

Targeted Literature Review of the Clinical, Social and Economic Burdens of Schizophrenia in Japan

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Objectives

Schizophrenia is a serious mental disorder which has social impact with clinical, economic, and humanistic burdens. This targeted literature review aimed to better elucidate the disease burden in patients with schizophrenia and caregivers in Japan.

Introduction

- Schizophrenia is a severe mental health disorder that profoundly affects individuals, families, and society as a whole [1]. While there is growing recognition of its clinical, social, and economic impacts globally, there remains a lack of comprehensive research addressing the full landscape of the burden of schizophrenia in Japan.
- Despite advancements in treatment options, gaps persist in our understanding of how this disorder affects HCRU, QOL, caregiver responsibilities, and unmet patient needs within the Japanese context.
- Furthermore, recent developments in mental health care and patient support systems highlight the necessity for a more thorough examination of the experiences and challenges patients and caregivers face [2].
- This study sought to fill that gap by examining the current state of knowledge, bringing forward critical insights into the real-world impact of schizophrenia in Japan.

Methods

- This targeted literature review was comprised of a systematic literature review for PubMed, Ichushi, CiNii, J-STAGE, CDSR (2013-2023), and hand searching for conference proceedings and other data sources, including medical associations, government, and patient associations (2018-2023).
- Target literature: Studies including patients with schizophrenia and caregivers of patients with schizophrenia in Japan, published in English or Japanese.
- Target information: Any reported evidence relevant to the clinical/social/ economic burden of disease.
- All identified references were screened by one reviewer using a two-stage approach to reviewing the title/abstract and full text. A third reviewer conducted quality checks. Relevant outcomes of interest were then extracted and summarized.

Extracted Literature

- Out of the 1,184 articles identified, 157 publications, 73 conference proceedings and 37 other data sources were extracted (Figure 1). The most common type of burden reported was literature on clinical management burden, followed by epidemiology, humanistic, society and welfare, and economic burden (Figure 2).

Figure 1. Screening flow

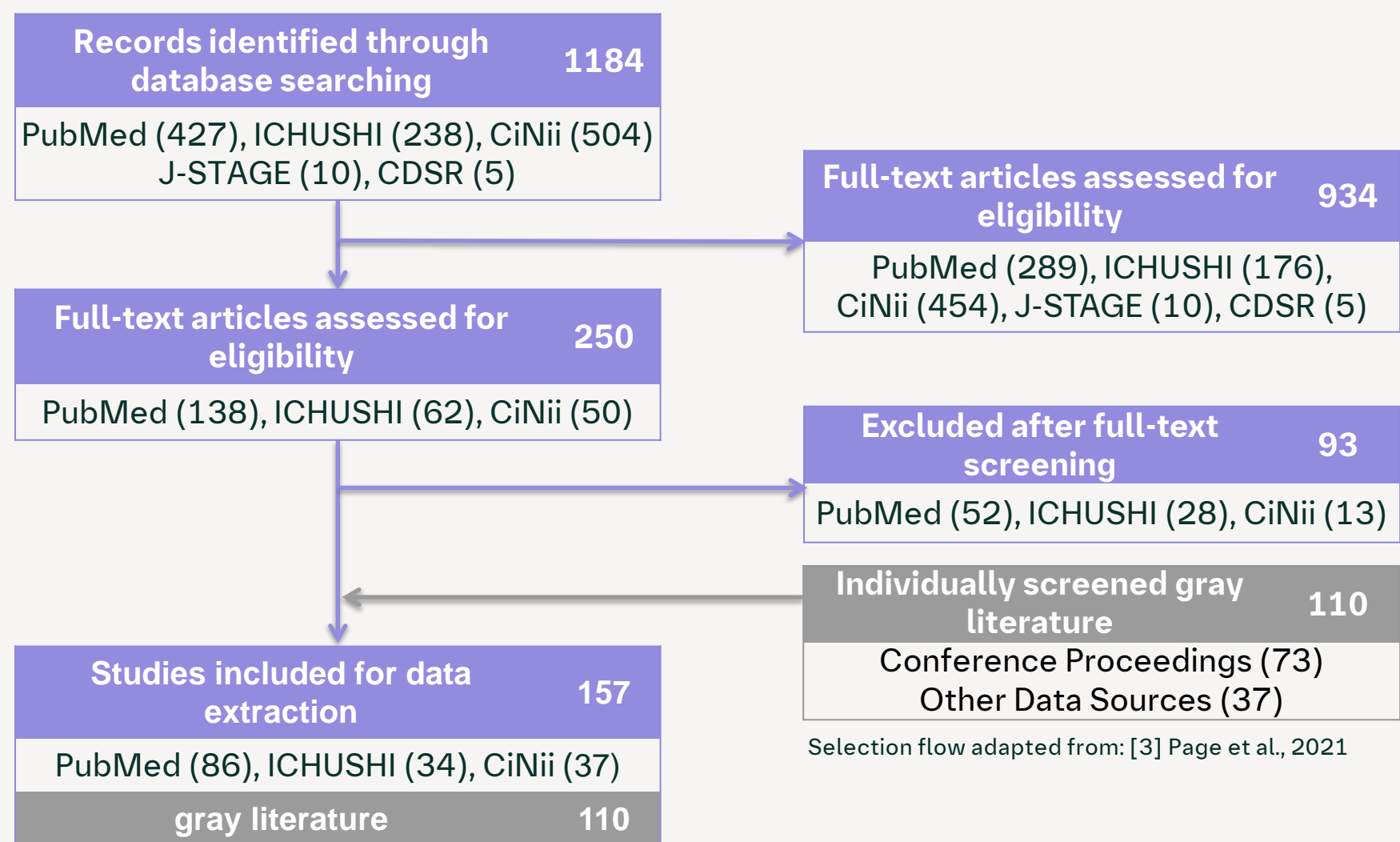
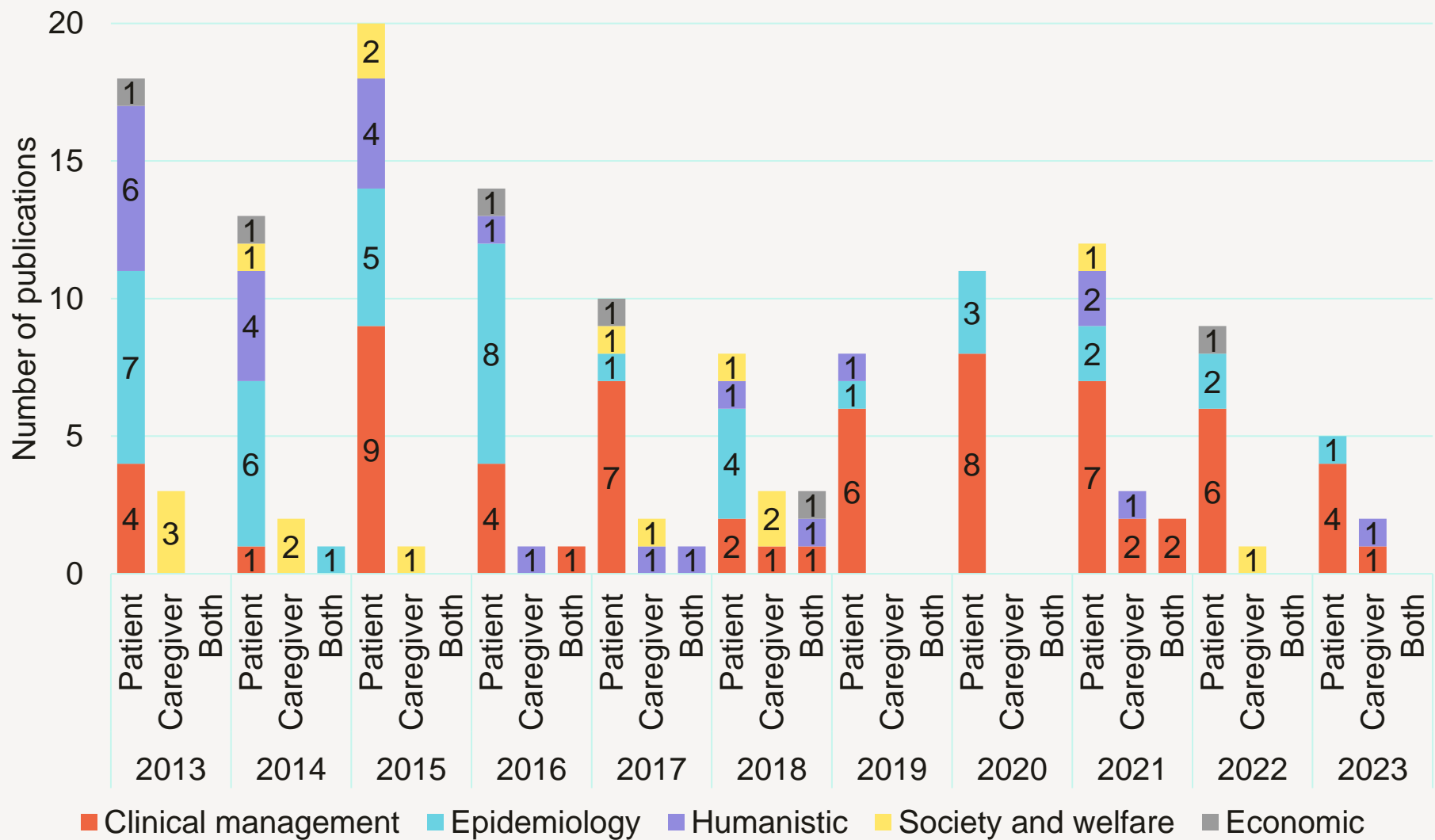


Figure 2. Publication frequency by HEOR discipline



Abbreviations
CiNii, Citation Information by Nii; CDSR, Cochrane Database of Systematic Review; HCRU, Healthcare Resource Utilization; MHLW, Ministry of Health, Labor, and Welfare; PDD, Perceived Devaluation Discrimination; QOL, Quality of Life; WPAI, Work and Productivity Activity Impairment scale

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Key Results

- In summary, schizophrenia patients were found to have common comorbidities such as obesity, hypertension, depression, and type 2 diabetes. Cognitive impairment was also reported as a burden of disease in some studies. Prolonged hospitalization was reported in several studies. Factors such as promoting self-care and community support were reported as one of the important factors in early readmissions. Caregivers also experienced productivity losses, mainly through presenteeism.
- The results of this poster mainly focus on findings from published literature, while outcomes from the gray literature search will be summarized in a future publication.

Epidemiology (n=41*)

*Number of extracted published literature

- The 2020 patient survey by MHLW (as gray literature) estimated that 193K people received treatment, 50K as outpatients, and 143K were hospitalized. Among all patients, 50.7% (97.8K) were aged 35-64, and 43.6% (84.2K) were 65 or older.
- Schizophrenia prevalence ranged between 0.59% and 0.8% across various surveys.
- Common comorbidities for schizophrenia patients include:
 - Hypertension: 30.5% of outpatients
 - Type 2 diabetes: 16.8% of outpatients
 - Depression, obesity, and smoking (26.4% of clozapine users are smokers)
- Reported mortality rates for schizophrenia have varied, showing between 4.2% and 20.8%. Regarding schizophrenia patients with cancer, 30-day in-hospital mortality was 4.2%.

Clinical management burden (n=66)

- Patients experienced extended hospitalization. Ten (58.8%; 10/17) studies indicated that the mean duration of hospitalization was more than one year.
- Adverse events related to clozapine treatment included neutropenia/leukopenia (5.4%; 206/3780) and glucose intolerance (15.4%; 583/3780) [4].
- Cognitive impairment, as a critical symptom of schizophrenia, was reported in three studies, with a BACS Z-score of -2.1 [5], and another study reported that a significantly lower cognitive impairment score was observed in patients with schizophrenia than in healthy individuals [6].

[Case study of approaches to clinical management burden]

- Good in-hospital nursing care and teamwork can help prevent early readmission of schizophrenia patients, with family involvement and a positive work environment also being important for nurses [7].

Society and welfare burden (n=16)

- A study using the PDD scale found that higher self-stigma indirectly linked to lower self-esteem through depression [8].
- Financial strain was a major aspect of the disease burden, with about 19% of schizophrenia patients depending on public assistance [9].

Humanistic burden (n=27)

- The main post-discharge challenge was “separating life as an inpatient from community life” consisting of categories: (1) dissatisfaction with the inpatient care received and (2) lack of abilities to coordinate lifestyle following discharge [10].
- Burden in natural disaster/pandemic: relocation, changes to daily life.
- Challenges in a family of accepting patients and despair.

Economic burden (n=7)

- Both direct healthcare costs (JPY 770,022 million) and indirect costs (JPY 2,004,359 million), as well as productivity losses from absenteeism, presenteeism, and job resignation for both patients and caregivers [11].
- Caregivers' productivity loss assessed by WPAI was reported that they tended to more experience presenteeism than absenteeism, with an annual productivity loss of JPY 2.36 million [12].

Insight & Future Direction

- Clinical and therapeutic knowledge was the most frequently reported. However, although some epidemiological data have been reported, they may not be definitive due to different study designs and clinical settings. Further evidence is necessary as appropriate/effective measures for the identified burdens for both Epidemiology issues and clinical management burdens are urgently needed with more robust evidence-based.

- Most of the published literature was patient-focused, and it was found that evidence of caregiver's burden is not well enough revealed. Further evidence of caregiver is needed for better understanding and improvement of their environment.

- While data related to cognitive impairment and economic burden, such as productivity loss, are limited, they provide valuable insights. Going forward, accumulating more data in these areas is essential to understand the disease burden of schizophrenia from societal, economic, and humanistic perspectives. These elements of burdens of disease will reinforce the need of treatment of cognitive impairment and social/clinical supports for patients and caregivers.

- To mitigate schizophrenia's multifaceted burden, collaboration among stakeholders—patients, caregivers, healthcare professionals, and policymakers—is crucial. Future research should focus on filling the gaps from multifaceted aspects and needs to contribute to realizing the development and implementation of holistic and evidence-based strategies.

- The study has limitations due to its timeframe and possible biases (e.g., literature selection).

Conclusions

There are complex and multifaceted burdens faced by patients, families, and healthcare systems, and reinforced the need for integrated and collaborative approaches among stakeholders with holistic and evidence-based strategies.



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