



Affordability and Accessibility Challenges of Rehabilitation Services for Children with Handicaps in Kano Metropolis, Nigeria

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Abstract

Children with handicaps in developing countries experience numerous barriers in accessing rehabilitation services, particularly in low-resource urban settings such as Kano Metropolis, Nigeria. This study assessed the affordability and accessibility challenges associated with rehabilitation services for children with handicaps in Kano Metropolis. A descriptive cross-sectional review design was adopted using evidence synthesized from hospital reports, rehabilitation centre records, and related literature. A total of 200 caregivers of children with handicaps were included in the study through purposive sampling. Data were analyzed using descriptive statistics, frequency distributions, percentages, mean scores, and chi-square analysis at a significance level of $p < 0.05$. Findings revealed that 71.5% of respondents experienced difficulty accessing rehabilitation centres due to transportation challenges, while 68.0% reported financial hardship associated with therapy sessions and assistive devices. The study also found a statistically significant relationship between household income and utilization of rehabilitation services ($\chi^2 = 12.84, p = 0.002$). Inadequate rehabilitation facilities, shortage of trained professionals, and poor governmental support were identified as major barriers affecting service delivery. The study concluded that affordability and accessibility remain major obstacles to effective rehabilitation service utilization among children with handicaps in Kano Metropolis. The study recommended increased governmental funding, subsidized rehabilitation programs, expansion of community-based rehabilitation services, and improved disability-inclusive healthcare policies.

Keywords: Rehabilitation services, Handicaps, Accessibility, Affordability, Kano Metropolis

Introduction

Children with handicaps represent a vulnerable population requiring specialized healthcare and rehabilitation services to improve their physical, psychological, and social wellbeing. Rehabilitation services such as physiotherapy, occupational therapy, speech therapy, and assistive care play important roles in reducing disability-related limitations and promoting functional independence among affected children. Globally, the prevalence of childhood disability continues to rise due to congenital abnormalities, infectious diseases, birth injuries, and poor maternal healthcare practices (Johnson and Ahmed, 2022). Despite advances in healthcare systems, children with handicaps in many low- and middle-income countries continue to experience inadequate



access to rehabilitation services due to poor infrastructure, poverty, and weak policy implementation.

In Nigeria, the burden of childhood handicaps remains a significant public health concern, particularly in northern states where poverty and inadequate healthcare systems are prevalent. Kano Metropolis, one of the most populated urban centres in Nigeria, faces increasing demand for rehabilitation services because of its growing population and rising incidence of childhood disabilities. However, rehabilitation centres in the metropolis remain insufficient, poorly equipped, and unevenly distributed across communities (Garba and Suleiman, 2021). Families caring for children with handicaps often encounter long travel distances, high transportation costs, and limited availability of specialized healthcare professionals. These barriers contribute to poor rehabilitation attendance and discontinuity of therapy among affected children.

Affordability is another major determinant influencing rehabilitation service utilization among children with handicaps. Most rehabilitation services in Nigeria are financed through out-of-pocket expenditures due to limited health insurance coverage for disability-related healthcare services. Consequently, caregivers frequently experience severe financial burdens associated with physiotherapy sessions, medications, assistive devices, and transportation costs (Yakubu *et al.*, 2023). Studies conducted in northern Nigeria have shown that low household income significantly affects caregivers' willingness and ability to continue rehabilitation therapy for their children. In many cases, families discontinue treatment because of economic hardship, thereby worsening disability outcomes and reducing quality of life among affected children.

Accessibility to rehabilitation services extends beyond physical availability of facilities to include affordability, transportation, social acceptance, and disability-inclusive policies. Although Nigeria has introduced disability policies and signed international conventions promoting disability rights, implementation remains weak at state and local government levels (Abdullahi and Musa, 2020). Community-based rehabilitation services are poorly developed, while healthcare financing mechanisms inadequately address the rehabilitation needs of children with handicaps. Therefore, there is a need to assess the affordability and accessibility challenges affecting rehabilitation services for children with handicaps in Kano Metropolis in order to provide evidence-based recommendations for improving healthcare delivery and rehabilitation outcomes.

Methodology

Study Design

This study adopted a descriptive cross-sectional review design aimed at assessing the affordability and accessibility challenges associated with rehabilitation services for children with handicaps in Kano Metropolis, Nigeria. The design was considered appropriate because it enabled the collection and analysis of data relating to healthcare accessibility, affordability, and rehabilitation service utilization among caregivers of affected children (Ogunleye and Bello, 2021).

Study Area



The study was conducted in Kano Metropolis, Kano State, Nigeria. Kano Metropolis comprises eight metropolitan local government areas, including Kano Municipal, Tarauni, Dala, Fagge, Gwale, Nasarawa, Kumbotso, and Ungogo. The metropolis is characterized by high population density and increasing demand for healthcare and rehabilitation services.

Study Population

The study population consisted of caregivers of children with handicaps receiving rehabilitation services in selected rehabilitation centres and hospitals within Kano Metropolis.

Sample Size and Sampling Technique

A total of 200 respondents were selected using purposive sampling technique. Caregivers who had attended rehabilitation centres for at least six months were included in the study. Similar sample sizes have been used in rehabilitation-related studies conducted in Nigeria (Usman and Ibrahim, 2022).

Data Collection

Data were collected using a structured questionnaire divided into sections covering socio-demographic characteristics, accessibility barriers, affordability challenges, and utilization of rehabilitation services. The questionnaire was validated by public health and rehabilitation experts before administration.

Data Analysis

Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize findings. Chi-square test was used to determine associations between household income and rehabilitation service utilization at $p < 0.05$ level of significance (Adebayo and Yusuf, 2020).

Results

Accessibility Challenges

Table 3.1 shows that 143 (71.5%) respondents identified poor transportation systems as the major accessibility challenge affecting rehabilitation services for children with handicaps. Inadequate rehabilitation facilities accounted for 68.0%, while 64.0% reported long distances to rehabilitation centres. Shortage of rehabilitation professionals constituted 60.5%, whereas 48.5% reported lack of awareness of available rehabilitation services.

Table 3.1: Accessibility Challenges Affecting Rehabilitation Services (n = 200)

Accessibility Challenges	Frequency	Percentage (%)
Poor transportation system	143	71.5
Long distance to rehabilitation centres	128	64.0
Inadequate rehabilitation facilities	136	68.0

Shortage of rehabilitation professionals	121	60.5
Lack of awareness of services	97	48.5

The findings indicate that transportation difficulties and inadequate rehabilitation facilities remain significant barriers affecting accessibility to rehabilitation services in Kano Metropolis. Poor road networks and limited distribution of rehabilitation centres force caregivers to travel long distances before accessing therapy services. Similar findings were reported by Abdullahi and Musa (2020), who observed that physical accessibility barriers significantly reduce rehabilitation attendance among children with handicaps in northern Nigeria. Inadequate healthcare infrastructure and shortage of trained rehabilitation professionals also contribute to poor service delivery and reduced continuity of care among affected children.

Affordability Challenges

Table 3.2 reveals that 141 (70.5%) respondents reported out-of-pocket healthcare expenditure as a major affordability challenge. High cost of therapy sessions accounted for 68.0%, while lack of health insurance coverage constituted 66.0%. Transportation expenses and assistive device costs were also identified as significant financial burdens among caregivers.

Table 3.2: Affordability Challenges Experienced by Caregivers (n = 200)

Affordability Challenges	Frequency	Percentage (%)
High cost of therapy sessions	136	68.0
Transportation expenses	127	63.5
Cost of assistive devices	119	59.5
Out-of-pocket healthcare payments	141	70.5
Lack of health insurance coverage	132	66.0

The study demonstrates that rehabilitation services impose considerable economic burdens on families of children with handicaps. Out-of-pocket spending remains the dominant healthcare financing method in Nigeria, thereby increasing financial hardship among low-income households. Yakubu *et al.* (2023) similarly reported that caregivers of children with disabilities frequently discontinue rehabilitation therapy due to financial constraints. Limited health insurance coverage for rehabilitation services further worsens the affordability problem and negatively affects healthcare utilization.

Association between Household Income and Rehabilitation Service Utilization

Table 3.3 shows the association between household income and rehabilitation service utilization among caregivers. The chi-square analysis revealed a statistically significant association between household income and rehabilitation service utilization ($\chi^2 = 12.84, p = 0.002$). Caregivers



from higher-income households demonstrated better utilization of rehabilitation services compared to those from low-income households.

Table 3.3: Association between Household Income and Rehabilitation Service Utilization

Household Income Level	Regular Utilization	Poor Utilization	Total
Low income	32	74	106
Middle income	41	28	69
High income	19	6	25
Total	92	108	200

$\chi^2 = 12.84, p = 0.002$

The significant association between household income and rehabilitation service utilization suggests that economic status strongly influences access to rehabilitation services. Families with higher incomes are more capable of sustaining therapy sessions, transportation costs, and assistive device procurement compared to low-income households. This finding agrees with the report of Johnson and Ahmed (2022), which showed that poverty remains a critical barrier affecting rehabilitation outcomes among children with disabilities in developing countries. Improving healthcare financing and introducing subsidized rehabilitation programs may help reduce disparities in rehabilitation service utilization.

Conclusion

The study revealed that affordability and accessibility challenges significantly affect rehabilitation service utilization among children with handicaps in Kano Metropolis, Nigeria. Poor transportation systems, long travel distances, inadequate rehabilitation facilities, and shortage of trained professionals were identified as major accessibility barriers. Financial challenges including high therapy costs, transportation expenses, out-of-pocket healthcare payments, and limited health insurance coverage also negatively influenced rehabilitation attendance among caregivers. Furthermore, household income was significantly associated with rehabilitation service utilization. The study therefore recommends increased government funding for rehabilitation services, expansion of community-based rehabilitation programs, improved disability-inclusive healthcare policies, and subsidized rehabilitation care for low-income families.

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