

Evidence to inform interventions for work reintegration among young stroke survivors: a scoping review protocol

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ADMINISTRATIVE INFORMATION**Support** - Nil.**Review Stage at time of this submission** - Piloting of the study selection process.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202440099**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 April 2024 and was last updated on 25 April 2024.**INTRODUCTION**

Review question / Objective What existing studies describe strategies used to facilitate work resumption for young stroke survivors?

Background Stroke, over the years, has emerged as a significant global health concern, not only due to its high prevalence but also because of its devastating impact on individuals, often leading to permanent disability and even death. It has become a leading cause of morbidity and mortality worldwide, affecting millions of lives annually with approximately half of those who survive a stroke event being left with lasting disabilities which greatly affect their quality of life (O'Donnell et al., 2016). Studies have shown that more than 15% of people around the world will experience a stroke at some point in their lives with regions like sub-

Saharan Africa bearing a disproportionately heavy burden of poor stroke outcomes (Akinyemi et al. 2015). Moreover, advancements in healthcare and rehabilitation services have led to improved life expectancy for stroke survivors (SSVs). While this is undoubtedly a positive development, it has inadvertently contributed to an increase in the burden of care and disability associated with stroke. The growing number of stroke survivors, coupled with their longer lifespans, presents new challenges for healthcare systems and caregivers alike (O'Donnell et al. (2016).

Contrary to previous perceptions, stroke is not solely a disease of the elderly. There has been a notable increase in the incidence of stroke among individuals under the age of sixty-five. This trend has been observed over the past decade, with a significant percentage of SSVs now falling into the younger age bracket, including those under the age of forty-five. This demographic shift highlights

the need for targeted interventions and support for SSVs of all ages (Roding et al., 2003). Work reintegration after experiencing a stroke can be a challenging for many survivors, particularly those of working age. The interruption of the career paths, whether temporary or permanent, poses significant challenges to SSVs' economic stability and social integration. Research has shown that a majority of stroke survivors struggle to resume their premorbid work roles, facing barriers such as physical limitations, cognitive impairments, and societal stigma.

Unemployment rates among people living with disabilities, including SSVs, remain disproportionately high. Global economic downturns have further compounded this rate, creating intense competition for the limited number of available jobs. Many SSVs of working age are forced into early retirement due to perceived inadequacies in their ability to perform and compete in the workforce. This perception is often reinforced by employers, caregivers, and even healthcare providers, further marginalizing SSVs in the workplace (Soeker & Olaoye, 2017).

Addressing the challenges of work reintegration for stroke survivors requires multifaceted interventions that consider the individual's abilities, limitations, and available supports. A holistic approach to vocational rehabilitation is essential, encompassing assessment, treatment planning, and workplace accommodations to facilitate successful integration (Eriksson, et al., 2018). Previous research has explored various vocational rehabilitation interventions aimed at facilitating work reintegration after stroke, but findings have been inconclusive due to variations in study definitions and methodologies. A systematic review by Baldwin and Brusco (2011) examined the effectiveness of vocational rehabilitation interventions for SSVs on work resumption. The review identified six studies published up to 2009, which offered interventions such as vocational counseling, assessment components, and graded return-to-work activities. However, the review noted significant variations in how employment, return to work, and vocational rehabilitation (VR) were defined across the studies, making it challenging to draw definitive conclusions about the most effective interventions.

Rationale Despite the insights provided by Baldwin and Brusco's review, there remains a need for a more comprehensive understanding of VR interventions for reintegration SSVs to work. Existing methodologies may have overlooked valuable insights from expert opinions and case reports, which could inform the development of more effective interventions. Therefore, this article

aims to fill that gap by providing an overview of published interventions addressing work reintegration for SSVs using a scoping review methodology.

METHODS

Strategy of data synthesis The following electronic databases will be searched for data extraction: Medline, PubMed, Conchrane library, Sage Academic Search Complete, and Cumulative Index to Nursing and Allied Health (CINALH). Similarly targeted searches will be performed for grey literature using the methods posited by the Centre for Reviews and Dissemination (2009). This will involve searching for keywords in various search engines (e.g., google), databases (e.g., CATIE), and webpages of agencies and organizations that offer vocational rehabilitation services (e.g., World Health Organization's webpage). Additional records will be identified and supplemented through reference mining; the reference lists of included articles which were included. The information in the various sets of data will be retrieved with a data extraction sheet. A preliminary data extraction sheet drawn up based on TIDieR checklist and guide (Hoffmann et al., 2014) will be used to extract data from first 10 studies and/or grey literature by the authors to examine if the extraction process is consistent with the research questions and the purpose of the review. The charting will be an iterative process in which the authors will continually update the data-charting form. This form will be built into EPPI-Reviewer to facilitate coding of data. Using EPPI-Reviewer's inductive coding function, which allows textual data to be coded line-by-line, the reviewer will qualitatively describe the sources of information with regard to the following variables: authorship, year of publication, country, status of publication (ie, published or grey literature), journal, Medical Subject Headings (MeSH), population/participants, study setting, study design, intervention, outcome measure used and results. The search keywords will include: stroke survivor, vocational rehabilitation, work reintegration, return to work, work rehabilitation, intervention, brain injury, acquired brain injury, strategies, and methods.

Eligibility criteria We will consider all study designs including quantitative and qualitative articles with focus on work reintegration for stroke survivors, full-text articles written in English language. However, priority will be given to intervention or experimental studies that are peer reviewed articles published in the last two decade (2004-2024). Studies will be selected using an

appraisal tool that will be calibrated before commencing the review. This will be carried out by randomly screening 5% of the included studies/citations by the researcher. Inclusion criteria will be revised accordingly based on availability of data. Subsequently the remainder of the search results will be screened independently.

Source of evidence screening and selection

The process through which data will be collected is conceptualized at three levels, these include: key concepts and search terms; database identification, and search process. The key concepts that will be utilized include stroke, stroke survivor, vocational rehabilitation programme, and work reintegration. In order to ensure that studies were relevant in answering the scoping review questions, the meaning of the key concepts in the review questions were clarified while appropriate search terms and synonyms will be generated for the concepts. Following the completion of database searches; the titles, authors, years of publication, and abstracts will be downloaded and extracted into excel spreadsheets to further sort through the articles that met the inclusion criteria for the review. All of the databases selected allows for extraction of titles and abstracts into an excel spreadsheet except CINAHL which allows for extraction of titles and abstracts in a Research Information System (RIS) format that is in the reference manager, Mendeley. The authors will independently assess the titles and abstracts in relation to selection criteria determined by the relevance and worthiness of the study to the scoping review research question. The titles and abstracts will be sorted into a “retain”, “unclear”, and “discard” folder through a collaborative effort of three reviewers (first-level screening). This will ensure credibility for the sorting of articles. For the articles whose title and abstract do not provide sufficient evidence to apply the inclusion and exclusion criteria (articles sorted into an unclear folder), the full text will be retrieved/downloaded and analyzed using inclusion and exclusion criteria screening procedure/techniques. Subsequently, the articles will be re-categorized into the “retain” or “discard” folder. Similar procedures will be conducted for the various databases and/or websites of grey literature. Once all included articles from the database and grey literature search are concluded, additional records will be identified and supplemented through reference mining; the reference lists of included articles; until no new studies met the inclusion criteria. Consequently, all studies that passed the first-level screening will then appraise for relevancy in the field (second-level screening). The second level screening will be conducted to ascertain if the

study provided appropriate description of work reintegration intervention in the study and assess the methodological quality of studies.

Data management All extracted data will be stored and managed electronically using reference management software (EPPI-Reviewer, EndNote) and Microsoft spreadsheet. This will facilitate efficient organization and retrieval of data throughout the review process. Data files will be regularly backed up to ensure data integrity and security. To ensure the accuracy and reliability of the data, quality assurance measures will be implemented at each stage of the review process. This will include regular checks for consistency and accuracy in the extracted data, as well as independent verification of data by a third reviewer. Any discrepancies or disagreements will be resolved through discussion and consensus among the review team.

Reporting results / Analysis of the evidence The reporting of results will involve both descriptive numerical summary and thematic analysis as suggested by Peters et al. (2015). The descriptive summary will include demographic characteristics of the study (such as year and country of publication, sample size, study design) while the thematic analysis will involve a meta-synthesis of extracted work integration interventions provided to stroke survivors. As different bodies of research methodologies will be pulled together in this review, the meta-synthesis approach proposed by Sandelowski and Barroso (2008) will be used.

Presentation of the results The findings of the scoping review will be reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews guidelines. The reporting of results will involve both descriptive numerical summary and thematic analysis as suggested by Peters et al. (2015). The descriptive summary will include demographic characteristics of the study (such as year and country of publication, sample size, study design) while the thematic analysis will involve a meta-synthesis of extracted work integration interventions provided to stroke survivors with the results presented in themes.

Language restriction The search will be restricted to studies published in English.

Country(ies) involved The studies will be carried out in sub-Saharan Africa-Nigeria and South Africa.

Keywords work reintegration; stroke survivor; vocational rehabilitation; young; acquired brain injury; scoping review.

Dissemination plans The study methodology and findings will be published in open access peer-reviewed journals.

Contributions of each author

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