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Work situation of patients with stroke who have returned to work: a scoping review protocol

Huixiao Wang ,[1] Yanping Si,[2] Guangliu Wu,[3] Jinpei Wen,[4] Mingying Yang[5]

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[1]Department of Rehabilitation Medicine, The Second Affiliated Hospital of Kunming Medical University, Kunming, Yunnan, China
[2]Department of Nursing, Yunnan University of Chinese Medicine, Kunming, Yunnan, China
[3]Department of Hepatobiliary Surgery, The Second Affiliated Hospital of Kunming Medical University, Kunming, Yunnan, China
[4]Department of Thoracic Surgery, The First Affiliated Hospital of Kunming Medical University, Kunming, Yunnan, China
[5]Department of Nursing, The Second Affiliated Hospital of Kunming Medical University, Kunming, Yunnan, China

Correspondence to
Professor Mingying Yang;
512830070@qq.com

ABSTRACT

Introduction The incidence of stroke in working-age adults is increasing. Many patients face cognitive, emotional and physical impairments and their subsequent influences on returning to work. An increasing number of studies have been conducted on the transformation from unemployment to returning to work. The criteria for returning to work only used the 'working yes/no' as the primary outcome. Although some researchers have investigated the characteristics of patients with stroke who have returned to work, there is a paucity of evidence regarding the work situation. This scoping review aimed to examine and map the work situation of patients with stroke who have returned to work.

Methods and analysis This study will be based on the Joanna Briggs Institute Reviewers' Manual for scoping reviews. A systematic literature search will be conducted using related medical subject headings and keywords on the work situation of patients with stroke who have returned to work. Relevant publications will be searched using 17 data sources, including grey literature sources, published in English or Chinese between 1957 and 2022. None of the articles will have restrictions on the data sources or study designs. The study selection and search results will be reported and presented according to the Preferred Reporting Items for Systematic Review and Meta-Analyses extension for scoping reviews flow diagram. The results will be presented in a table format based on the data extraction tool.

Ethics and dissemination This study is exempted from a medical ethical review. This scoping review addresses the knowledge gap by identifying and synthesising the work situation of patients with stroke who have returned to work, which will provide helpful information for various stakeholders. This scoping review will be submitted and published in a peer-reviewed scientific journal.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Our scoping review conforms to the rigorous methodology manual of the Joanna Briggs Institute.
⇒ Identifying and synthesising data are not limited to data sources or study designs.
⇒ The study follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews checklist.
⇒ The authors and coauthors of this review are Chinese. When interpreting the findings, social environment variables need to be fully considered, such as sociopolitical contexts and cultural differences.
⇒ This study will not be reported in the methodological quality appraisal of the included studies.

INTRODUCTION

Stroke has become a significant public health concern globally. It is the second leading cause of death and disability worldwide.[1] Currently, the incidence of stroke in working-age patients is increasing. Despite improvements in stroke treatment, many individuals still face cognitive, emotional and physical impairments, which influence them on returning to work.[2–4] Return to work (RTW) refers to the behaviour of a patient who leaves the job due to injury or illness and then returns to work and continues to undertake the corresponding work tasks. There has been no unified definition of 'return to work', it varies from region to region.[5–7] A systematic review and meta-analysis indicate that the operational definition of RTW is 'the resumption of any paid work (full-time or part-time), inclusive of self-employment, in a regular or modified capacity, for an average number of work hours per week'.[8] In a recent review, the job category involves returning to the same job or a new job, full-time or part-time work, paid or unpaid work, and skilled or unskilled work.[9] Patients who successfully RTW often show better physical, psychological and social outcomes within 2–5 years after stroke.[9 10] Failure to RTW following stroke has been associated with adverse health outcomes such as cardiac disease, depression, isolation, poor coping skills and higher mortality rates.[11] Hence, the goal of rehabilitation after stroke is considered to restore body functions and further RTW and society.

Returning to work is an essential sign of rehabilitation and returning to normal life. However, the criteria for returning to work only use a single question, 'working yes/no' as the primary outcome.[12 13] Additionally, RTW estimates vary widely between studies

conducted in China and other countries. Employment after stroke estimates ranged from 51.3% to 60.0% within 1 year in the West.[8] However, in urban and rural areas of China only, it is 17% and 11%, respectively.[14] RTW estimates can be affected by different definitions used in a particular study because rehabilitation service provision and employment policies vary in various countries or regions.[15 16] Therefore, it seems inaccurate to judge the RTW situation only by the RTW rate.

Rationale

Currently, the criteria for 'success' in post-stroke employment remain unclear. A recent study reported that some patients needed changes at work, worked fewer hours, and earned less than before stroke. It is not entirely clear the implications of work adjustments for stroke survivors and whether the reported reductions in hours, status, roles and responsibilities are viewed as positive or negative.[4 17] Even though employees RTW after their first episode of stroke, recurrent sickness absence, or resignation may still occur because of recurrent strokes, mental disorders, and fractures.[18] Therefore, the outcome indicators of stroke should not only be based on whether patients with stroke RTW but also on recognising the work situation of patients with stroke who have returned to work. In this review, work situation refers to relevant outcome indicators, challenges and countermeasures for patients with stroke who have returned to work from stakeholders' perspectives. Stakeholders refer to all parties related to the system, such as individuals, groups, or institutions who may positively or negatively impact the decision-making and implementation process owing to different positions, such as patients with stroke, healthcare providers, employers, colleagues, the Employment Agency, the Social Insurance Office and so on.[19 20] Although some researchers have investigated the characteristics of patients with stroke who have returned to work, there is a paucity of evidence on patients' relevant outcome indicators, challenges and countermeasures.[21–23]

A preliminary search of Medline, CINAHL, Cochrane Library, Joanna Briggs Institute (JBI), Web of Science and PubMed resulted in three completed reviews associated with the proposed review. However, none of these studies specifically addressed the author's review objectives. In previous reviews, researchers undertook a scoping review and a systematic review to gain the definitions and characteristics of patients with stroke who returned to work and provide more precise estimates of RTW.[8 9] An earlier systematic review determined the frequency of RTW at different time points after stroke and identified predictors of returning to work.[5] Previous researchers focus on patients with stroke who had not returned to work.[24–26] This scoping review addressed this knowledge gap by identifying and synthesising the work situation of patients with stroke who have returned to work.

Objectives

1. To identify and synthesise relevant outcome indicators, challenges and countermeasures for patients with stroke who have returned to work.
2. To recognise stakeholders related to the work situation of patients with stroke who have returned to work.
3. To describe the success criteria for returning to work after a stroke in different countries or regions.

METHODS AND ANALYSIS

The proposed scoping review will follow the JBI[27] methodological framework and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist.[28]

Eligibility criteria

Based on the JBI, the Population-Concept-Context (PCC) framework is used to determine the eligibility criteria.[27]

Participants

This review will include studies reporting working-age patients with stroke. Working age is defined as the period between the legal working age and the retirement age of a person capable of working, which varies among countries or regions. Regarding the legal working age reported in previous studies,[13] this study included patients with stroke aged 18 years or older.

Concept

This review considers studies that explore the work situation of patients with stroke who have returned to work. The job category involves paid work, including full-time or part-time, skilled or unskilled, employed, or self-employed.

Context

The included studies are not limited to patients from any geographical location. It can be studied in medical institutions and non-medical settings, including hospitals, community clinics, rehabilitation facilities and their own homes.

Information sources

This scoping review has no limitations regarding data sources or study designs. Studies were limited to the period from 1957 to 2022, as papers on vocational rehabilitation services for patients with stroke were published since 1957. Papers written in English and Chinese were included, as all authors are bilingual.

Search strategy

An initial search was performed in MEDLINE(EBSCO) and China National Knowledge Infrastructure (CNKI). We further analysed the search terms in the title, abstract and full text of the retrieved papers to ensure the final search terms, which are shown in table 1. MEDLINE(EBSCO) and CNKI were specifically chosen because the former is the world's most comprehensive source of full text for medical journals, and the latter is the largest and most

Table 1 Search terms

PCC framework	Search terms selected
	stroke; ischemic stroke; embolic stroke; thrombotic stroke; hemorrhagic stroke; brain stem infarctions; infarction, middle cerebral artery; infarction, posterior cerebral artery; infarction, anterior cerebral artery; cerebrovascular disorders; cerebral infarction; brain infarction; brain ischemia; intracranial thrombosis; intracranial embolism; intracranial embolism and thrombosis; subarachnoid hemorrhage; cerebrovascular disease; cerebrovascular accident; cerebrovascular occlusion; apoplexy; cerebral thrombosis; cerebral embolism
Concept	return to work; employment; work engagement; return-to-work; return-to-job; job recovery; back to work; stay at work; re-employment; employee; work reentry; work resumption
Context	—

PCC, population-concept-context.

used online academic library in China. Next, the following 10 English and 2 Chinese databases will be searched: MEDLINE(EBSCO), CINAHL(EBSCO), PsycINFO(EBSCO), PubMed, Embase, Web of Science, Scopus, The Cochrane Library, AMED(EBSCO), JBI, CNKI and Wan Fang. Unpublished studies and grey literature will be searched in the ProQuest, NICE, Open Grey, Google Scholar and Baidu Wenku databases. In accordance with the search terms used to formulate a comprehensive search strategy, see online supplemental appendix I. Finally, the reference lists of all identified eligible studies will be assessed to identify potentially eligible studies.

Study selection

The process of study selection involves the following steps. First, GW will systematically search to identify records and upload them into the reference manager software Endnote V.X7.2 (Clarivate Analytics, Pennsylvania, USA), with duplicates removed. Two reviewers (HW and YS) will then independently screen and evaluate the titles and abstracts based on the eligibility criteria. Finally, relevant papers will be retrieved in full text, and additional full-text papers retrieved from citation details will be assessed and imported into the manager software by two independent reviewers (HW and JW). This scoping review will record and report the reasons for excluding full-text papers that do not meet the inclusion criteria. A third reviewer (MY) will resolve the reviewers' disagreements on the content evaluation at each stage of the data selection process. Furthermore, the studies included in the final scoping review will be fully reported. An example of the review decision process is presented in the PRISMA-ScR flow diagram in figure 1.

Data extraction

Data will be extracted from the research reports using a customised data extraction tool by two independent reviewers. A random sample of 10% of the included studies will be used as a pilot test before review to ensure consistency and accuracy in the data extraction process. Data will be extracted from specific details regarding the bibliometric data, population characteristics, job categories, study design and relevant findings of the review objectives. The data extraction tool is presented in online supplemental appendix II. The draft data extraction tool will be modified and revised as necessary during the data extraction process for each of the included studies. The modifications will be detailed in the full scoping review. A third reviewer will resolve disagreements on the content evaluation at each stage of the data extraction process.

Data synthesis and presentation

We will use both qualitative and quantitative methods of data synthesis, and conduct numerical analysis to provide an overview of the basic characteristics of the included studies. For objectives 1 and 2, we will provide a narrative synthesis of relevant outcome indicators, challenges, countermeasures and stakeholders of patients with stroke who have returned to work and present a quantitative summary of the effectiveness of countermeasures. For objective 3, we will conduct qualitative analysis to provide a narrative synthesis of the success criteria of RTW after stroke in different countries or regions.

Patient and public involvement

Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

ETHICS AND DISSEMINATION

This study reports a scoping review protocol that will conduct secondary analysis of data already published in the literature, so it is exempt from medical ethical review. Since the scoping review is based on the analysis published in the literature without involving any new clinical and basic research, this study does not require ethics approval. The scoping review will be submitted and published in a peer-reviewed scientific journal.

DISCUSSION

This scoping review aims to map the available literature on the work situation of patients with stroke who have returned to work and highlight areas where evidence is missing to identify priorities for further study. Identifying and

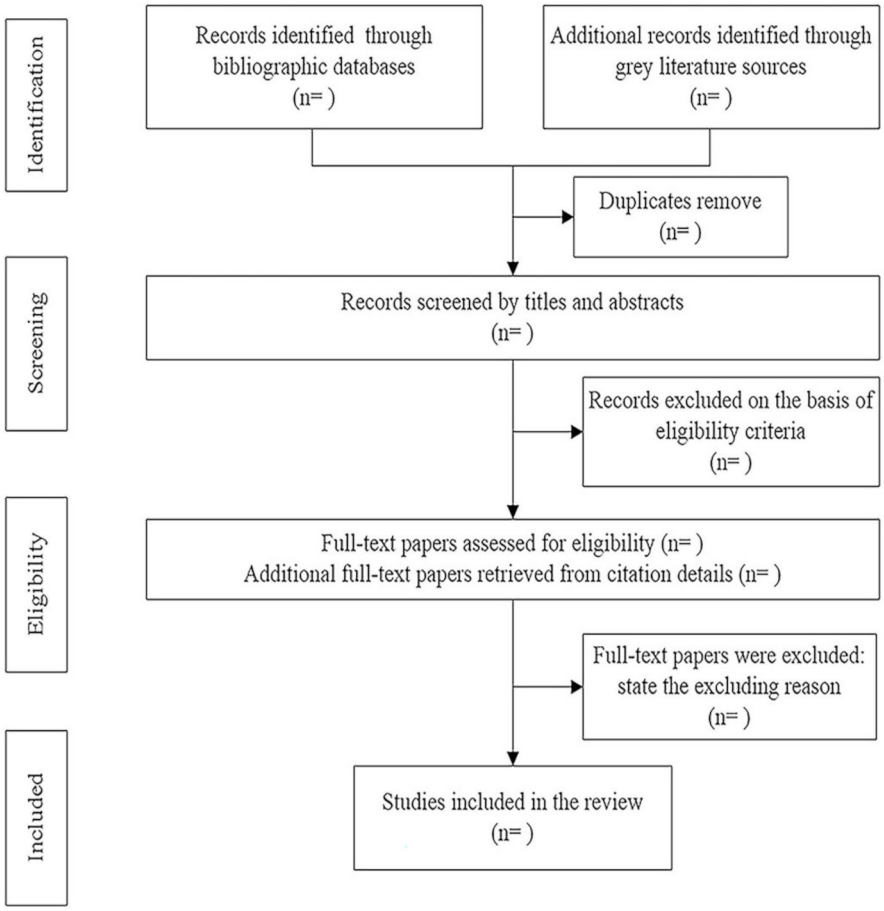

Figure 1 Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) flow diagram. The review decision process is presented in the PRISMA-ScR flow diagram, including the results from the search, removal of duplicate citations, study selection, full-text retrieval and additions from a third search, and final summary presentation.

synthesising the work situation of patients with stroke who have returned to work will promote further application and dissemination of evidence in follow-up healthcare services. Moreover, there are no restrictions on any data source or study design to capture comprehensive sources to answer our research question. Although the various formats and sources can present a significant challenge in searching for evidence, it may reduce publication bias and increase the comprehensiveness and timeliness of our review. Of course, the probable limitations must also be considered. We will not report the methodological quality of the included studies, which may be further investigated in a systematic review and meta-analyses in the future.

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ORCID iD
Huixiao Wang http://orcid.org/0000-0002-3997-9901

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