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## Original article

Schizophrenia nursing research in China from 2010 to 2014:  
A bibliometric analysis<sup>☆</sup>Shu-Ping Zhang, Hong-Xia Liu<sup>\*</sup>

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## ABSTRACT

**Objective:** This study used a bibliometric analysis to explore the research development of schizophrenia nursing in China from 2010 to 2014.

**Methods:** The CNKI, VIP, and CBM databases were used to retrieve articles in China describing schizophrenia nursing that met the predefined criteria from 2010 to 2014. Altogether, 1486 articles were included and analyzed by bibliometric methods.

**Results:** The area of schizophrenia nursing had an annual average publication of 351 papers. The most productive institutions in schizophrenia nursing were located in Guangdong, Jiangsu, and Shandong, followed by Henan and Zhejiang. The papers were mainly published in the Medical Journal of Chinese People's Health and then in the International Journal of Nursing and the Chinese Journal of Modern Nursing. The study subjects mainly were on schizophrenics and then caregivers of schizophrenics (including families, nursing assistant, nurse). The most often used study designs in schizophrenia nursing research were a quasi-experimental study followed by experience reports and an investigational study. The research topics mainly focused on nursing intervention and rehabilitation training, followed by psychological, quality of life and social function.

**Conclusions:** The schizophrenia nursing research has rapidly developed, with extensive content and abundant study topics, over the past 5 years.

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## 1. Introduction

Schizophrenia may affect the advanced thinking regarding the function of the cranial nerve, serious disorders of which affect perception, mind, emotion and behavior, and mentation dissonance.<sup>1</sup> Schizophrenia is described as a split mind, psychiatric disorder, or madness traditional medical theory,<sup>2</sup> which has become a common clinical mental illness. The disease etiology and pathological mechanism of schizophrenia are still unclear, so clinical practices mainly treat the symptoms and not cause of the disease.<sup>3</sup> Nursing work in psychiatric hospitals mainly focuses on nursing interventions and rehabilitation training to improve self-

care ability of schizophrenic patients, not on injections and transfusions, which are common in a general hospital. With the development of nursing science research, clinical research on schizophrenia has expanded and more research articles have been published in journals. The aim of this study was to systematically analyze the development of schizophrenia nursing research in several parameters, including the annual publication output, publishing geographical distribution, publishing journals, characteristics of the study participants, study design and research topics in schizophrenia nursing research.

## 2. Material and methods

## 2.1. Source of data

The CNKI, VIP, and CBM databases were used to retrieve articles describing schizophrenia nursing in China over 4 years (2010–2014), resulting in obtaining 1618 records related to schizophrenia.

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## 2.2. Study selection criteria

An eligibility assessment was performed, and papers were excluded for the following reasons: (1) the studies that did not focus on schizophrenia nursing; (2) the studies were in nonacademic journals and lacked details regarding the contributors and subscription information; and (3) there were double citations. The full text of the articles as retrieved and reviewed, resulting in 1486 articles that met the selection criteria.

## 2.3. Analysis

A bibliometric method was used to analyze the articles according to the publication sequence of the articles, annual publication output, publishing geographical distribution, publishing journal, characteristics of the study participants, study design, and research topics.

## 2.4. Statistical analysis

Statistical analyses were performed using the SPSS 17.0 statistical package.

## 3. Results

Tables 1–5 show the annual publication output, publishing geographical distribution, publishing journals, study design, and research topics in schizophrenia nursing research.

### 3.1. Annual publication output: see Table 1

**Table 1**  
Annual publication output.

Year	Numbers (n)	Percent (%)
2010	329	22.14
2011	351	23.62
2012	357	24.02
2013	365	24.56
2014	84	5.65
Total	1486	100

### 3.2. Publishing geographical distribution: see Table 2

**Table 2**  
Publishing geographical distribution.

Geographical distribution	Numbers (n)	Percent (%)
Guangdong	183	12.31
Jiangsu	174	11.71
Shandong	170	11.44
Henan	111	7.47
Zhejiang	107	7.20
Others	741	49.87
Total	1486	100

### 3.3. Publishing journals: see Table 3

**Table 3**  
Publishing journals.

Journals	Numbers (n)	Percent (%)
Medical Journal of Chinese People's Health	189	12.72
International Journal of Nursing	63	4.24
Chinese Journal of Modern Nursing	62	4.17
Nursing Practice and Research	48	3.23
Journal of Clinical psychosomatic diseases	44	2.96
Journal of Qilu Nursing	42	2.83
Clinical General Practice Nursing	36	2.42
Chinese Nursing Research	34	2.29
Others	968	65.14
Total	1486	100

### 3.4. Characteristics of the study participants

A total of 1326 articles in schizophrenia research was found to focus on schizophrenia patients, with 21 articles on men, 34 articles on women, 18 articles on the elderly, and 20 articles on children. Eighty articles focused on patients with regard to their first episode and 136 articles on patients in the rehabilitative period. Another 160 papers focused on the caregivers of schizophrenia patients, including the family, nursing assistant and nurse specialists of the mental hospital.

### 3.5. Study design in schizophrenia research: see Table 4

**Table 4**  
Study design in included studies.

Study type	Numbers (n)	Percent (%)
Quasi-experimental	819	55.11
Experience reports	295	19.85
Investigation	244	16.42
Review	28	1.88
Qualitative study	20	1.35
Others	80	5.38
Total	1486	100

### 3.6. Research topics in schizophrenia research: see Table 5

**Table 5**  
Research topics in schizophrenia research.

Article types	Number of papers (N)	Percent (%)
Nursing intervention	271	18.24
Rehabilitation training	239	16.08
Psychology	208	14.00
Quality of life	171	11.51
Social function	169	11.37
Severe acute status	147	9.89
Complication	94	6.33
Health education	58	3.90
Medication adherence	49	3.30
Others	80	5.38
Total	1486	100

## 4. Discussion

### 4.1. Gradual increase in the annual publication output

As shown in Table 1, the cumulative publication output regarding schizophrenia nursing research consisted of 1486 papers from 2010 to 2014, with a slowly increasing trend. There were 84 papers recorded in the database in the first six months of 2014, which represented a higher publication output than other disease nursing research. Wang Jinling performed a statistical analysis of articles regarding dementia care in the most recent decade (2004–2015), which included 393 articles.<sup>4</sup> Compared with the publication output in schizophrenia nursing research, the results reveal that nurses working with schizophrenia paid more attention to scientific research to promote the development of effective nursing work and to further improve nursing quality.

### 4.2. Publishing geographical distribution

As shown in Table 2, Guangdong tops the list, with a share of 183 articles (12.31%). Jiangsu and Shandong rank second and third, with a share of 174 and 170 articles (totally 11%), respectively, followed by Henan, Zhejiang, and Shanghai, each had dozens of publication outputs. Some provinces only had a few publications, such as Hainan, which had 6 articles, and Gansu, which had 5 articles. The results showed a difference in the level of schizophrenia nursing research among different places, which may be related to the different extent of attention of each location.

### 4.3. Publishing journals

As shown in Table 3, the Medical Journal of Chinese People's Health is at the top of the list, with a share of 189 articles (12.72%). The International Journal of Nursing ranks second, with a share of 63 articles (4.245%), followed by the Chinese Journal of Modern Nursing, with a share of 62 articles (4.17%), and some articles were also published in scattered nursing journals. Thus, it can be observed that high quality schizophrenia nursing research articles tend to be published in specialized journals of the psychiatric discipline. Some nursing researchers also tend to submit their papers to nursing journals; however, some journals consider that schizophrenia nursing research belongs to a specific or specialized field.

### 4.4. Characteristics of the study participants

A total of 1486 articles were included in the study. A total of 1326 (89%) articles focused on schizophrenia patients, which revealed that the nursing idea of "patient-oriented" has come up in nursing work and scientific research. Among the articles, 21 focused on men, 34 on women, 18 on the elderly and 20 on children. Eighty articles focused on first-onset schizophrenic patients, and 136 articles focused on schizophrenic patients during convalescence and the recovery period. Additionally, 160 articles focused on caregivers of schizophrenia patients, including the family, nursing assistant and nurse specialists of a mental disease hospital. The results revealed that the research subjects were comprehensive, with an emphasis on patients as well as on those who may affect disease rehabilitation.

### 4.5. Study design in schizophrenia research

The type of study design was divided into five classes based on using different methods in the study design, including quasi-experimental research, investigational research, reviews, qualitative research, and experience reports. As shown in Table 4, 819 (55.11%) articles used quasi-experimental research methods, followed by the experience reports method used by 295 articles (19.85%). The investigational research method was used in 74 articles (16.42%), reviews in 28 articles (1.88%), and qualitative research method in 20 articles (1.35%). Quasi-experimental research is relatively reasonable to use in all types of research methods to determine a causal relationship and has reliable study results, and it is an experimental design that has comparative promise and application value in scientific research.<sup>5</sup> The included articles in schizophrenia mainly used a quasi-experimental research method, with a higher level of research design and a higher application value for the study results.

### 4.6. Research topics in schizophrenia research

The research topics were classified into nursing intervention, rehabilitation training, psychology, quality of life, social function, severe acute status, complication, health education, and medication adherence. As shown in Table 5, the distribution of research under different topics showed that the highest research output comes from nursing intervention, with 271 articles (18.24%), followed by nursing intervention (16.08%), psychology (14.00%), and quality of life (11.51%). Additionally, some of the articles focused on social function, severe acute status, complication, health education, and medication adherence. The front-line nurses focused on nursing intervention research are closely related to nursing work, and they implemented specific and effective nursing practices to improve the mental and physical condition of schizophrenia patients, the research results of which provide reference for other workers who work with patients with mental illness.

## 5. Conclusions

The cumulative publication output of schizophrenia nursing research has increased year by year from 2010 to 2014. Guangdong had the highest publication output. The researchers tend to submit their articles to specialized journals that focus on psychiatry. Among the articles included, schizophrenic patients were the most common study subjects, a quasi-experimental research method the most commonly used method, and nursing intervention was the most common research topic.

### Conflicts of interest

All the contributing authors declare no conflicts of interest.

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