International Journal of
Health Systems and Medical Sciences

ISSN: 2833-7433
Volume 2 | No 11 | Nov -2023

Young Adults Stroke Survivor's Experiences with Psychological Support in High-Income Countries -Qualitative Systematic Review

Prince Nnamdi John [1], Abdulrahman Kolawole Yaya [2], Francis Adeniyi Balogun JP (RCHP) [3] Olasunkanmi Ridwan. A [4], Ayinde Abayomi Oluwasegun [5]

[1] MBBS, Msc Public Health and Health Promotion (MPHHP) Swansea University, Abertawe, Wales United Kingdom
[2] Kwara State College of Health Technology, Offa
[3] Lead City University, Ibadan, Nigeria, Faculty of Basic Medical and Health Science, Community Health Department
[4] University of Ibadan, Faculty of Public Health
[5] University of Ibadan (Public Health Epidemiology)

Abstract: Background. The widely held view that stroke is a condition suffered mainly by older people makes it difficult for people to believe the experiences of younger stroke survivors. Hence, young stroke survivors suffer several forms of emotional stress during a stroke and at the commencement of rehabilitation.

Study aims and Objectives. This study aimed to comprehensively review the experiences of young stroke survivors in high-income countries with post-stroke psychological support alongside the significant barriers to and enablers of these supports. It also compares these experiences between studies carried out in the UK and other selected high-income countries.

Methods. A qualitative evidence synthesis study design is carried out. A comprehensive literature search of the selected five databases and other sources was conducted for eligible studies. The extraction of data and quality appraisal of the papers were performed using the CASP checklist and the JBI framework, respectively. The data was extracted following a two-stage data extraction process. Lastly, a thematic three-staged approach was utilised to synthesise the findings with aimed insights into the research questions.

Results A total of 846 records were identified from all searched sources and screened, with 12 studies selected for synthesis that met the eligibility criteria. From the synthesis of findings, descriptive themes and later four analytical themes emerged, namely I) invalidation due to age; ii) difficulty accessing health services; iii) the effectiveness of rehabilitation and community support, and (iv) facilitators and barriers to recovery.

Conclusion, Recommendation, and Implication of key findings Results from this review revealed the diverse experiences of young adult stroke survivors with psychological support in high-income countries. It also recommends that interventions and all forms of support should be designed to accommodate young stroke patients. Using the social-ecological model (SEM) as adopted from McLeroy et al. (1988) stated that the role of interaction between influential factors such as individual, social, and environmental in health promotion initiatives drives the desired behavioral change to seek psychological support. This could also be leveraged by organisational, national, and international stakeholders in designing effective age-specific stroke care programs and policies to prioritise stroke care among young adults in high-income regions.

Background

As a public health issue, stroke is common and has a devastating effect on the sufferers and their immediate environment (families and friends). It is complex and may disrupt some or all parts of the human motor, sensory, cognitive, and social functioning. According to Corr (2002), stroke may affect daily activities such as self-care, leisure, and employment. According to Corr &Wilmer (2003), expected consequences include chronic fatigue and other affective disorders such as depression. Admittedly, the importance of stroke care as an essential part of global public health is seen to be captured for solution under the Sustainable Development Goals (SDG), which plans to ‘’ensure healthy society, promote the healthiness and wellbeing of society irrespective of gender and ages (SDG 3)”, adopted by United Nations in 2015, aimed to be achieved in 2030 (UN, 2015).In as much as the disease is attributed more to old age, with a mean age of 75 years in HICs (Leys et al., 2002). Research by Peterson et al. (2005) found that 4650 adults of working age suffer from stroke in the UK annually. Studies have found that stroke in young adults between 18 and 45 years differs from that seen in older adults, with the major difference being the likelihood of young adults having strokes of hemorrhagic origin (Johnny & Gupta, 2006; Musolino et al., 2003).

Moreso, there are other causes of stroke in young adults, including genetic predisposition, HRT, and pregnancy (Biller et al., 2000). However, Leys et al. (2002) opine that clinicians often cannot ascertain the cause of stroke in young adults. Young adults who have suffered from stroke are classified as distinct groups and may not be effectively placed into standard services. These groups of people may have different medical needs, with more emphasis on diagnosing the specific cause of stroke. Their rehabilitation may require specific and specialized care for their prospects to work or bring up young children (RCP, 2004: p.18). Other distinct needs and priorities of young stroke survivors include family finances, parenting, sexual function, employment, social participation, and driving (Rowat et al.,2009). These become a challenge because these individuals are still part of the economically active population and experience the impact of stroke on their quality of life more than older adults (Visvanathan et al., 2019; Wada, 2018).

Additionally, these patients experience cognitive disorders, issues concerning their sense of self (self-esteem and self-confidence), and affective disorders (Immenschuh, 2003). Young stroke survivors, when discharged from hospitals, face impairments, including cognitive impairment, immobility, dependency in the activities of daily living (Rakesh et al., 2019). Most of these experiences (physical, social, and psychological challenges) may be devastating and coping with such outcomes will be a great challenge, with many adjustments and variations expected to be made in the individual's social integration, family roles and physical abilities. These are rather invisible effects of the diseases that are most times not identified and therefore are not properly assessed and treated (Keppel & Crowe, 2000). Stroke has a considerable impact on the lives of young adults in different ways, yet there is still no sufficient research exploring these experiences from young survivors of stroke (Banks & Pearson, 2004).

Stroke remains one the leading causes of mortality and morbidity around the globe, with over 12.2 million cases each year, attacking one in every four individuals over the age of 25 years during their lifetime. As reported by Feign et al. (2021), currently, over 101 million people are living with the diseases globally. This sums up to over 100,000 cases each year in the UK and 1.2 million survivors of stroke in this region (Stroke Association, 2017). Adamson et al. (2004) report that stroke, when compared with other conditions, is responsible for the widest range of disabilities, and up to two-thirds of individuals who survive and are discharged from hospitals have disabilities requiring psychological support with activities of daily living (McPherson et al., 2010; Nelson et al., 2008). According to predictions, the incidence and prevalence rates are expected to grow by 34% by 2035 (Feign et al., 2014), thus increasing the disease burden on individuals, careers, and the nation (Langhorne et al., 2011a). In the UK alone, the financial costs of the disease to health are anticipated to rise from £26bn to about £91bn (NICE, 2019).

Several after-stroke interventions have been applied as a way to support the survivors with after-stroke experiences. Although much research has been done on the effectiveness of these psychological supports, the exploration of the experiences of stroke survivors seems relatively scarce, especially for young adults. Yet, the usefulness of context in successful evidence-based practices, such as the perceptions of the patients, interpretations and evaluations are mostly recognized (Bate et al.,2014; Murphy et al.,2014), with evidence showing that these perceptions from patients contribute to the effectiveness of some of these interventions and support (Greenberg et al., 2006). Hence, the experiences of these young survivors are important and needed for a better outcome.

Problem Statement

A large pool of qualitative studies has attempted to explore the needs of stroke survivors globally (Temehy et al., 2022 p. 2). Although these studies have considered post-stroke needs within a month through ten yet of post-stroke (Davoody et al., 2016), they have as well considered different categories of post-stroke care. Areas such as psychological needs (Harrison et al., 2017), emotional needs, rehabilitation, and information needs have all been explored (Eames et al., 2010). In addition, practical steps have also been taken to evaluate the viability of several post-stroke assistance provided to stroke survivors; these were largely targeted at determining how effective the care provided has been (McKevitt et al., 2011). However, research indicates that most of the available studies within this context have focused almost exclusively on adults beyond 65 years. This is consistent with the available data that most stroke patients are within this age range (Ojha et al., 2020; Yamamoto, 2012).

Consequently, young adult stroke survivors may be exposed to standard post-stroke services that they may need help to fit into. Most of these care services, including psychological support, may differ from the wider expectation of this group of stroke survivors. Rehabilitation services targeting adults above 65 years, which are widespread, may be inconsistent with younger adults who need specialized needs regarding education, getting back to work, and even parenting.

Integrating young stroke survivors to standard services designed for over 65 years stroke survivors is challenging as their medical needs after stroke could differ (Lawrence, 2010). With recent studies indicating a rise in the incidence of stroke among adults 18 to 50 years (George, 2020), continuing with existing standard post-stroke services is not sustainable. Given these challenges, an impending public health issue is envisaged. Therefore, this review intends to explore the experiences of young stroke survivors with existing care services, especially psychological support. The review will focus on studies conducted in HICs, and the loopholes are expected to be identified and appropriate responses initiated.

Research Questions

1. What are the experiences of young adult stroke survivors with psychological support"?
2. What are the perceived barriers and enablers of psychological support among young stroke survivors?

Aim and Objectives

Aim

This review aims to acquire an in-depth understanding of the experiences of young adult stroke survivors with psychological support.

Objectives.

The review also intends to achieve the following objectives.

1. To explore young stroke survivors' experiences with psychological needs, assessment, and support.
2. To identify perceived barriers and enablers of psychological support among young stroke survivors.

Materials and Methods

Overview

The systematic review of qualitative literature was carried out based on the principles of QSR to respond to the research review questions (Booth, 2016). The principle entails systematic identification of eligible research studies from the electronic databases using the appropriate search terms and strategy and also searching the citation list, critical quality appraisal of the included research studies using a quality assessment tool for qualitative studies, then followed by extraction of data from eligible studies and overall synthesis and summary of findings, with the aim as to derive insight into the experiences of young adult stroke survivors with psychological rehabilitation support in high-income countries (Booth, 2016; Meade & Richardson, 1997). In addition, the QSR structure applies the ENTREQ Research guidelines (Tong et al., 2012), as opposed to the preferred PRISMA guidelines (Moher et al., 2009), which according to report by De Jong et al. (2021) is favourable for QSR and likewise improve the overall transparency, systematic review process and reporting of the research study's findings. The review is QSR rather than a meta-analysis which arguably reported best utilizing the PRISMA guidelines (Moher et al.,2015; Page et al.,2021). Regardless of this assertion, the PRISMA flow chart was employed to show steps undertaken systematically to identify the needed studies included in the review (Figure 2).

Developing Search Strategy

The development of the systematic review questions preceded the development of a search strategy. Upon analysing the research questions, key concepts and terms were identified. The search strategy first started using the basic terms within the review questions. The strategy development commenced with an initial search on PROSPERO and Cochrane Library (Moher et al.,2019; Schiavo et al.,2019). The search was to confirm ongoing/previous or current systematic reviews with the same review questions. Also, the initial search would provide insight into the possible approach to improve the present review question where necessary (Moher et al.,2019). Priority was on previous reviews on young stroke survivors in the UK and any part of the world and later narrowed to HICs, due to limited research papers in the UK. In the absence of a previous review question like the current one, an extended search was carried out to identify specific keywords and phrases from previous studies within the review context. Results from the search were employed to formulate the final search strategy for the review. Hence, CINAHL and PUBMED were utilised for this purpose, where "stroke" and "young adults" were combined with the qualitative design type and method in the advanced search dashboard of databases and then screened initially for the first 100 records for each of the databases.

The Search terms and Final Search Strategy

From the research questions, concepts were generated and categorized into five "psychological support", "young adults", "stroke", "experiences", and "qualitative research", high-income. After that, other synonyms were added to the concepts, all from the ideas obtained from previous searches. Expectedly, a suitable research strategy became accomplished through iterative processes, which entails applying the combination and modification of key terms to get a more satisfactory final search strategy that would cover the concepts and all aspects of the research questions. Accordingly, the final search strategy emerged using terms from MESH terms and other vital terms gotten from reading the subject area extensively; Boolean operators (OR /AND) and truncations (", *) were put into the search keyword when needed to either combine keywords to search similar words related to the keywords (truncations) or achieve a more focus search (Boolean operators). To ensure a comprehensive search, keywords were searched in titles and abstracts (Booth, 2016). See (Table 3)

Searching Electronic Database

A comprehensive search was carried out utilising five different electronic databases considered Ideal for medical research to increase the reach of available research studies in high-income countries. The electronic databases searched were CINAHL, Medline, Psycinfo, Pub Med and Web of Science from (January 2012 to December 28, 2022). These databases were employed because they have been proven efficacious in prompting the highest number of relevant papers when exploring qualitative research studies of this kind (Macdonald S et al.,1999). The database was employed because it inhabits the most significant biomedical and clinical research studies (Methley et al., 2014); Psycinfo was used to give a broader coverage of the psychological aspect of the review question of the research (Boileau-Falardeau et al., 2022) and Web of science was further utilized to give a more extensive coverage across several databases (Falagas et al., 2008).

The search strategy (Final), formulated by applying the SPIDER tool, is shown in (table 3) below, whilst the strategy specific to the electronic database was modified based on each of the utilized databases as shown in (Appendix 1)

Eventually, studies were managed, checked for duplicates manually and check was continual. The publication year was limited to any range in relation to this review as the phenomenon of interest is long-standing; rather, dates were limited by the search database used.

Table 3: Search Strategy based on the SPIDER framework.

SPIDER Tool	Search Terms
S	Stroke* OR cerebrovascular accident* OR cerebrovascular event* OR transient ischaemic attack* OR “stroke survivor*" OR "stroke patient*" OR ischaemic stroke OR haemorrhagic stroke. "Young adult*" OR "younger adult*" OR young OR "young women" OR "young men" OR "young people" OR "young individual*" OR midlife OR "middle age*" OR "working age"
P of I	psychological support* OR psychological car* OR psychological need* OR psychosocial support* OR emotional car* OR emotional support* OR mental health support* OR "stroke rehabilitation"
D	Interview* OR focus group discussions* OR thematic analysis OR phenomenological research OR hermeneutic study OR hermeneutic- phenomenological analysis interview* OR ethnological
E	experience* OR perspective* OR feel* OR belie* OR opinion* OR understanding* OR view* OR attitude* OR illness experience* OR satisf* OR service user perspective*
R	“qualitative” OR qualitative method*

Searching Other Sources

Furthermore, additional eligible included studies were searched in the citation list of the included studies by employing the eligibility criteria to research studies.

Study Selection

The study articles were selected for inclusion, applying the eligibility criteria formulated using the SPIDER framework. The available articles' titles and abstracts were initially screened for eligibility. Nevertheless, those for which eligibility cannot be ascertained in this first-mentioned step had the full text retrieved for comprehensive reading applying the eligibility criteria.

Design

Inclusion: The peer-reviewed primary qualitative papers with available full-text, entailing qualitative interviews, focused group discussion, phenomenological, ethnographic, ethnological, and hermeneutic studies which are all aspects of qualitative studies, were included. However, the qualitative part of mixed studies, in which the qualitative part was reported separately, was accepted.

Exclusion: Systematic reviews, quantitative studies, secondary studies, or mixed methods in which the qualitative part was not reported separately were not included in the review.

In addition, conference journals, proposals, and abstracts with no accessible full text were excluded.

Evaluation

Inclusion: studies that explored experiences, attitudes, opinions, feelings, satisfaction, or services received in the rehabilitation unit of the health services in stroke care within the age range were accepted.

Language and Date

Inclusion: Only English-published studies of a qualitative study of design or methodology at most ten years were selected for the review.

Exclusion: Studies written in other languages were not selected in the study, as the review is to be done in English, and there is a possibility of losing relevant information during the translation process.

Additionally:

Inclusion: Studies conducted for high-income countries were selected. However, studies conducted in low-income countries but inclusive of high-income countries were only considered if the findings from the HICs were reported separately.

Exclusion: Studies conducted outside the HICs were not considered for the review.

Quality Assessment

After assessing the eligibility of the studies from five databases using the eligibility criteria, in the absence of two independent reviewers, the selected studies were assessed for quality employing a renowned tool known as the critical appraisal checklist for primary qualitative studies (Burl,2014). The tool is recognised as simple to use and readily available for assessing the risk of bias and methodological quality of the selected primary research (Booth, 2009). This tool was chosen due to its strength to evaluate the credibility, relevance and rigour of the selected studies using the ten questions in the checklist (Sapthiang et al.,2019). The assessment was employed to ascertain the strength and weaknesses of each study and how they affect the results and synthesis of the review (Dixon-Woods et al., 2007). The assessment is crucial as it increases confidence in the review findings (Dixon-wood et al., 2007). The ten domain questions from the CASP tool were scored "Yes", "No", and "Can't tell". The study scored "Yes" when the research study met the criteria convincingly, and a "No" when it did not and the "cannot tell" score signifies an unclear. Also vital, reasons and comments for scoring each question domain were stated. Then Looking extensively at the "Yes" scores for each of the research studies across the ten domain questions, a final grade was allocated as either "Low quality "(in the case of a 5 or less YES score), "Moderate quality" (in case of 6 to 7 YES score) and "High quality" (in case of 8 or more YES scores) (Booth, 2009, p.44). While acknowledging the challenges associated with scoring the papers (Munthe-Kaas et al., 2018). **Check Table 4.**

In addition, research articles were examined for relationship with any organisation programming on stroke care or any other possible interest in the research topic, hence making sure there are free from spins/biases such as "misleading reporting" or "inappropriate extrapolation" or misleading interpretation or academic authors exaggerate their findings to hype the possibility of their included being accepted for publications. This was done by wholly going through the research findings and conclusions.

Furthermore, to address limitations associated with checklist assessment of the quality of papers for a review, each of the studies was assessed to highlight their richness concerning their potential to contribute to the success of the review. The term “richness” emphasises the extent to which the study findings provide insight transferrable to other settings (Noyes & Popay, 20017, p.230).

Data Synthesis

The data extraction was followed by an in-depth analysis of the final extract using the thematic synthesis technique (Flemming & Noyes, 2021). The preference was due to the kind of findings extracted from the primary research studies, its simplistic nature and the technique's suitability for developing descriptive and analytical themes (Fleming K et al., 2018; Hegvaert et al., 2016). The data synthesis was done in three stages approach, factoring in the type of study, the synthesis (Thomas & Harden, 2008). The stages were not linear but somewhat overlapped.

Firstly, a free line-by-line coding of the study findings from the included primary studies was followed by assembling the “free codes” from the findings based on similarity into descriptive themes. Finally, analytical themes were developed (Thomas & Harden, 2008), with an intended as to generate new explanations and constructs (Hegvaert et al.,2016). A deductive approach was employed in extracting text from the included primary studies. Adopting the line-by-line coding method was because it enabled concept translation between studies which is an essential aspect of a QSR type (Britten et al., 2002).

The coding process was done manually; no electronic software was employed. However, as this is a student dissertation, the synthesis could not meet the minimum of two independent reviewers’ standards (double sits). However, ideally, the data extraction and synthesis were to have been reviewed by two independent reviewers, which aimed to minimize bias and errors in the study. An attempt was made to minimise the bias usually associated with this study by ensuring the judicious application of all the steps captured in the referenced literature (Flemming et al.,2018; Flemming et al.,2021) on systematic review for qualitative studies and thoroughly following the ENTREQ guidelines of transparent reporting (Tong et al.,2012).

Ethical Requirements

Ethical approval was not needed in this review as participants were not involved. However, allocated a supervisor and reviewer, which can be considered a sufficient check of the validity and integrity of the review following Swansea guidelines.

RESULTS.

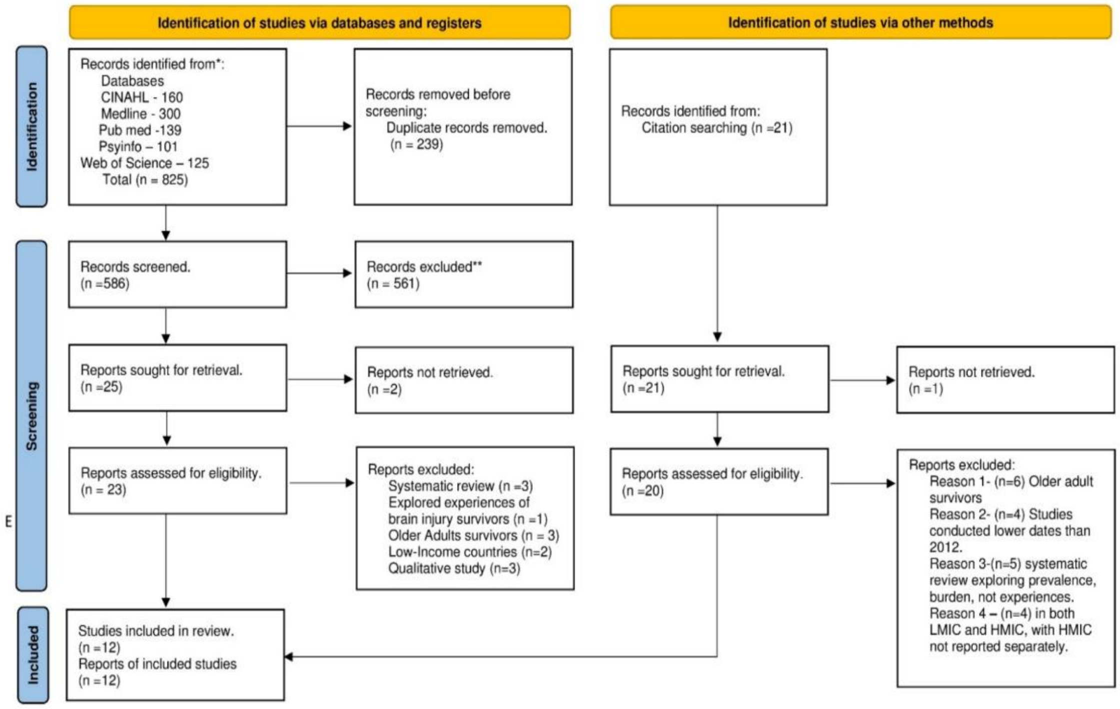
Literature Search

A total of 846 records were identified from all search sources, of which 825 were from electronic databases and 21 from citation searching.

Consequently, 239 duplicates were manually removed from the electronic database records, leaving 586 articles. After that, 561 studies were excluded for failing to meet the eligibility criteria following the title and abstract screening. Subsequently, 25 (2 studies were not retrieved as only the abstract was available without a full-text) studies from the databases were successfully retrieved for full-text screening. Conclusively, the remaining 23 reports from the databases were subjected to full-text screening applying the eligibility criteria, then arriving at a total of eleven included in the review and twelve excluded with reasons. The citation was searched with 21 studies identified for screening, with 1 article not retrieved (No full text available), leaving the remaining 20 studies for full-text screening applying the eligibility criteria, with 1 study included for the review and 19 excluded with reasons. Then conclusively, twelve were selected for the systematic qualitative literature review, out of which eleven were from electronic databases and one from other source (citation searching).

See **figure 2** below for the details of records using a PRISMA flow chart diagram (McKenzie et al.,2020). However, hand searching, and registers were not used.

Literature Search:



Study Characteristics

Table 3 shows the study characteristics of the Twelve selected studies, which are discussed in detail below. These twelve included studies were all conducted between 2012 to 2022. All the studies of which were conducted in HICs. Four of the studies (Alaszewski & Wilkinson,2015; Holloway et al., 2022; Kuluski et al., 2014; Sadler et al., 2014) were conducted in the United Kingdom, followed by three studies (Chen et al., 2022; Shipley et al., 2018; Wolfenden & Grace, 2015) conducted in Australia, two studies (Leahy et al., 2016; Martinsen et al., 2015) conducted in Europe (Norway and Dublin Ireland), two studies (Harris Walker et al., 2021; Hartford et al., 2019) conducted in North America and 1 study by (Chang et al., 2022) was conducted in Taiwan part of China.

Although all twelve studies went through the ethics committee of the various institutions and

were duly approved, five studies (Alaszewski & Wilkinson, 2015; Holloway et al., 2022; Sadler et al., 2014; Wolfenden & Grace, 2015) were funded by the stroke association in the United Kingdom and Australia. Government institutions funded five studies, that is, ministries and NHS, although drawbacks of bias from the procedural process, management, and protocols have been the subject of arguments. In addition, two studies (Chang et al., 2022; Harris Walker et al., 2021) were funded through seed money grants from Flinde and Duke University in the United States and Australia, respectively. However, no evidence of ‘’spins’’ noticed in their findings and conclusion.

All the studies were from different authors. Eleven studies were of qualitative methods, except for 1 study by (Harris Walker et al., 2021) which adopted a mixed study (qualitative or quantitative method). However, all the studies were made of different numbers of participants.

In addition, an important characteristic of the studies is their focus on the study population, which is the primary population under review either receiving services at the hospital or residing in the community in a HIC.

Most of the studies collected their data through interviews (interviews) except one study by Chang et al. (2022) collected through FGD for qualitative studies. However, the quantitative aspect of the mixed method study (Harris Walker et al., 2020) used questionnaires for their data collection, which was not of interest in this review as it focuses on qualitative findings only. Again, for qualitative research studies, the most common method used for data analysis is the thematic analysis, and seven of the studies (Andy & Wilkinson, 2014; Chang et al.,2022; Harris-Walker et al.,2020; Hartford et al.,2019; Kuluski et al.,2014; Sadler et al.,2014; Wolfenden & Grace, 2015) used this method. Also, three studies (Chen et al.,2021; Leahy et al.,2014; Martinsen et al.,2015) used phenomenological and hermeneutical analysis. While two of the twelve studies (Holloway et al., 2021; Shipley et al.,2018) were analysed using narrative and qualitative descriptive analysis, respectively. Finally, one of the twelve studies is a mixed study (Harris-Walker et al.,2020), while the remaining eleven were qualitative methods, out of qualitative research.

Table 1: Study characteristics of selected papers

Author	**Methodology**	**Phenomena of interest**	**Setting**	**Geography**	**Participants**	**Funding Source**	**Data analysis**	**Authors Conclusion**	**Comment**
Harris-Walker et al. (2020). Socio-ecological perspective on factors influencing acute recovery of younger stroke survivors: A mixed methods study.	Qualitative and quantitative methods	Influence of acute recovery for young adults using a socio-ecological perspective.	Hospital	USA	44 young adult participants	Duke University School of Nursing USA	Linear regression and thematic analysis	Certain barriers such as family and societal level influences affect access to care. More access to rehabilitation services is required for the effective recovery of survivors.	*The study covered the desired aspect of the review. #However, method selection was complex. Having used appropriate qualitative tools, the result is considered medium value in rating.*
Chen et al. (2021). Exploring the	Qualitative	Shared experiences with	Hospital	Australia	12 survivors and 18	College of Nursing and	Gadamer's philoso	Discharge planning should be re-	*The research highlighted. the review objectively.*

shared experiences of people with stroke and caregivers in preparedness to manage post-discharge care: A hermeneutic study.		people with stroke and their caregivers			caregivers	Health Sciences, Flinders University, Adelaide, South Australia,	phical hermeneutics	examined. Post-stroke care should be encouraged while identifying individual needs	*The sample size is moderate however, the age of participants conflicts with desired age range based on the review design.*
Kuluski et la. (2014). Life interrupted and life regained? Coping with stroke at a young age.	Qualitative study	Coping with Stroke at a young age	Community dwellers	UK	17 survivors below 55 years	National Institute for health research (NIHR), NHS and DH.	Thematic analysis	Stroke is accompanied by impairment. Effective rehabilitation is required to help young person's reintegrate into a pre-stroke state	*The research used a suitable methodology. The sample size. was modest. and the research addressed the review questions.*
Sadler et al. (2014). Navigating stroke care: the experiences of younger stroke survivors	Qualitative study	Experience of young stroke survivors	Hospital	UK	31 participants between 24 and 62 years	Stroke Association UK	Thematic analysis	Access To support for young stroke survivors is crucial. It influences long-term adjustme	*The study addresses the review question, adopted the desired study method, and highlighted various aspects of rehabilitation including psycholo*

								nt for the survivors	*gical acre.*
Andy and Wilkinson (2014). The paradox of hope for working-age adults recovering from a stroke.	Qualitative study	Experiences of recovery for young stroke survivors	UK stroke association survivors	England	33 participants below 60 years	Stroke Association UK	Thematic Analysis	The recovery dynamics among survivors differ. Post-stroke support including psychological support was viewed as helpful by participants	*The study was able. to highlight the review question. However, the approach to data analysis was not. explicit. Also, the data source was of high quality and useful for the present review.*
Chang et al. (2022). Recovery after stroke: perspectives of young stroke survivors in Taiwan.	Qualitative study, focus group	The perspective of young stroke survivors	Rehabilitation centre in a hospital	Taiwan	25 between 20 and 64 years	Ministry of science, technology and Education Taiwan	Thematic analysis	Stroke recovery is a dynamic process. Limited psychological support and other forms of support constitute a barrier to recovery	*The study addressed. The primary research question. It also used a method of analysis consistent with the review design.*
Leahy et al. (2014). Stroke in young women: An interpretative phenome	Qualitative study	Experiences of stroke among young women	Hospital	Dublin Ireland	12 persons below 50 Years	Irish Research Council for humanities and	Interpretative phenomenology	Addressing the specific needs of young stroke survivors is crucial through effective	*The research addresses the primary review question.*

nological analysis.						social sciences		rehabilitation services.	
Hartford et al (2019). Stroke survivors' experiences of team support along their recovery	Qualitative study	Stroke survivors' experiences of team support along their recovery continuum	Stroke survivor support group	Western Canada	Stroke survivors, caregivers, stroke suppose a group	College of Physicians and Surgeons of BC.	Thematic analysis	The study found fragmented care compounded by inequalities in the rehabilitation program and health services resulting in disempowering rehabilitation process	*Clearly stated research aim and design. However, the recruitment process can be faulted. since it limited participants to stroke group attendees*
Wolfenden & Grace (2015). Vulnerability and post-stroke experiences of working-age survivors during recovery	Qualitative Study	Exploration of the recovery and return to work experiences of young stroke survivors	Higher functioning young female stroke survivors in Australia	Australia	Young female stroke survivors	National stroke Foundation Australia	Thematic analysis	The study concludes that vulnerability may be reduced, and outcomes improved through the provision of long-term psychological support and a better understanding of	*The research topic does not capture. the population under study. The use of 'working age survivors' in place of young stroke survivors can be misleading*

								the impact of stroke on the continuing lives of working-age adults	
Martinsen et al. (2015). Young and midlife stroke survivors' experiences with health services and long-term follow-up need	Qualitative Study	The study aimed to explore young and mid-stroke survivors' experiences with their health services and to identify their long-term follow-up needs	Participants were recruited from a previous feasibility study that ended a year before this study	Norway	16 young stroke survivors	America Association of Neuroscience Nurse	A hermeneutic-phenomenological analysis is composed of three main interpretative steps was conducted	The study concludes that young and midlife stroke survivors appear vulnerable to falling outside the follow-up system due to their struggle to have access to follow-up health services and psychological support	*The variety In Descriptions And participants rich provides an opportunity. for accurate finding*
Holloway et al. (2021). Young adults' rehabilitation needs and experiences following stroke	Qualitative Study	Exploration of young adults' experiences of stroke rehabilitation to inform practice, education, and	Participants were drawn from media and other public platforms	UK	Stroke survivors aged 18-45	Stroke Association UK	Narrative and multimodal analysis	The study concludes that the complex process of recovery follows stroke for the younger adult	*Well-explored research aims with clearly stated findings. Suitable for future research*

(YARNS): a review of digital accounts to inform the development of age-appropriate support and rehabilitation		future health policy						stroke population and challenges for better rehabilitation need to be understood	
Shipley et al (2018). The personal and social experiences of community-dwelling younger adults after stroke in Australia: a qualitative interview study	Qualitative Study	Examination of the personal and social experiences of young adults after stroke	Participants were recruited across urban and rural Australia	Australia	19 younger stroke survivors aged 18-55	National health and medical research council	Qualitative descriptive analysis	The study concludes that more bespoke support is needed for younger adults after a stroke	*Finding give more insight into the possibilities of meeting the unmet needs of young stroke survivors. Although this cannot be generalized due to differences in medical systems in different countries*

Quality Appraisal of selected studies.

Following the assessment of the twelve included studies using the CASP checklist (CASP,2020) for qualitative studies. As shown in **Table 4** below, nine out of the twelve studies (Chang et al., 2022; Chen et al., 2022; Harris Walker et al., 2021; Hartford et al., 2019; Kuluski et al., 2014; Leahy et al., 2016; Martinsen et al., 2015; Sadler et al.,2014; Shipley et al., 2018) were found to be of **high quality**, while two studies (Alaszewski & Wilkinson, 2015; Holloway et al., 2022) was of **moderate quality** and the remaining one (Wolfenden & Grace, 2015) was of **low quality.**

However, all the studies had good methodology, and there needed to be a direct relationship between study quality and the article's source. In addition, all the studies clearly stated their study aims. Furthermore, all studies except for one (Andy & Wilkinson, 2015) did not explain in detail the data was analysed (rigorous data analysis), although the researchers stated the method used, while seven studies (Chang et al., 2022; Chen et al., 2014; Harris-Walker et al., 2019; Hartford et al., 2014; Leahy et al., 2014; Kuluski et al., 2014; Sadler et al.,2014) considered the relationship between research and participants. All the studies had a good study design appropriate for the study except three (Holloway et al., 2021; Andy & Wilkinson, 2015; Wolfenden & Grace, 2015), which are considered equivocal (was not explicitly stated). However, all twelve studies got ethical approval from an ethics board and were clearly stated in all the studies. Generally, all the studies stated their findings, and the research was significant regarding stroke care.

Conclusively, considering the limitation to the usage of the CASP checklist for a qualitative study to critically appraise a mixed method study, particularly on how a mixed study method might perform rather poorly and whether to utilize another checklist for the only mixed method study (Harris-Walker et al., 2019) included in the review such as the Mixed Method Appraisal Tool (Pace et al., 2012). Nonetheless, the overall study quality following the ten criteria for the only mixed method study in question was not affected, as it was scored high. Nevertheless, the one mixed study (Harris Walker et al., 2021) has a rigorous qualitative data analysis and generally of good quality score. However, study quality was not a basis for the exclusion of an article. The complete checklist for each of the eleven studies found in **Appendix 2**

Synthesis of data

Following the review of findings from each of the twelve included studies, as shown in (**Appendix 4: Summary of Table of findings**), the final synthesis of data employed the three-staged thematic synthesis approach (Flemming K et al.,2018). That was applied, as described earlier in **Chapter 3**. In the first stage, a total of 20 "experiences" were generated via the thematic coding technique (coded with no 1-20) with references to underpin the included studies. The second stage entails the 20 experiences categorised into 10 themes, coded with numbers and alphabets. *"These were utilised in allotting important sections of text and sentences within and across the included studies to interpret rather than just aggregating information"* (Thomas & Halden, 2008).

Eventually, in the third stage, the 10 themes were analysed and categorised to give four cross-cutting ideas: **Invalidation due to age, challenges accessing health care services, the effectiveness of community-based support and barriers and facilitators,** thus giving an interpretative analysis of the data and an inductive reasoning approach was employed in coding the themes. The assessment was also completed with direct quotes to elucidate the meaning and showcase its grounding in the data. These themes gave insight into the papers' findings under review and helped achieve study objectives. The details of the thematic coding stages are in **Appendixes four below.**

Theme 1: Invalidation Due to Age

The analysis of the selected papers showed that age is a major factor for the patients under study. Since people are used to seeing stroke in much older people, they become doubtful when it is reported by younger adults. Due to this, younger adults face various invalidations from themselves, the medical systems, and their societies. Therefore, the analysis of this theme generated three sub-themes.

Sub-Theme 1: Invalidation by medical services

"Invalidation" can be used to describe the experiences of most of the stroke survivors who reported being devalued, or discredited by medical services and other environmental aspects they interact with. As reported, the medical system was one of the major sources of such feelings. This was because, during their initial presentation to the emergency department, most of them stated that their conditions were tied around drugs and abuse of alcohol.

"I think, Yes, I was right! I am ill – and they did not listen to me. I hope the nurse feels bad – the one in A&E who shouted and accused me of being on drugs!" (Holloway et al.2021. p.14)

Some also stated that even in the medical system, stroke was dismissed as a diagnosis judging by their young age.

According to one "*The problematic stereotype of stroke being a condition of old age resulted in some of the participants feeling 'different' and 'old before their time.*" *(Leahy et al., 2014. p.673).*

Since they are viewed this way during diagnosis, they feel complacent going back to the hospital for rehabilitation due to their inability to face "unnecessary" questions from the medical system.

Sub-Theme 2: Invalidation by Society

Considering their age and the misconception that stroke is a disease of significantly older adults, society often shows shock and disbelief when young stroke patients disclose their diagnoses. In extreme cases, people argue with them when they state their medical conditions.

" *I argued with someone because they refused to believe that I had had a stroke… [exclaiming] "you're just too young, that's stupid, that's ridiculous*" *(Shipley et al., 2018. p.6).*

Most of them also experienced frustration from being stigmatized that their conditions must have been caused by smoking or drug-taking. According to one report

"They sort of look at you like, "oh, were you on drugs… or are you a smoker?" *(Shipley et al., 2018. p.6).*

Again, the ones courageous enough to apply for other support in the monetary form most times get turned down because no one believes their state. One participant reported,

"I never wanted it [income support] for long, just a few months to help us, and they said no, I was too healthy for it." (Wolfenden & Grace, 2015. p.4).

According to the analysis of their systems, it can be deduced that these forms of stigmatization from society make them see no need to seek psychological support since it may result in them being judged for a condition, they did not inflict on themselves.

Validation through support groups was not viewed as a suiting experience. A participant with an invisible cognitive disability from stroke reported feeling odd whenever in support groups. Since the disability is invisible and he looks young and vibrant, people look at him and ask quietly, "why are you there with us".

"There is a different … sense in everyone's head of what exactly a stroke is … some people are a little bit dismissive … the fact that you are not going around with a lame leg, it can't have been that bad." (Leahy et al., 2014. p.673)

Some young stroke survivors feel they should not be in such support groups or should not be subjected to such psychological support since the individuals in the group seem not to understand their conditions.

Sub-Theme 3: Invalidation of Self

This is another theme consistent with most of the studies reviewed. For effective psychological support to take place, a survivor must hitherto accept the condition to be able to participate fully and accept the support provided. One of the most consistent findings was that most survivors developed a modified attitude toward the future after clinic discharge. That can be a result of distress propagated by thoughts of the opportunities that have been denied to them because of the complex physical and mental efforts they put into the management of their condition; most declared their inability and unwillingness to consider further out of hospital psychological supports. For example, one participant stated,

"*I tend not to think so much as my future … I have to confront myself with my future, so I don't think about it very often … I sort of life at the moment, I suppose" (Andy & Wilkinson, 2015. p.183)*

Others discussed this reluctance to undertake further support due to their commitment to live for the present without trying to stress themselves more than the disease had stressed them. Some also feared the damaging effect their feelings of anger may portray during rehabilitation might have on their loved ones and therefore decided to cut the hopes of going in for more rehabilitation or asking for more psychological support.

The papers also discussed participants who demonstrated self-driven Invalidation. Another example is the report from some participants who stated lower self-worth.

As a result of not measuring up to things, they used to do in the past. Again, some of them with disabilities found it difficult to interact and socialize a major means of obtaining psychological support.

"*I'm battling feeling embarrassed and… self-conscious because you're not walking like a normal person" (Shipley et al., 2018. p.7)*

At some point, most participants seemed to have internalized the stigma associated with disabilities in society. This feeling makes them indifferent to psychological support since it puts them in a position to interact with people that might end up judging them because of their conditions.

Theme 2: Challenges accessing HealthCare services.

Within this theme, their experiences regarding the information on how to locate healthcare services for improved well-being after stroke was highlighted. Participant responses sampled from the reviewed articles indicated delayed cases to rehabilitation services after stroke, including psychological support. The quality of health services available was also questionable from the participant's perspective. A lack of a standard for evaluating the quality of services was also reported an indication of a lack of proper information for young stroke survivors. The uncertainty regarding their physical well-being, which is a consequence of disabilities associated with stroke, was also identified. Consequently, three subthemes were identified within this theme. Their analysis and reference to excerpts from some of the reviewed studies are presented accordingly.

Sub-theme 1: Negligence of Psychological wellbeing

Results obtained from some of the articles under review highlight the importance of access to appropriate rehabilitation services after stroke for young stroke survivors. Unfortunately, results from some of the studies presented the frustration of most stroke survivors concerning the exclusive focus of providing basic care and rehabilitation services with little or no attention to their psychological well-being. Some participants expressed shock at the focus on physical well-being while their psychological state, which is critical to recovery, is neglected. Some excerpts are presented below.

"It's foolish things I'm going through just now. I think the GP examine my blood pressure. [I] everybody is concerned about my physiotherapy, checking my arms and legs, but who is checking what's going wrong in my head? [I] (Martinsen et al., 2015, p. 31)

"I had to run after my doctor to ask him about the tests and this and that...I want to know because I want to do certain things to recover properly. Unbelievable. Treated like a number. I don't know, or a case, or something...It's my body, my health...I wanted to approach my recovery differently, if I may. I started Chinese medicine; I do yoga, acupuncture, you know, seeing an alternative method to recover instead of taking pills". (Mr. Panetti), *(Sadler et al., 2014, P. 1914).*

The above statements extracted from participants' responses from the reviewed studies highlighted their need for psychological well-being. However, in most instances, such needs were barely met, communicating their experience regarding psychological support and the issue of difficulty accessing medical services.

Sub-theme 2: Lack of necessary information on services availability

Data obtained indicated that most young stroke survivors lack adequate information on the services available for their recovery plan. Some results indicate a long wait for information from survivors, which never came when they should, thereby depriving them of the much-needed support. Some complained of worsening mental health due to deteriorating physical conditions and wondered about the reason behind the limited information on psychological and rehabilitation services. The challenges were complicated as most available information was specifically designed for the elderly. Some of the excerpts include.

"Heard at the hospital and found a document about stroke [on Internet] that suggested a [brain scan] once a year during the following five years to check [if the brain] was [normal]. But that's probably for the elderly. I haven't been offered this, so I've asked about it. I haven't heard anything" (Martinsen et al., 2015, p. 31).

"My nurse, (name), played a major role in my recovery; she arranged a cognitive assessment for me at the rehabilitation centre and provided me with all the information I could ask for – and I felt that the doctors had failed to provide (Female, 21)" (Holloway et al., 2021, p. 14).

From the excerpts presented above, most young stroke survivors complained of a lack of relevant information on their journey to recovery after stroke. In most instances, the healthcare professionals failed to provide the information reflected in negative experiences during the period support was needed for smooth recovery. The view was expressed in most reviewed articles.

Sub-theme 3: Absence of tailored post-stroke services

Most of the articles highlighted complaints by young stroke survivors regarding the suitability of post-stroke services available. In most cases, some studies' participants reported encountering care services designed for older stroke survivors. In essence, there was an apparent lack of tailored psychological support services and physical support service for young stroke survivors. There was a report of a lack of individual services post-stroke. Although this was a prominent report from a study conducted in Norway, generally, it is perceived that such coordinated services for individuals were coon in older patients than in younger patients. This contributes to a negative experience with psychological support, amongst others. See excerpts below.

"Being treated differently was disempowering and prolonged the patient role and led to feelings of frustration: 'my mother is a real fusspot" (Chang et al., 2014, p. 674).

"I found going to the stroke ward extremely distressing. If I had been in a ward with four blokes the same age as me, I wouldn't have found it quite so distressing, but to see old ladies who had had severe strokes, I found very distressing ..." (Andy & Wilkinson, 2014, p. 180).

From the opinions sampled above, participants' responses highlighted a lack of individual and young person-specific care services available for providing care to young stroke survivors. Hence the review identifies a lack of coherent post-stroke support services designed to accommodate the unique needs of young persons.

Theme 3: Effectiveness of community-based support

From the analysis, another consistent report across several papers reviewed asserts that community-based support was more effective than medical rehabilitation. Most of the participants reported the effectiveness of the support they received from peers and family members during their recovery period and stated that they loved to be around people closer to them who would not judge them. Two sub-themes emerged from this theme, which has been analysed in the paragraph below.

Sub-Theme 1: Peer support over rehabilitation

Young stroke survivors who managed to break through the barriers of Invalidation reported feeling connected to some rehabilitation services in their environments. However, the availability of these services could vary according to the system's development levels and the resources invested in them. The long waiting list was reported as a problem in the rehabilitation. As such, individuals who needed more effective services were advised to go through private services, which are affordable and available in their community. Many of the individuals reported adequate access for cases involving physical difficulties. However, rehabilitation services were reported to be less effective for cognitive disabilities.

Also, some of the participants reported that for the rehabilitation services to be more effective, they had to come to terms with the fact that they needed help from someone else. According to them, one must not be ashamed to seek help.

"*Accepting help from others and not being ashamed to ask for help has been important too" (Holloway et al., 2021.p.19).*

A further report from young stroke survivors revealed that young adults felt isolated from some rehabilitation services where they did not meet the criteria due to their age. Hence, they stated that the availability does not support groups is beneficial for young survivors to cope with the challenges and develop a more positive perception of emotional support. For example, one of the participants in one of the reviewed papers shared an experience, as seen below.

"*My first post on the group was a very depressed one – I was offered so much support from the group – tips on how to manage the after-effects down to music recommendations that helped to calm anxiety! It's lovely to talk to people going through the same things and get that reassurance. I never realized how common strokes were, especially in younger people" (Holloway et al., 2021.p.20).*

Another participant supporting the effectiveness of peer support stated this.

"*My friends invite me to get together occasionally, and I always join them. They don't treat me like a patient and are always thoughtful. I read their encouraging messages every day. These messages are important to me." (Chang et al., 2022.p1979).*

While they felt that rehabilitation as a psychological support was less effective for them and always perceived it as a service for older people, peer support was more result oriented.

Sub-Theme 2: Environmental support

Another important aspect of the psychological support received by young stroke survivors is that which they got from their immediate environment, their families. They reported that family support is one of the most common facilitators of recovery. Most of the participants reported the crucial roles of their spouses, parents, and siblings in aiding their psychological recovery.

"It's my wife and my son… because I can't let them down. They supported me the most. My son came to accompany me on my walks every day after school. We walked more than 10 laps around the hallway daily, and he insisted on accompanying me without a complaint". (Chang et al., 2020.p5).

"I feel that family support was most important for my recovery since I had a stroke."

Theme 4: Facilitators and barriers to Recovery

This theme describes the review results highlighting the perceived facilitator and barriers to effective psychological support services for young stroke survivors and how they influence recovery. In each case, results from the studies identified barriers and facilitators as having different dimensions, and they could be personal (facilitated by survivors themselves) of the environment. Regardless, facilitators and barriers played central roles in whether the recovery process is fast and effective or slow and demoralizing for survivors. Consequently, two sub-themes are discussed under this theme.

Sub-theme 1: Facilitators for recovery from stroke

Research suggests that certain factors can facilitate recovery from stroke. These factors can emanate from individual stroke patients or sources outside them, often considered environmental factors. The review highlighted personal and environmental facilitators as key to recovery. On a personal level, survivors report that a positive attitude remains a critical facilitator for their survival and subsequent recovery. Regardless of the level of care rendered, results from reviewed studies identify self-confidence and positive self-image as key facilitators to recovery. Some references to personal facilitators from some of the articles included.

But you're going to feel all different ways. You're going to feel resentful; why me? You're going to feel down in the dumps, you're going to feel frustrated, you're going to feel absolutely everything *under the sun, and it's just, it's just the process of accepting it and getting better, getting stronger. (Kuluski et al., 2014, p. 8).*

Again, the studies identified environmental support as those from family, community, and rehabilitation support. Survivors eulogized the role of family, friends, peers, and community support in facilitating recovery. Consider the excerpts below.

"I have had the most tremendous support from my family and friends, and I think that has made the biggest difference. Everybody around me has just been so good, I think. That's helped me with my overall outlook on things that I've just kind of just got to get on with it". (Kuluski et al., 2014, p. 7)

The preceding excerpts indicate the role of family, friends, community, and the patients in accessing necessary support for recovery from stroke.

Sub-theme 2: Barriers to recovery from stroke

Unlike facilitators, the experience of young stroke survivors indicates that certain factors can also constitute barriers to access to psychological support and total recovery. Similar to the facilitator to recovery, barriers can also be classified into personal and environmental, according to data available from review articles. Psychological, and physical factors can frustrate recovery and effective utilization of available support services after stroke. Most participants in the studies reviewed complained of cognitive and physical difficulties frustrating the impact of support and recovery to a pre-stroke state. Furthermore, results reveal that stigma and accompanying embarrassment constitute a barrier to their recovery. In some cases, they are discouraged from accessing rehabilitation services, among them psychological support, due to incessant stigma from the community. They indicate that such experiences slow recovery and getting back to work as expected of any young person. See excerpts below.

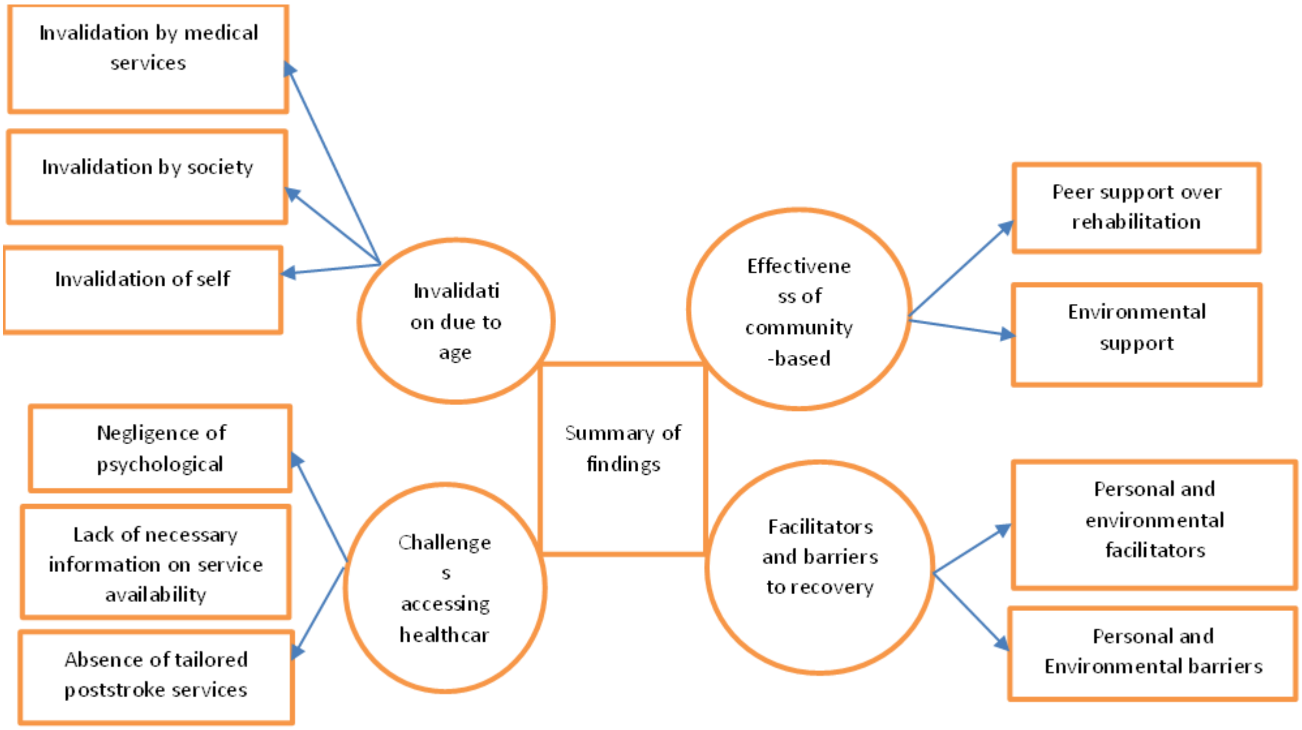
"*Because my leg is like this, I don't feel like doing risky things. For example, I used to like to walk on the beach, but I don't do it anymore because my leg has no strength." (Chang et al., 2022; I., 1980).*

"What was… disappointing, are they kept on writing him off saying he [Eric's stroke survivor] would never speak again. He would never walk again. He would never do this. He would never do that… I found them extremely negative" (Hartford et al., 2019, p.5).

As seen above, excerpts from the papers reflect participants' displeasure concerning the impact of personal and environmental barriers on the recovery of young stroke survivors. These barriers affect their access to care, integration into the community, and commitment to recovery.

Coupled Framework showing findings.

These summaries of the review findings above can be employed to develop a framework as illustrated below, that studies in the future could explore to ascertain its applicability in other settings in terms of the experiences of young adults with psychological support.



Discussion, Conclusion and Recommendation

Discussion

The review aimed to contribute new and nuanced insight into understanding the experiences of young adult stroke survivors with psychological support and how their experiences affect recovery and reintegration into society. This SQR summarizes available evidence for the experience of young stroke patients with psychological need. The age category for "young" stroke survivors differs markedly in studies, including ages 18–49, 18–55, and 18–65 (Hamedani et al., 2001; Murphy et al., 2019). Rights Protection Law (China) opined that individual aged above 60 as "older adults." This SQR depicts "young" stroke survivors as those between the ages 18–64 (China. gov,1996). Judging from findings in the review relevant stakeholders need to comprehend the importance of understanding the peculiar experiences of young adults as a working age group with psychological support and the practical implications of the shortfalls and negligence seen in current support options for younger adults after stroke. These, therefore, should not be seen as just biomedical but also as social conditions requiring a collaborative individual, economic and environmental policy direction to address (Krug et al., 2002). Health promotion is an extensive approach to healthcare that entails physiological, social, emotional functioning and integration, aimed at enabling them to take charge of their health (Naidoo & Willis, 2005). I would dwell on the SEM for the discussion of this review findings and its meaning to public health (Golden & Earp,2012). The reason for adopting SEM was due to its effectiveness in improving the health of larger population of people, as they target all levels of the social-ecological strata (Smedley & Syme, 2000). Morris et al. (2015) recognises the social-ecological complexity of psychological care in young survivors to encompass environmental considerations. Ideally, the young survivor is empowered throughout recovery, with healthcare professionals supporting decision-making in achieving rehabilitation goals. Peoples et al. (2011) identified "Power and Empowerment" as a key term in the experience of survivors during stroke rehabilitation. The integration of these SQR review findings identified areas of expansion, divergence, and convergence of understanding of experiences with psychological care among younger stroke survivors. At the individual level, data integrates the impact of individuals, which considers how one's attitude and experiences influence its trajectories. The family level encompasses one's social circles, such as the relatives and peer group, which impacts on the experiences of survivors. The societal level explored the information and health care accessibility data findings addressed concepts. The policy influences pinpointed the role of policy direction. Thus, divergent of influences may intersect across SEM levels to influence psychological experiences and health outcome.

Individual Influences.

At the individual level of SEM, the first notable theme from the papers was invalidation by oneself, society, and the medical system. This involves the feeling of dismissal, devaluation or being discredited, which the survivors experience after a stroke. This primarily manifested in a survivor being hit with shock and rejection whenever they made their diagnoses known to people. This is followed by presumptions about the cause of their stroke and dismissal of non-physical impairments suffered because of a stroke. These invalidating experiences were common among young stroke survivors and driven mainly by the generally held perception that stroke is a disease for the old and people who have chosen unhealthy lifestyles.

This is in line with the literature finding of frustration and isolation after the fight with stroke in young people because of invisible impairments being overlooked by the rest of the community (de Bruijn et al., 2015; Naess et al., 2010). In addition to the complaint of invalidation from others, the papers also reported that young adults demonstrated self-invalidation in the form of reduced self-esteem after getting down with disabilities and their impairments being reduced as mere fabrication. This is also consistent with the known concept of ‘internalized oppression', which occurs when an impaired individual internalizes prejudiced views from people (Reeve, 2006). These wrong perceptions from people and other forms of invalidation deter them from going further to seek different forms of support after a stroke. They feel there is no need since they might end up being wrongly judged by people who do not understand how they feel, people who see their conditions as being fabricated, considering their age.

Therefore, understanding these experiences and their effect may offer an opportunity to adequately and effectively address these issues to enable young stroke survivors to freely seek post-stroke support. Also, these findings may further raise the need to incorporate programs like building resilience into rehabilitation for younger stroke survivors (Martz & Livneh, 2016). Again, findings show that while younger stroke survivors may experience most of the same psychological and functional consequences as the older adult population, some specific effects appear to be age dependent. For example, the papers reviewed report challenges of social participation and mental well-being which are also problems for older people; however, Invalidation using the old age concept affects only the younger survivors.

The review has insight into difficulties associated with recovery among young stroke survivors. However, aside from these challenges, the review result revealed certain factors considered crucial in the attempt to facilitate recovery for young stroke survivors. Sub-themes within this theme indicate that for each of the facilitators or inhibitors, two categories exist: personal and environmental factors. The information available from the review identifies personal factors that facilitate recovery as a positive attitude. Participants in this context argued that maintaining a positive attitude was key to their recovery regardless of available care services. They emphasized how a positive attitude resolved most of the psychological challenges they faced as young people suffering from a stroke. In addition to this, self-confidence was proven to be positively associated with recovery by participants. This discovery corroborates a similar study by Lee & Kim (2014), which reported a positive association between self-esteem, confidence, and intrinsic motivation with patient recovery from stroke. This view was as well expressed by An et al. (2019) on the influence of esteem on stroke patient recovery. Hence, caregivers must ensure appropriate psychological support that amplifies positive attitudes and self-confidence in young stone survivors going through rehabilitation.

Furthermore, the papers also gave insight into factors that constitute barriers to recovery for most young stroke survivors. Barriers can also be linked to the individual or their environment. On the individual level, psychological factors and physical factors emanating from an individual can slow recovery. Factors such as low self-esteem, depression, impaired physical and cognitive ability can constitute barriers to recovery from stroke. Most of these factors affect the patient’s ability to use rehabilitation services even when available. The finding echoes the result of studies such as that by Das & Rajanikant (2018), which reported that post-stroke depression affects recovery negatively. From the perspective of environmental factors, the review indicates that stigma from the community and poor access to support within the community can constitute barriers to recovery for young stroke survivors. The finding agrees with a study by Sarfo et al. (2017) on the effect of stigma on stroke survivors and how it could result in other medical complications for the patients. The findings, therefore, indicate the need to control stigma against young stroke survivors as it shapes their experience regardless of the rehabilitation services they receive.

Conclusively, stroke in young adult stroke survivors, can be linked with stigmatization and discrimination as in other mental health disorders as captured in reviewed papers from self, structural and societal discrimination. However, studies have shown that even expensive and large-scale anti-sigma campaigns have not yielded desired results in achieving positive attitudes toward the issues (Sartorius, 2010; Henderson & Thornicroft, 2013). Building campaigns through strategic media campaigns on target audiences such survivors, health professionals, and the social network could influence positive health-seeking behaviour. This is consistent with a study by (Rusch et al.,2005) that alluded in-depth influence of these individuals' interaction in seeking mental health support, could make for a needed behavioural adjustment towards seeking psychological health services and return to work.

Family and community-level Influences

At this level of SEM which encompasses the relationship with the close social circle, was discovered as a facilitator of recovery. According to the papers reviewed, factors within this category include support from family members and community. These factors, although outside of the control of the stroke patient, influence their response to rehabilitation and eventual recovery. Fortunately, these results reflect a similar result presented by Visser-Meily et al. (2006) on the role of the family in stroke rehabilitation. In addition, previous research, such as that by Belagaje (2017), emphasised rehabilitation's role in facilitating recovery from stroke. Consequently, it is believed that the review informs the need for families and communities support institutions to understand and fulfil their responsibility of contributing to the recovery of young stroke survivors. This will reduce cases of stigma often reported by young stroke survivors.

Although stroke has been described as a life-changing condition, the young adults also reflected on rehabilitation, stating that it heralds opportunities for quick psychological recovery and other forms of self-worth. However, they stated their struggles with accessing rehabilitation benefits, citing stigmatization from other groups who viewed stroke as a disease for much older people. The participants reported feeling more comfortable getting support from their peers and family members. They cited the effectiveness of their support from people closer to them rather than going for rehabilitation in places where they would end up being judged, or their stories are taken as fabricated. The participants expressed frustration with the lack of age-sensitive rehabilitation programs, insufficient programs for younger people and lack of effective participation. According to the opinion of Dale Stone (2005), one of the issues with experiencing a stroke as a young adult is a popular consciousness; young survivors of stroke are not visible, and rehabilitation programs virtually focus on older people. The study also recommended social support groups specific to younger adults as an effective form of psychological support for younger people. This underpins the statement of the participants that they felt better being around peers, support groups and their families compared to other forms of rehabilitation.

Another theme obtained from the synthesis of the papers is the effectiveness of rehabilitation and community-based support. The participants' description of the whole stroke journey helped them reflect on their journey and made them make sense of what they had been through, and the things considered important to be publicly shared (Beal, 2013). According to the assertion of Frank (2013), telling stories about the events of illness is a form of support and an attempt to express experiences that cannot be described medically. The participant's sighted the uniqueness of stroke rehabilitation as it evokes a powerful impact considering the changes they have experienced in their lives. The finding echoes the result of studies such as that by Das and Rajanikant (2018), which reported that PSD affects recovery negatively.

Finally, From the review papers, the family, peer group, and community are vital settings in shaping the experiences of the survivors. These settings are vital for HP (Naidoo & Willis, 2011).

Establishing relationships in the settings in the review could enable impacting other transferable skills, thus enhancing "emotional literacy" toward seeking support, hence improving outcome and well-being.

Societal Level Influences

At the societal level of influence in the SEM, according to results obtained from the reviews, most participants emphasize challenges in accessing prompt support services post-stroke. The results also revealed that these challenges were independent of the patients discharged from the hospital. Although they expressed the desire to receive appropriate psychological interventions as the focus on physical care was inconsistent with their need, such help was coming to a limited level. Although specific interventions were provided in most instances, gross failure in service delivery was witnessed in follow-up services. Unfortunately, the frustration with limited access to follow-up care was expressed across the board, considering the regions where the reviewed studies were conducted.

Consequently, the result indicated that stroke survivors access limited psychological services, resulting in delayed recovery. The findings are consistent with previous research on access to follow-up services by Salisbury et al. (2010) & Roding et al. (2003). Furthermore, the negligence of the psychological needs revealed in the review could result in their physical, psychological, and social needs not being addressed for effective integration into their communities. It also increased their vulnerability to further deteriorating conditions (Eriksson et al., 2006) during the period they were supposed to successfully go through the recovery phase. The results further highlight earlier reports on the challenging experience of young stroke survivors by Robinson et al. (2009).

Access to adequate information regarding the available services for effective recovery was also identified as a challenging experience among young stroke survivors. This challenge, highlighted within the countries examined, further complicated the psychological conditions of young stroke survivors. According to the papers reviewed, young stroke survivors seem to have little or no information regarding available services. The system of post-stroke care operated within the study environment reveals lack of an IMS and how it can affect access to follow-up care for young stroke survivors. Consequently, the papers highlight the importance of information in providing young stroke survivors with rehabilitation services and how they can be accessed; this is like the view presented by Peoples et al (2011). This view resonates with the report of similar studies, such as that by Walker et al (2013), on the importance of information on available services within a given community. Therefore, appropriate mechanisms and needs are set up to ensure young stroke survivors receive up-to-date information on the care services they require, we can get them, and how to meet their peers within communities facing similar challenges. The apparent lack of services designed to cater to young stroke survivors was another noted discovery from most of the papers reviewed. This was challenging as most rehabilitation processes were designed for older adults. A review of this trend is essential to ensure suitable support and care services are rendered to young stroke survivors.

Policy Level of influences

Once discharged to the community from the hospital, from the review papers, the participant experienced lack of access to rehabilitative services, an absence of tailored services and limited information on service delivery. This challenge was due to restrictions in existing policies on the delivery of services and information to these young stroke survivors. In addition, the stigmatisation and discrimination (Invalidation) from stakeholders could be due to the failure to implement policies. This is inconsistent with policy such as the "health in all policy" (HIAP) considered a strategy to recognize solving health determinants in sectors outside the health sector to solve stroke issues in the young (Wahl beck & Taipale, 2006).

Conclusion and Recommendation

Conclusion

The prevalence of stroke among young adults has been on the increase in recent times. This can be attributed to lifestyle issues exposing more young persons to multiple stroke risk factors. Despite the unfortunate development, support for stroke survivors after treatment is essential for recovery to a pre-stroke state. However, this can be difficult due to the physical and psychological burdens associated with strokes. In a young person, these burdens seem to be unfortunate as most persons within this category are at the stage in their life where work and raising a familiar are important. Fortunately, several rehabilitation programs have been developed over the years to tackle the challenges of recovering from a stroke. Psychological support represents a major component of this program. When adopted and implemented, it plays a central role in the patient's ability to recover while going to the other rehabilitation programs designed to address different disabilities resulting from their stroke. It will also enable them to integrate into their community. Unfortunately, the experiences of young stroke survivors reveal numerous loopholes that need to be addressed for effective care post-stroke.

This review revealed that most young stroke survivors find it difficult to access care services during their journey toward full recovery from stroke. Most care providers often neglect psychological support designed to address their psychological well-being. The review shows that psychological support is essential for a positive attitude that expedites patients' recovery. Limited follow-up programs were available, and information on these services was scarce for young stroke survivors in most cases. In addition, the review revealed that most available support services are unsuitable for young persons as they were designed to suit older adults. The findings demonstrate the need for urgency in developing and communicating support services, especially psychological services tailored for young stroke survivors. This represents a piece of critical information for policymakers within the healthcare sector.

Furthermore, the review demonstrates that most young stroke survivors experience different forms of invalidation during their recovery. Invalidation manifests in terms of their age, linking their condition as an anomaly. This is due to the perception that stroke occurs exclusively among the elderly. The invalidation extends to a medical system where survival is designed mainly for the elderly. Unfortunately, this has caused most of these young people to have self-invalidation, which is detrimental to their recovery from stroke. Above all, these challenges and community stigma constitute barriers to recovery from stroke for most young adults.

Fortunately, the review demonstrated the effect of facilitating barriers to recovery from stroke. A positive attitude, self-confidence, and a positive self-image are essential tools that can speed up recovery regardless of the rehabilitation technique adopted. This demonstrates the importance of psychological support and why it should be prioritised in rehabilitation processes. The review also demonstrated environmental factors such as community, family support, and effective rehabilitation as facilitators of recovery. In addition, most challenges are consistent within HICs considered during the review. Consequently, healthcare professionals, survivors' families, and their communities have roles to play in shaping their experience while they recover from a stroke.

Furthermore, international agencies and governments can leverage the findings from this review in designing or redesigning effective programs and policies in HICs, which could aid in prioritizing stroke care.

Recommendations

The review has highlighted the difficulties braces by young stroke survivors in accessing care and their experiences with all-around psychological support. Since maintaining good emotional well-being is part of reintegrating these individuals into the system, it becomes sacrosanct that the findings of this review as regards their experiences should be applied as a guide for a better outcome. The adoption of a person-centred perspective within this group could serve as a form of encouragement for innovative practices that would benefit young adult stroke survivors.

The review buttresses the need for improved health literacy around the psychological sequelae of stroke and the overall increase in the awareness of stroke in younger adults among medical caregivers and the community to prevent the dismal these individuals face, which may lead to delayed intervention.

Furthermore, younger stroke survivors have complained of misconceptions and stigmatization from other individuals. Hence it becomes difficult for them to return to their workplace after stroke. Therefore, it is recommended that efforts be made to help these individuals return to work, as it would help reduce their dependency on others. For instance, improving initiatives like "Time to change" (TTC) aimed at reducing social stigma towards mental health challenges following stroke (DH, 2011).

Conclusively, it will also be good to have a comparative study of the experiences of young adult stroke survivors with psychological support and its integration into policies and programmes to explore how this could fit into LMIC and broader global contexts.

REFERENCE

1. Adamson, J., Beswick, A., & Ebrahim, S. (2004). Is stroke the most common cause of disability? Journal of Stroke and Cerebrovascular Diseases, 13(4), 171–177. https://doi.org/10.1016/j.jstrokecerebrovasdis.2004.06.003
2. Alajbegovic, A., Djelilovic-Vranic, J., Alajbegovic, S., Nakicevic, A., Todorovic, L., & Tiric-Campara, M. (2014). Post Stroke Depression. Medical Archives, 68(1), 47–50. https://doi.org/10.5455/medarh.2014.68.47-50
3. Alaszewski, A., & Wilkinson, I. (2015). The paradox of hope for working age adults recovering from stroke. Health (London, England: 1997), 19(2), 172–187. https://doi.org/10.1177/1363459314555242 Al-Jundi, A. and Sakka, S., 2017. Critical appraisal of clinical research. Journal of clinical and diagnostic research: JCDR, 11(5), p.JE01.
4. Amarenco, P., Bogousslavsky, J., Caplan, L. R., Donnan, G. A., & Hennerici, M. G. (2009). Classification of stroke subtypes. Cerebrovascular diseases, 27(5), 493-501.
5. Amaricai, E., & Poenaru, D. V. (2016). The post-stroke depression and its impact on functioning in young and adult stroke patients of a rehabilitation unit. Journal of Mental Health, 25(2), 137–141. https://doi.org/10.3109/09638237.2015.1022251 services in Ghana: A cross-sectional study. Health & social care in the community, 29(5), e67-e78.
6. Boot, E., Ekker, M. S., Putaala, J., Kittner, S., De Leeuw, F.-E., & Tuladhar, A. M. (2020). Ischaemic stroke in young adults: A global perspective. Journal of Neurology, Neurosurgery & Psychiatry, 91(4), 411–417.
7. Booth, A. (2016). Searching for qualitative research for inclusion in systematic reviews: A structured methodological review. Systematic Reviews, 5(1), 74. https://doi.org/10.1186/s13643-016-0249-x
8. Brainin, M., Tuomilehto, J., Heiss, W.-D., Bornstein, N. M., Bath, P. M. W., Teuschl, Y., Richard, E., Guekht, A., Quinn, T., & Group, the P. S. C. S. (2015). Post-stroke cognitive decline: An update and perspectives for clinical research. European Journal of Neurology, 22(2), 229-e16. https://doi.org/10.1111/ene.12626
9. Britten, Nicky, Rona Campbell, Catherine Pope, Jenny Donovan, Myfanwy Morgan, and Roisin Pill. 'Using Meta Ethnography to Synthesise Qualitative Research: A Worked Example'. Journal of Health Services Research & Policy 7, no. 4 (1 October 2002): 20915.https://doi.org/10.1258/135581902320432732.:http://www.bps.org.uk/system/files/Public%20files/DCP/cat-561.pdf.
10. Leys, D., Bandu, L., Henon, H., Lucas, C., Mounier-Vehier, F., Rondepierre, P., & Godefroy, O. (2002). Clinical outcome in 287 consecutive young adults (15 to 45 years) with ischemic stroke. Neurology, 59(1), 26–33.
11. National Institute for Health and Care Excellence (NICE) (2019). NICE impact stroke 2019. Available from: https://www.nice.org.uk/media/default/about/what-we-do/into-practice/measuring-uptake/nice-impact-stroke.pdf.

12. Royal College of Physicians. (2013). Sentinel Stroke National Audit Programme (SSNAP). Clinical audit first pilot report prepared on behalf of the Intercollegiate Stroke Working Party. July 2013
13. Royal College of Physicians. (2015). Sentinal Stroke National Audit Programme (SSNAP) National Results - Post Acute Organisational. Retrieved from London, UK: https://www.strokeaudit.org/results/PostAcute/National.aspx
14. Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. European psychiatry, 20(8), 529-539.Retrieved from London, UK: https://www.strokeaudit.org/results/Organisational.aspx Sandelowski M, Barroso J. (2002). Finding the findings in qualitative studies. J Nurs Scholarsh. 2002; 34:213–9. PMID: 12237982
15. Schiavo, J. H. (2019). PROSPERO: an international register of systematic review protocols. Medical reference services quarterly, 38(2
16. Tatlisumak T, Cucchiara B, Kuroda S, Kasner SE, Putaala J (2018) Nontraumatic intracerebral haemorrhage in young adults. Nat Rev Neurol 14(4): 237-250 https://doi.org/10.1016/j.jstrokecerebrovasdis.2020.105087
17. Temehy, B., Rosewilliam, S., Alvey, G., & Soundy, A. (2022). Exploring Stroke Patients’ Needs after Discharge from Rehabilitation Centres: Meta-Ethnography. Behavioral Sciences, 12(10), 404. https://doi.org/10.3390/bs12100404
18. Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. BMC medical research methodology, 8(1), 1-10.
19. Tong, A., Flemming, K., McInnes, E., Oliver, S., & Craig, J. (2012). Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. BMC Medical Research Methodology, 12(1), 1–8.
20. Towfighi, A., Markovic, D., & Ovbiagele, B. (2011). Persistent Sex Disparity in Midlife Stroke Prevalence in the United States. Cerebrovascular Diseases, 31(4), 322–328. https://doi.org/10.1159/000321503
21. United Nations (2015). Transforming Our World: The 2030 Agenda for Sustainable Development. Resolution Adopted by the General Assembly on 25 September 2015 [without Reference to a Main Committee (A/70/L. 1)]
22. United Nations (2006) Convention on the Rights of Persons with Disabilities: article 26. Accessed January 2023, from:
23. UK National Statistics. (December 2012). Statistics on stroke. In Health and Social Statistics, (Health and Social care division) Available on linehttp://www.un.org/esa/socdev/enable/documents/tccconve.pdf.
24. Urimubenshi, G., & Rhoda, A. (2011). Environmental barriers experienced by stroke patients in Musanze district in Rwanda: A descriptive qualitative study.African Health Sciences, 11(3), 398–406.
25. van Rooij, F. G., Schaapsmeerders, P., Maaijwee, N. A., van Duijnhoven, D. A., de Leeuw, F.-E., Kessels, R. P., & van Dijk, E. J. (2014). Persistent cognitive impairment after transient ischemic attack. Stroke, 45(8), 2270–2274.
26. Vossel, S., Weiss, P. H., Eschenbeck, P., & Fink, G. R. (2013). Anosognosia, neglect, extinction and lesion site predict impairment of daily living after right-hemispheric
27. Westerlind, E., Persson, H. C., & Sunnerhagen, K. S. (2017). Return to Work after a Stroke in Working Age Persons; A Six-Year Follow Up. PLOS ONE, 12(1), e0169759. https://doi.org/10.1371/journal.pone.0169759

28. Wolfenden, B., & Grace, M. (2015). Vulnerability and Post-Stroke Experiences of Working-Age Survivors during Recovery. SAGE Open, 5(4), 2158244015612877. https://doi.org/10.1177/2158244015612877

29. WHO MONICA Project Investigators (1988). The World Health Organization MONICA Project (Monitoring trends and determinants in cardiovascular disease). J. Clin. Epidemiol. 41, 105–114. doi: 10.1016/0895-4356(88) 90084-4

30. World Health Organization (2017) WHO Methods and Data Sources for Country-level Causes of Death 2000-2015. Bit.ly/WHODeathCauses10-15

31. World Stroke Organisation (2022). Global stroke fact sheet 2022; 2022. Available from: https://www.world-stroke.org/assets/downloads/WSO_Global_Stroke_Fact_Sheet.pdf.

32. Wrigley, S., Jackson, H., Judd, F., & Komiti, A. (2005). Role of stigma and attitudes toward help-seeking from a general practitioner for mental health problems in a rural town. Australian and New Zealand Journal of Psychiatry, 39(6), 514-521. doi:10.1080/j.1440-1614.2005.01612.x

33. Yamamoto, F. I. (2012). Ischemic stroke in young adults: An overview of etiological aspects. Arquivos de Neuro-Psiquiatria, 70(6), 462–466. https://doi.org/10.1590/S0004-282X2012000600014

34. Zhang, S., Chang, C., Zhang, J., Song, B., Fang, H., & Xu, Y. (2014). Correlation Analysis of Sleep Quality and Youth Ischemic Stroke. Behavioural Neurology, 2014, 1–6. https://doi.org/10.1155/2014/246841

35. Zedlitz, A. M. E. E., Rietveld, T. C. M., Geurts, A. C., & Fasotti, L. (2012). Cognitive and graded activity training can alleviate persistent fatigue after stroke. Stroke, 43(4), 1046.