

# Challenges to rehabilitation services in Sub-Saharan Africa from a user, health system and service provider perspective: A scoping review

Callixte Cyuzuzo, Marie Josee Dukuzimana, Clement Muhire, Mathew Sheldon Ames, Emmanuel Ngwakongnwi

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# Challenges to rehabilitation services in Sub-Saharan Africa from a user, health system and service provider perspective: A scoping review

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## Abstract

**Background:** Rehabilitation aims to restore and optimize the functioning of impaired systems. It is an integral part of universal health coverage and access to it is a human right for people with disabilities. It is important to identify the key challenges to rehabilitation services in Sub-Saharan Africa (SSA) from a user, health system and service provider perspective

**Objective:** To identify the key challenges to rehabilitation services in Sub-Saharan Africa (SSA) from a user, health system and service provider perspective

**Methods:** This scoping review was conducted in accordance with the five steps framework proposed by Arksey and O'Malley and a comprehensive electronic search was run to identify published articles on rehabilitation services in Sub-Saharan Africa. Of all 131 articles retrieved in the searches, 83 articles were assessed for eligibility and 15 papers met the inclusion criteria were considered

**Results:** The results showed that people with disabilities in Sub-Saharan Africa face multifactorial challenges to access rehabilitation services. Poor access to rehabilitation services is associated with less attention given to rehabilitation by governments which led to less funding, cultural and social beliefs, less and poorly equipped rehabilitation centers, failure of the health systems, lack of trainings to professionals, logistical and financial constraints. This review also revealed that digital rehabilitation reduced costs and improved access to services in hard-to-reach geographical areas. However, it faced connectivity issues, inaccessibility to technology and lack of technical knowledge, lack of privacy and ethical challenges

**Conclusions:** This review concludes that people with disabilities face multifactorial challenges to access rehabilitation services in SSA. It is therefore critical to address these challenges to optimize patients' health outcomes and offer better rehabilitation services.

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## Challenges to rehabilitation services in Sub-Saharan Africa from a user, health system and service provider perspective: A scoping review

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### Abstract

**Background:** Rehabilitation aims to restore and optimize the functioning of impaired systems of people with disabilities. It is an integral part of universal health coverage and access to it is a human right.

**Objective:** To identify the key challenges to rehabilitation services in Sub-Saharan Africa (SSA) from a user, health system and service provider perspective.

**Methods:** This scoping review was conducted in accordance with the five steps framework proposed by Arksey and O'Malley and a comprehensive electronic search was run to identify published articles on rehabilitation services in Sub-Saharan Africa. Of all 131 articles retrieved in the searches, 83 articles were assessed for eligibility and 15 papers that met the inclusion criteria were considered.

**Results:** The results show that people with disabilities in Sub-Saharan Africa face multifactorial challenges to access rehabilitation services. Poor access to rehabilitation services is associated with less attention given to rehabilitation by governments which led to less funding, cultural and social beliefs, less and poorly equipped rehabilitation centers, failure of the health systems, lack of trainings to Rehabilitation practitioners, logistical and financial constraints. This review also revealed that digital rehabilitation reduced costs and improved access to services in hard-to-reach geographical areas. However, Digital rehabilitation faced connectivity issues, inaccessibility to technology and lack of technical knowledge, lack of privacy and ethical challenges.

**Conclusion:** People with disabilities face multifactorial challenges to access rehabilitation services in SSA. It is therefore critical to address these challenges to optimize patients' health outcomes and offer better rehabilitation services.

**Keywords:** Challenges; rehabilitation services; users; health system; service providers; Sub-Saharan Africa

### INTRODUCTION

Rehabilitation is a set of therapeutic approaches that are structured to address physical, developmental, emotional and mental challenges to improve patient's health outcomes and quality of life [1]. Rehabilitation is an integral part of universal health coverage and contributes greatly to the achievement of the Sustainable Development Goal 3 of ensuring healthy lives and promoting well-being for all at all ages. Access to rehabilitation for disabled people is a human right, as stated in Article 26 of United Nations Convention for the Rights of People with Disabilities. Rehabilitation services can be either delivered through traditional face-to-face fashion or using remote approaches facilitated by existing technologies [2, 3]. Digital rehabilitation has reduced costs and improved

access to rehabilitation services in hard-to-reach geographical areas [3].

Demographic changes that lead to chronic health conditions and accidents have gradually contributed to the increased need for rehabilitation services [4]. It is estimated that 2.4 billion people have a health condition that may benefit from rehabilitation services; however, these services are still inaccessible due to shortage of rehabilitation practitioners [5]. A World Health Organization (WHO) report disclosed that the ratio of patients to skilled rehabilitation practitioners is 10/1,000,000 in low- and middle-income countries. This leads to persistent scarcity of human resources for health and reduced access to rehabilitation services in low resource regions [6].

Sub-Saharan Africa (SSA) has a shortage of human resources for health that accounts for 3.5 % of the world's health workers, yet it has a high disease burden including disabilities of several types [5]. In this low resource region, there is a significant difference in the availability and access to rehabilitation services, and this impedes the achievement of desired health outcomes for disabled individuals [7,8]. It was reported by the WHO that in Sub-Saharan Africa, 50% of people that need rehabilitation services do not get them and the high proportion of the disabled people with unmet needs are in low- and middle- income countries [9].

Demand for rehabilitation services in SSA is well established given the prevalence of unmet rehabilitation needs, rising cases of non-communicable diseases, and a significant incidence of road traffic accidents resulting in disabilities. Additionally, lack of access to rehabilitation services by people with chronic conditions can lead to a need for assistance with activities of daily living, and long-term hospital stays [10]. It is important to explore the rehabilitation challenges from the users, health systems and service providers. This scoping review aims to enhance our understanding of the complex demands imposed by these factors in the region and examine the challenges associated with rehabilitation services from those three domains.

**Objective:** To identify the key challenges to rehabilitation services in Sub-Saharan Africa (SSA) from a user, health system and service provider perspective.

## METHODS

### Study design

This review follows the framework of conducting scoping reviews as proposed by Arksey and O'Malley. This framework consists of five distinct stages: identifying the research question, identifying relevant studies, selecting studies, charting the data, and collating, summarizing, and reporting the results [11].

### Identifying the research question

The research topic and its associated objectives helped to determine the scope of the review, appropriate literature, search strategy and inclusion and exclusion criteria. To attain the main aim of this review, the scope of rehabilitation services in SSA were explored and key challenges that the users, service providers and health systems face on the availability and access to rehabilitation services were identified.

### Identifying relevant studies

#### Search strategy

A comprehensive electronic search was conducted to retrieve published data on the availability and access to rehabilitation services in SSA. Research studies published in reputable journals and databases such as PubMed, NCBI, Scopus, PLOS, BMC, Taylor and Francis, Science direct, Frontiers, Springer Nature and web of Science were chosen as they yielded the most topic-relevant articles. A search strategy using the keywords "rehabilitation services", "availability", "access", and "Sub-Saharan Africa" was used. To increase the number of accessed literatures, Sub-Saharan Africa was replaced by the name of the country and "rehabilitation services" was replaced by specific types of rehabilitation services such as physiotherapy, occupational therapy, speech and language therapy, and prosthetics services, to mention few. To maximize the literature coverage and to provide additional evidence, reference lists of primary studies and review articles were screened to identify additional relevant literature.

### Inclusion and exclusion criteria

Inclusion criteria were developed to ensure that all relevant publications focusing on availability and access to rehabilitation services in SSA were included. The works written in English and published in the above-mentioned reputable journals between 2018 and 2023 were considered. Articles not written in English, published before 2018, and conducted outside SSA countries were excluded.

### Study selection

One team member led the search and screened all the titles and abstracts of all retrieved papers based on the inclusion and exclusion criteria. Articles retained for review were confirmed by the research team after discussion. Duplicates were removed and the articles that satisfied the inclusion criteria were selected for full-text review.

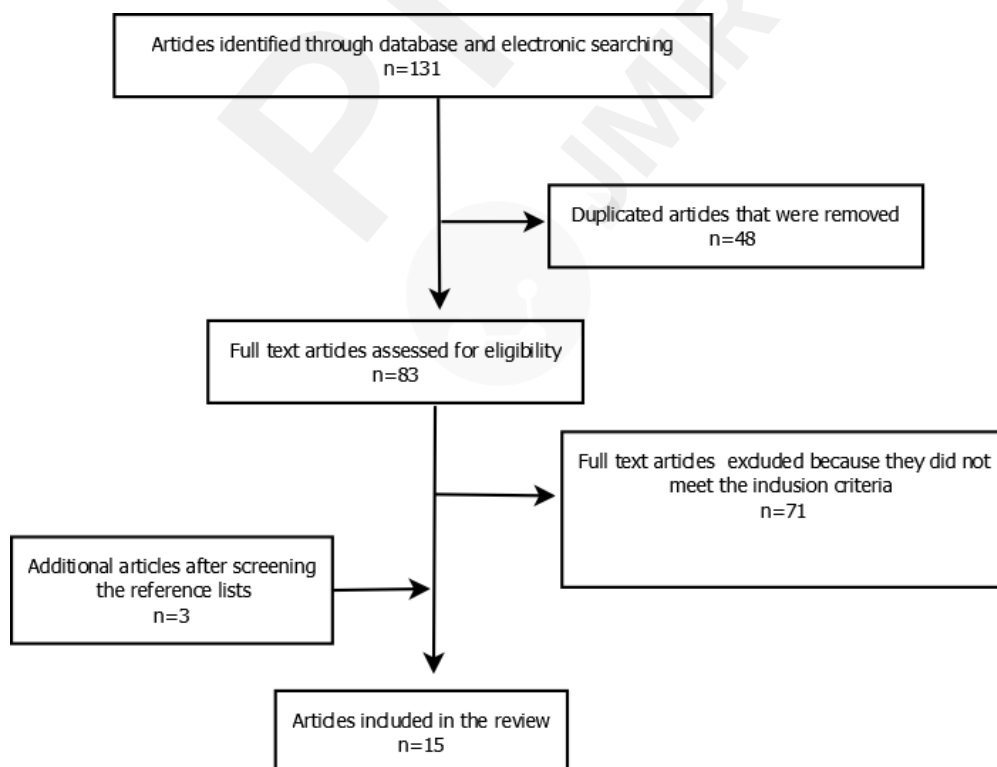
### Charting the data

With the help of Microsoft Excel sheet, data on availability and access to rehabilitation services were extracted from the full text. Challenges faced by users of the rehabilitation services, service providers and health systems were recorded. Information such as title of the paper, names of authors, year of publication, study setting, study design, objectives of the paper, inclusion criteria, study findings were extracted and recorded in the excel table. Reference lists of included papers were also screened to optimize the search. Data extraction document is attached as a supplementary file.

### RESULTS

The search yielded 131 research and review articles overall. Forty-eight articles were duplicates and 71 articles did not satisfy the inclusion criteria. Full text of the remaining 12 articles was screened, and 3 more were identified using the reference lists, making 15 articles eligible for analysis. Six of the fifteen articles (40%) were original studies meanwhile 60% were scoping or systematic reviews covering other aspects of rehabilitation. Figure 1 illustrates how the sources of evidence were selected and the challenges to rehabilitation services in SSA from a user, health systems and healthcare providers perspective. All considered articles indicated the existence of the rehabilitation challenges in SSA, however, 6 of 15 papers reported on the rehabilitation challenges for the service users, 5 on the health systems, 3 on the rehabilitation services' providers and one review article indicated challenges on all.

Figure 1. PRISMA diagram illustrating article selection process.



### Challenges to rehabilitation services in SSA

A synthesis of the literature revealed two categories of challenges to rehabilitation services from a user, service provider and health system perspective (table 1).

Table 1. Challenges to rehabilitation services reported in studies involving users, providers and health systems.

Category	Rehabilitation Challenge	
	Accessibility	Availability
Users	<ul style="list-style-type: none"> <li>• Unsuitable environment and buildings for disabled people</li> <li>• Inaccessibility to technology</li> <li>• Stigma, negative attitudes and discrimination from therapists and other hospital staff</li> <li>• Long queues and waiting time.</li> <li>• Financial constraints to afford medicine.</li> <li>• Mindset that nothing can be done to help them.</li> <li>• Lack of psychological support</li> <li>• Non-supportive family members</li> <li>• Lack of trust in service providers</li> <li>• Pain during rehabilitation process</li> <li>• Religious beliefs and socially accepted norms and traditions that disability results from bewitching or divine origine</li> <li>• Language barriers</li> </ul> <p>Digital rehabilitation</p> <ul style="list-style-type: none"> <li>• Lack of secure platform and privacy</li> <li>• Lack of technical knowledge or digital illiteracy</li> <li>• Connectivity issues</li> <li>• Inconsistency in power supply</li> </ul>	<ul style="list-style-type: none"> <li>• Do not know where to find the services.</li> <li>• Long distance between user's homes and health facilities</li> <li>• Lack of reliable transport and logistical affordability</li> <li>• Distant health units</li> </ul>
Service providers	<ul style="list-style-type: none"> <li>• Insufficient time for consultation</li> <li>• Inadequate follow-up</li> <li>• Inappropriate treatment procedures</li> <li>• Lack of patience</li> <li>• Ethical challenges</li> </ul> <p>Digital rehabilitation</p> <ul style="list-style-type: none"> <li>• Lack of technical knowledge or digital illiteracy</li> <li>• Connectivity issues</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of communication skills</li> <li>• Lack of professional training and necessary skills</li> <li>• Lack of maintenance for the assistive tools</li> <li>• Failure to schedule online appointments.</li> </ul>
Health	<ul style="list-style-type: none"> <li>• Rehabilitation is considered a less important healthcare strategy and not</li> </ul>	<ul style="list-style-type: none"> <li>• Irregular referral to well-equipped health</li> </ul>

systems	<p>well integrated into service.</p> <ul style="list-style-type: none"> <li>• Fragmented health services</li> <li>• Lack of community awareness on rehabilitation services</li> <li>• Failure of the health system</li> </ul> <p>Digital rehabilitation</p> <ul style="list-style-type: none"> <li>• Financial constraints</li> </ul>	<p>facilities</p> <ul style="list-style-type: none"> <li>• Lack of medicines and services</li> <li>• Shortage of human resources for health</li> <li>• Less attention by governments and underfunding</li> <li>• Limited rehabilitation centers and poorly equipped rehabilitation units</li> </ul>
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## DISCUSSION

This review revealed that people with disabilities in SSA have limited access to rehabilitation services. The limited access can be explained partly by users, service providers and the health system factors [7, 12]. This finding is similar to that from other studies [3, 13] which found that rehabilitation was given less priority by governments, and not recognized as a crucial healthcare service. Consequently, the sector faced underfunding, experienced a deficiency in health human resources, particularly therapists, encountered a scarcity of rehabilitation centers, and witnessed inadequately equipped rehabilitation units within health facilities. This scenario contributed to compromised access to high-quality rehabilitation services [3, 13, 14].

The results from this review align with other studies which reported that limited access to rehabilitation services in SSA is attributed to financial inability to afford treatment, lack of insurance that covers service expenses, waiting time at the health facilities, and the lack of drugs at health facilities[9]. Other studies have found that patients lack psychological support, are unaware of where to find services, believe that nothing could be done to help them, and are not involved in making decisions on their health[7,15].

This review identified stigma as an impediment to access rehabilitation service. A study conducted in Rwanda, [17], found that stigma and disability, coupled with negative attitudes and discrimination from therapists and other hospital staff negatively impacted uptake of rehabilitation services. Likewise, the role of family in accessing rehabilitation services is well documented. Family members who do not perceive the need for rehabilitation services and who do not trust service providers may demotivate patients from seeking rehabilitation services [12,16,17]. Additionally, compromised access to health information, irregularities in referral to health facilities that are well equipped, inadequate policies and standards that govern the services, lack of adequate follow-up, insufficient time for consultations and pain during the rehabilitation process are all hindrances to accessing rehabilitation services [8, 14].

This review showed that people with disabilities in SSA lack a reliable, affordable, and accessible transportation means to reach health facilities. Furthermore, travelling long distances to get to services, distant health units, and unsuitable environments and lack of buildings for wheelchair access prevent the users from accessing the services. This is similar to findings of a review conducted in Brazil which documented patients determinants (residential location, economic resources, and social characteristics) and characteristics of services (cost, location, and status of the available facilities) as factors limiting access to rehabilitation services [7].

The findings of this review are supported by the results published by Bright and colleagues which disclosed that compromised health systems, lack of professional training and necessary skills for therapists, inappropriate treatment procedures and lack of maintenance for the assistive tools reduce

access to quality rehabilitation services [7, 16]. Healthcare providers who have not received enough training may lack the skills required to provide successful rehabilitation services. This lack of competence implies that misdiagnoses or outdated and inappropriate techniques could be used, and cause harm to patients.

The results of this study are similar to the findings of the study conducted by Jones on telerehabilitation that reported how digital rehabilitation services have addressed some logistical challenges; however, they came with challenges including the absence of secure platforms and privacy, inaccessibility to technology and lack of technical knowledge for both users and therapists [7]. Other challenges identified include; failure to schedule online appointments, connectivity issues, ethical challenges, and failure of the health systems [3]. Patients and health care providers may struggle to use digital tools for rehabilitation, limiting the effectiveness of remote health services. Additionally, inability to schedule and fail to maintain digital appointments may result in missed sessions, decreased patient participation, and care delays. Health system face the challenge of poor policy that lead to lack of financial capacity to afford digital technologies in health service delivery [18]. Digital technology such as online medical records, wearable devices, telemedicine can improve patient care and accessibility to health services, particularly in hard-to-reach area. When financial limitation prevents the use of these technologies, patients may not receive quality care needed on time.

The review discerned that religious beliefs, cultural norms, and traditions serve as deterrents for disabled individuals seeking rehabilitation services at health facilities, attributing their disabilities to bewitchment or divine origin. A study conducted in Rwanda found that people with mental disorders believe that traditional and faith healers should be more effective at treating mental problems than hospital specialists [19]. Such cultural beliefs dissuade people with disabilities from persisting in rehabilitation services, casting doubt on their quality and efficacy. In addition, uncertainties regarding the precise origins of their conditions, often intertwined with mystical beliefs fueled the situation.[20].

Considering the rehabilitation challenges identified in this review, there is a need to bridge the gaps of infrastructure, social and cultural awareness on disability and rehabilitation services. This should be done by decentralizing services, providing continuous professional training to therapists, and conducting regular community awareness about rehabilitation services to inform service seekers and break the stigma around it. While this review has enumerated challenges to rehabilitation in SSA, it is worth noting that a majority of articles retained for consideration were scoping and systematic reviews that examined other aspects of rehabilitation. User and health system challenges were mostly highlighted in comparison to the service provided perspective that was limited in content.

**Conclusion:** This review has revealed that rehabilitation services face multifactorial challenges that negatively impact timely access and quality of rehabilitation services for people with disabilities. As a consequence, persons needing rehabilitation services experience longer periods of decreased mobility, function inferior quality of life, and lower socioeconomic well-being. Future studies should examine the application of digital technologies to improve rehabilitation services' accessibility, especially in remote settings.

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#### Declarations

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N/A

Consent for publication.

N/A

Competing interests

The authors declare that there is no potential financial or personal conflict of interest.

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## Supplementary Files

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