

INPLASY202510067

doi: 10.37766/inplasy2025.1.0067

Received: 19 January 2025

Published: 19 January 2025

Ran, JJ; Yang, X; Li, ST; Peng, W.

### Corresponding author:

Jiajia Ran

15025716450@163.com

### Author Affiliation:

Wuhan Union Hospital Affiliated to  
Tongji Medical College of Huazhong  
University of Science and  
Technology.

### ADMINISTRATIVE INFORMATION

**Support** - There is no financial support in this review.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202510067

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 January 2025 and was last updated on 19 January 2025.

### INTRODUCTION

**Review question / Objective** Osteoporosis is a common bone degenerative disease in China, and its complications can have a serious impact on patients. In order to better prevent osteoporosis, we urgently need to investigate the awareness of osteoporosis in the population. This paper comprehensively introduces the osteoporosis awareness survey from five aspects: osteoporosis awareness survey tools, research status at home and abroad, the impact of cognitive differences, relevant measures to improve awareness, and bone health education. The aim of this study is to draw relevant experience from existing research and summarize its own shortcomings, so as to assist the development of subsequent research in this area. At the same time, it is helpful to recognize the shortcomings in related research and guide the formulation and application of future osteoporosis prevention and treatment measures.

**Rationale** In this paper, literature related to osteoporosis awareness, which was published from October 2020 to October 2023, was searched in the CNKI, Wanfang, and Pubmed databases. After the establishment of volume exclusion criteria, 16 articles were ultimately included in the analysis. Two reviewers independently extracted the study methods, tools, and results.

**Condition being studied** Osteoporosis, a prevalent degenerative bone disorder, and its associated complications can have a substantial impact on patients. To enhance osteoporosis prevention, it is imperative to explore the public's awareness of this condition. Following the World Health Organization's identification of osteoporosis risk indicators, the predicted prevalence values in subsequent epidemiological studies have significantly increased compared to earlier estimates. The prevalence of osteoporosis is closely linked to age[4]; the most recent data from China in 2018 revealed that the prevalence of osteoporosis among individuals aged over 50 was

19.2%, while the prevalence in those over 65 was 32.0%. International researchers often consider hip fractures as critical epidemiological data to assess the severity of osteoporosis, given that nearly all hip fractures can be attributed to this disease.

Osteoporosis is accompanied by various complications, including pain, height loss, kyphosis, and fractures, which have a detrimental impact on patients' health. Among these complications, fractures are the most severe. They significantly reduce the quality of life of patients. Moreover, the subsequent treatment and care for fractures can impose a substantial burden on families, society, and the economy. The current management of osteoporosis patients encompasses both pharmacologic and non-pharmacologic interventions. Pharmacological approaches involve the use of agents that inhibit bone resorption and promote bone formation, while non-pharmacological strategies focus on modifying patients' lifestyle habits. According to China's 2011 guidelines, osteoporotic fractures are preventable and treatable, underscoring the importance of disseminating knowledge about osteoporosis to facilitate early diagnosis, timely assessment of fracture risk, and the implementation of standardized preventive and therapeutic measures.

In this paper, we will focus on osteoporosis cognition research and analyze the research tools, the current status of the research, and the impact of cognitive differences, so as to provide a basis for the subsequent development of related cognitive research.

## METHODS

**Search strategy** Literature retrieval was conducted in databases such as the China National Knowledge Infrastructure (CNKI) and PubMed. The search time span was set from October 2020 to October 2023. Chinese search terms encompassed "骨质疏松症", "骨质疏松", "认知", "认知度", "知识", and "意识", while English search terms included "osteoporosis", "awareness", "knowledge", and "health concept".

**Participant or population** In this review, postmenopausal women were predominantly studied, but some studies also included patients with osteoporosis, type 2 diabetes, and adult community populations.

**Intervention** There is no intervention or group of interventions in this review.

**Comparator** There is no comparative intervention in this review.

**Study designs to be included** The studies included in this review were all cross-sectional studies, mainly investigating the current status of the population's cognition.

**Eligibility criteria** Inclusion criteria: 1) Studies on the awareness of osteoporosis that were published between October 2020 and October 2023. 2) Studies with clearly defined inclusion and exclusion criteria.

Studies in which the research tools employed are questionnaires that have been tested for reliability or have been proven through research. 3) Studies that correctly utilize statistical methods to analyze the results and provide detailed data descriptions.

Exclusion criteria: 1) Recognition analyses conducted by medical practitioners. 2) Studies in which the research tools used are self-designed questionnaires without mentioning reliability and validity tests. 3) Literature that has not been repeatedly published. 4) Review articles, case reports, editorials, conference abstracts, letters, unpublished reports, or literature consisting of only abstracts.

Literature not published in core Chinese journals or in the Science Citation Index (SCI).

**Information sources** Literature retrieval was conducted in databases such as the China National Knowledge Infrastructure (CNKI), WanFang and PubMed.

**Main outcome(s)** The literature included in the review was a cross-sectional study with the outcome of the questionnaire recovery.

**Additional outcome(s)** There is no Additional outcome in this review.

**Quality assessment / Risk of bias analysis** Two evaluators ( Ran and Yang ) independently assessed the full-text articles and extracted data from all eligible publications. The extraction encompassed information such as the author's name, year of publication, country, number of participants, gender, age, research tools, and study results.

**Strategy of data synthesis** The results of the included literature were evaluated mainly in descriptive language.

**Subgroup analysis** There is no subgroup analysis in this review.

**Sensitivity analysis** There is no sensitivity analysis in this review. .

---

**Country(ies) involved** China.

**Keywords** Osteoporosis; Awareness; Osteoporosis knowledge; Systematic review; Health education.

**Dissemination plans** Osteoporosis; Awareness; Osteoporosis knowledge; Systematic review; Health education.

**Contributions of each author**

Author 1 - Jiajia Ran - Jiajia Ran was responsible for the conception and design of the article, collection and organization of research materials, and writing the paper.

Email: 15025716450@163.com

Author 2 - Xin Yang - Xin Yang was responsible for the collection and organization of research materials.

Email: 2260727997@qq.com

Author 3 - Shaotian Li - Shaotian Li was responsible for the revision of the paper.

Email: 1398998676@qq.com

Author 4 - Wen Peng - Wen Peng was responsible for the revision of the paper, quality control and proofreading of the article, overall responsibility for the article, and supervision and management.

Email: pengwen666@sina.com