfmpe.jfmpe\\_977\\_19](https://doi.org/10.4103/jfmpe.jfmpe_977_19)
- Prasad, F., Hahn, M. K., Chintoh, A. F., Remington, G., Foussias, G., Rotenberg, M., & Agarwal, S. M. (2023). Depression in caregivers of patients with schizophrenia: a scoping review. *Social Psychiatry and Psychiatric Epidemiology*, 1–23. <https://doi.org/10.1007/s00127-023-02504-1>
- Ray, A., Bhardwaj, A., Malik, Y. K., Singh, S., & Gupta, R. (2022). Artificial intelligence and Psychiatry: An overview. *Asian Journal of Psychiatry*, 70, 103021. <https://doi.org/10.1016/j.ajp.2022.103021>
- Renwick, L., Susanti, H., Brooks, H., Keliat, B. anna, Bradshaw, T., Bee, P., & Lovell, K. (2023). Culturally adapted family intervention for people with schizophrenia in Indonesia (FUSION): a development and feasibility study protocol. *Pilot and Feasibility Studies*, 9(1), 53. <https://doi.org/10.1186/s40814-023-01280-8>
- Reynolds, C. F., Jeste, D. V., Sachdev, P. S., & Blazer, D. G. (2022). Mental health care for older adults: recent advances and new directions in clinical practice and research. *World Psychiatry*, 21(3), 336–363. <https://doi.org/10.1002/wps.20996>
- Rohilla, J., Tak, P., Jhanwar, S., & Hasan, S. (2020). Primary care physician's approach for mental health impact of COVID-19. *Journal of Family Medicine and Primary Care*, 9(7), 3189–3194. [https://doi.org/10.4103/jfmpe.jfmpe\\_513\\_20](https://doi.org/10.4103/jfmpe.jfmpe_513_20)
- Rostiani, Y., Tjandra, E., Akuntansi, K., Informasi, S., & Rostiani, Y. (2022). Analisis Bibliometrik Studi Perkembangan Metode Service Quality pada Database Google Scholar Menggunakan Vosviewer ( Studi Literatur Tahun 2016 – 2020 ) Bibliometric Analysis of Service Quality Method Development Studies on the Google Scholar Database. *usi*, 11, 85–93.
- Sarkis-onofre, R., Catalá-lópez, F., Aromataris, E., & Lockwood, C. (2021). How to properly use the PRISMA Statement. 13–15. <https://doi.org/10.1186/s13643-021-01626-4.9>

- Seamon, A., Groth, C. M., Surya, S., & Rosenquist, P. B. (2022). Role of Electroconvulsive Therapy in Treatment-Resistant Schizophrenia in Forensic Psychiatry. *The Journal of ECT*, 38(3), 156–158. <https://doi.org/10.1097/yct.0000000000000843>
- Senter, M. S., Patel, S. R., Dixon, L. B., Myers, R. W., & Simpson, H. B. (2021). Defining and Addressing Gaps in Care for Obsessive-Compulsive Disorder in the United States. *Psychiatric Services*, 72(7), 784–793. <https://doi.org/10.1176/appi.ps.202000296>
- Syafwan, R. A., Simbolon, M. J., & Camellia, V. (2019). The Correlation Between the Level of Anxiety According to the Hospital Anxiety and Depression Scale-Anxiety Subscale with the Duration of Illness, the Age of the Caregiver, and the Age of First Illness in the Biological Mother Who Takes Care of Boys with. *Open Access Macedonian Journal of Medical Sciences*, 7(16), 2656–2660. <https://doi.org/10.3889/oamjms.2019.822>
- Thein, K. Z. K., Herberholz, C., Sandar, W. P., & Yadanar. (2021). Caring for persons with drug use disorders in the Yangon Region, Myanmar: Socioeconomic and psychological burden, coping strategies and barriers to coping. *PLOS ONE*, 16(10), e0258183. <https://doi.org/10.1371/journal.pone.0258183>
- Vass, E., Simon, V., Fekete, Z., Kis, B., & Simon, L. (2021). Case Report: Feasibility of a Novel Virtual Reality-Based Intervention for Patients With Schizophrenia. *Frontiers in Psychology*, 12, 642590. <https://doi.org/10.3389/fpsyg.2021.642590>

