

## Policy And Health System Barriers Affecting Rehabilitation Services For Adolescents With Handicaps In Kano Metropolis, Nigeria

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### ABSTRACT

Adolescents with handicaps in low- and middle-income countries continue to experience significant barriers in accessing rehabilitation services due to weak health systems and ineffective policy implementation. This study assessed policy and health system barriers affecting rehabilitation services for adolescents with handicaps in Kano Metropolis, Nigeria. A descriptive cross-sectional study design was adopted involving 200 caregivers selected through purposive sampling. Data were collected using a structured questionnaire and analyzed using descriptive statistics and chi-square test at  $p < 0.05$  significance level. Findings revealed that 74.0% of respondents reported weak implementation of disability policies, while 72.0% identified long waiting time in health facilities. In addition, 69.5% reported shortage of rehabilitation professionals and 66.5% indicated inadequate funding of rehabilitation units. A significant association was found between policy awareness and utilization of rehabilitation services ( $\chi^2 = 14.26, p = 0.001$ ). The study concluded that weak policy enforcement and fragile health system structures significantly limit rehabilitation service utilization. Strengthening disability policy implementation, increasing funding, and expanding rehabilitation workforce capacity were recommended.

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### INTRODUCTION

Adolescents with handicaps represent a vulnerable group requiring sustained rehabilitation services to support physical, cognitive, and social development. Rehabilitation interventions such as physiotherapy, occupational therapy, and psychosocial support are essential in improving functional independence and reducing disability-related limitations (WHO, 2023; UNICEF, 2022). Globally, adolescent disability remains a growing concern due to congenital conditions, injuries, and infectious diseases, particularly in low-resource settings (Smith and Carter, 2023; Bhutta *et al.*, 2021).

In Sub-Saharan Africa, access to rehabilitation services is constrained by weak health systems and poor policy implementation. Studies have shown that inadequate integration of rehabilitation into primary healthcare systems limits service availability and continuity of care (Mills *et al.*, 2022; Adeyemi and Okeke, 2021). In Nigeria, rehabilitation services are still developing, with significant disparities between urban and rural regions, especially in the northern states (Garba and Yusuf, 2022; NBS, 2022).

Kano Metropolis, being one of the most populous urban centres in Northern Nigeria, experiences increasing demand for rehabilitation services due to rising cases of childhood and adolescent disabilities. However, available rehabilitation facilities remain insufficient, poorly equipped, and unevenly distributed across the metropolis (Abdullahi *et al.*, 2021; Ibrahim and Yusuf, 2022). These structural deficiencies are further worsened by long waiting times and shortage of trained personnel.

Policy implementation challenges also significantly affect rehabilitation service delivery. Although Nigeria has adopted disability-inclusive policies such as the Discrimination

Against Persons with Disabilities (Prohibition) Act, enforcement at state and local levels remains weak (Ojo and Abdullahi, 2020; WHO, 2023). Limited funding allocation, lack of monitoring systems, and poor intersectoral coordination continue to undermine effective rehabilitation service delivery. This study therefore examines the policy and health system barriers affecting rehabilitation services for adolescents with handicaps in Kano Metropolis.

### MATERIALS AND METHODS

#### Study Design

A descriptive cross-sectional research design was employed for this study to assess the policy and health system barriers affecting rehabilitation services for adolescents with handicaps in Kano Metropolis, Nigeria. The descriptive cross-sectional design was considered appropriate because it enables the collection of data from a defined population at a single point in time while examining relationships between variables such as policy awareness, healthcare accessibility, and rehabilitation utilization. This design has been widely used in healthcare accessibility and disability-related studies because it allows for efficient assessment of prevalence and associated factors without manipulating study variables (Creswell and Creswell, 2018; Babbie, 2021). The design also provided an opportunity to gather quantitative data from caregivers regarding their experiences with rehabilitation services and health system challenges.

#### Study Area

The study was conducted in Kano Metropolis, Kano State, Nigeria. Kano Metropolis comprises eight Local Government Areas (LGAs), namely Kano Municipal, Dala, Gwale, Tarauni, Fagge, Nasarawa, Ungogo, and Kumbotso. Kano is

one of the most densely populated urban centers in Northern Nigeria and serves as a major commercial and healthcare hub. The metropolis hosts several public and private healthcare facilities offering rehabilitation services including physiotherapy, occupational therapy, speech therapy, and psychosocial rehabilitation. Despite the presence of these facilities, access to rehabilitation services remains inadequate due to population pressure, limited infrastructure, and shortage of trained professionals (Garba and Bello, 2021; NBS, 2022). The study area was selected because of the increasing number of adolescents living with disabilities and the growing demand for rehabilitation services within the metropolis.

### Study Population

The target population for the study consisted of caregivers of adolescents with handicaps receiving rehabilitation services in selected hospitals and rehabilitation centers within Kano Metropolis. Adolescents aged between 10 and 19 years who had physical, sensory, intellectual, or developmental disabilities and had attended rehabilitation programs for at least six months were considered eligible through their caregivers. Caregivers included parents, guardians, or relatives directly involved in the adolescents' healthcare and rehabilitation decisions. Caregivers were selected because they possess firsthand knowledge of the barriers affecting access to rehabilitation services and are responsible for coordinating treatment and follow-up care (UNICEF, 2022; Ogunleye and Bello, 2021).

### Sample Size Determination

The sample size for the study was 200 respondents. The sample size was considered adequate for descriptive and inferential statistical analysis involving chi-square tests. Similar healthcare accessibility studies have used comparable sample sizes to examine health system barriers and rehabilitation utilization among vulnerable populations (Usman and Ibrahim, 2022; Fisher *et al.*, 2019). The selected sample size also enhanced the reliability and representativeness of the findings within the study area.

### Sampling Technique

A purposive sampling technique was employed to recruit respondents for the study. This non-probability sampling method was chosen because the study specifically targeted caregivers of adolescents with documented handicaps who were actively utilizing rehabilitation services. Selected hospitals and rehabilitation centers within Kano Metropolis served as recruitment sites. Respondents who met the inclusion criteria and consented to participate were enrolled in the study until the required sample size was attained.

### Inclusion Criteria

The following individuals were included in the study:

- i. Caregivers of adolescents aged 10–19 years with documented handicaps.
- ii. Caregivers whose adolescents had attended rehabilitation services for at least six months.
- iii. Respondents willing to provide informed consent for participation.

### Exclusion Criteria

The following individuals were excluded from the study:

- i. Caregivers of adolescents not currently receiving rehabilitation services.
- ii. Caregivers who declined participation.

- iii. Respondents with incomplete questionnaire responses.

### Data Collection Instrument

Data were collected using a structured questionnaire adapted from World Health Organization (WHO) disability assessment and rehabilitation access tools. The questionnaire was divided into four sections:

- i. Section A: Socio-demographic characteristics of respondents and adolescents.
- ii. Section B: Policy-related barriers affecting rehabilitation services.
- iii. Section C: Health system barriers affecting rehabilitation utilization.
- iv. Section D: Utilization patterns and awareness of disability policies.

The questionnaire consisted mainly of close-ended questions structured using Likert-scale and dichotomous response formats. The instrument was prepared in English and translated into Hausa language to enhance comprehension among respondents who were not fluent in English.

### Validity of the Instrument

Content and face validity of the questionnaire were established through expert review by specialists in public health, rehabilitation sciences, and health policy research. Corrections and modifications suggested by the experts were incorporated into the final version of the instrument to ensure that the questionnaire adequately measured the study objectives and variables.

### Reliability of the Instrument

A pilot study was conducted among 20 caregivers in a rehabilitation center outside the selected study sites to determine the reliability of the questionnaire. Data obtained from the pilot test were analyzed using Cronbach's alpha reliability test. The instrument produced a Cronbach's alpha coefficient of 0.83, indicating good internal consistency and reliability for data collection (Tavakol and Dennick, 2011; Bolarinwa, 2015).

### Data Collection Procedure

Data collection was carried out over a period of four weeks using trained research assistants familiar with the study objectives and ethical considerations. Permission was obtained from the management of selected hospitals and rehabilitation centers before commencement of data collection. Respondents were approached during clinic visits and rehabilitation sessions. The purpose of the study was explained to them, and informed consent was obtained prior to questionnaire administration. Respondents were assured of confidentiality, anonymity, and voluntary participation throughout the study.

### Ethical Consideration

Ethical approval for the study was obtained from the appropriate health research ethics committee in Kano State. Permission was also obtained from the selected healthcare facilities and rehabilitation centers. Respondents participated voluntarily, and informed consent was obtained before data collection. Confidentiality of information provided by respondents was maintained, and no identifying information was included in the data analysis or reporting process. The study adhered to the ethical principles guiding human subject research as recommended by WHO (2023) and the Nursing and Midwifery Council of Nigeria (NMCN, 2021).

**Data Analysis**

Completed questionnaires were checked for completeness, coded, and entered into the Statistical Package for Social Sciences (SPSS) version 25 for analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize socio-demographic characteristics and study variables. Inferential statistics using chi-square tests were employed to determine associations between policy awareness and rehabilitation service utilization among respondents. Statistical significance was set at  $p < 0.05$  (Field, 2018; Adebayo and Yusuf, 2020).

**RESULTS AND DISCUSSION**

**Socio-Demographic Characteristics**

The socio-demographic characteristics of respondents showed that the majority of caregivers were aged between 30–

39 years (38.0%), followed by those aged 40–49 years (29.0%), while respondents aged 20–29 years and those aged 50 years and above accounted for 17.0% and 16.0% respectively. Female respondents constituted the majority of the caregivers with 59.0%, whereas males accounted for 41.0%. Regarding educational status, most respondents had secondary education (38.0%), followed by tertiary education (27.0%), primary education (21.0%), and no formal education (14.0%). The majority of respondents were parents of the adolescents with handicaps (71.0%), while guardians and relatives represented 19.0% and 10.0% respectively. In terms of duration of rehabilitation attendance, 46.0% of respondents reported that the adolescents had attended rehabilitation services for 1–3 years, 28.0% for 6 months–1 year, and 26.0% for above 3 years.

**Table 1: Socio-Demographic Characteristics of Respondents (n = 200)**

| Variable            | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| 20–29 years         | 34        | 17.0           |
| 30–39 years         | 76        | 38.0           |
| 40–49 years         | 58        | 29.0           |
| 50 years and above  | 32        | 16.0           |
| Male                | 82        | 41.0           |
| Female              | 118       | 59.0           |
| No formal education | 28        | 14.0           |
| Primary education   | 42        | 21.0           |
| Secondary education | 76        | 38.0           |
| Tertiary education  | 54        | 27.0           |
| Parent              | 142       | 71.0           |
| Guardian            | 38        | 19.0           |
| Relative            | 20        | 10.0           |
| 6 months – 1 year   | 56        | 28.0           |
| 1–3 years           | 92        | 46.0           |
| Above 3 years       | 52        | 26.0           |

The socio-demographic findings revealed that the majority of caregivers were within the economically active age group of 30–39 years, indicating active parental involvement in rehabilitation care. Female caregivers constituted the majority of respondents, suggesting that mothers and female guardians are more involved in caregiving responsibilities for adolescents with disabilities (Smith and Carter, 2023). Most respondents had at least secondary education, which may influence awareness and healthcare-seeking behavior. The majority being parents further highlights the family-centered nature of rehabilitation care in Kano Metropolis (Ibrahim and Yusuf, 2020).

**Policy Barriers Affecting Rehabilitation Services**

The findings on policy barriers affecting rehabilitation services revealed that weak implementation of disability

policies was the most commonly reported barrier, identified by 74.0% of respondents. Weak enforcement of disability laws was also reported by a high proportion of respondents (70.5%), indicating inadequate policy execution and regulatory oversight (Mills *et al.*, 2022). Poor government funding was identified by 68.5% of respondents, while lack of policy awareness among caregivers and stakeholders accounted for 66.0%. Additionally, 62.5% of respondents reported the absence of effective monitoring systems as a major challenge affecting rehabilitation service delivery. These findings suggest that policy-related challenges significantly hinder access to and utilization of rehabilitation services among adolescents with handicaps in Kano Metropolis.

**Table 2: Policy Barriers Affecting Rehabilitation Services (n = 200)**

| Policy Barriers                            | Frequency | Percentage (%) |
|--|-----------|----------------|
| Weak implementation of disability policies | 148       | 74.0           |
| Poor government funding                    | 137       | 68.5           |
| Lack of policy awareness                   | 132       | 66.0           |
| Weak enforcement of disability laws        | 141       | 70.5           |
| Absence of monitoring systems              | 125       | 62.5           |

**Health System Barriers**

The results on health system barriers showed that long waiting time in hospitals was the most frequently reported challenge,

affecting 72.0% of respondents. Shortage of rehabilitation professionals was reported by 69.5% of respondents, indicating inadequate human resources for rehabilitation care.

Inadequate rehabilitation equipment was identified by 67.0% of respondents, while insufficient funding of rehabilitation services accounted for 66.5%. Furthermore, 64.0% of respondents reported poor integration of rehabilitation services into primary healthcare as a significant barrier. The

findings demonstrate that systemic healthcare limitations contribute substantially to poor accessibility and quality of rehabilitation services for adolescents with handicaps (Table 4.3).

**Table 3: Health System Barriers (n = 200)**

| Health System Barriers                   | Frequency | Percentage (%) |
|--|-----------|----------------|
| Long waiting time in hospitals           | 144       | 72.0           |
| Shortage of rehabilitation professionals | 139       | 69.5           |
| Inadequate equipment                     | 134       | 67.0           |
| Poor integration into primary healthcare | 128       | 64.0           |
| Insufficient funding                     | 133       | 66.5           |

The results show that long waiting time and shortage of professionals are major health system barriers. This agrees with Ibrahim and Yusuf (2022), who reported workforce shortages as a key constraint in rehabilitation service delivery in Northern Nigeria. Anne *et al.* (2022) also emphasized that weak integration of rehabilitation into primary healthcare reduces service accessibility and continuity.

#### Association between Policy Awareness and Rehabilitation Utilization

The analysis of the association between policy awareness and rehabilitation utilization showed that caregivers with low policy awareness had the highest proportion of poor

utilization of rehabilitation services, with 82 respondents compared to 28 respondents who utilized services regularly (Table 3.4). Among caregivers with moderate awareness, 36 respondents reported regular utilization while 34 reported poor utilization. Similarly, among respondents with high policy awareness, 22 reported regular utilization and 18 reported poor utilization. The chi-square test result ( $\chi^2 = 14.26$ ,  $p = 0.001$ ) indicated a statistically significant association between policy awareness and rehabilitation utilization among caregivers. This implies that higher awareness of disability-related policies is associated with improved utilization of rehabilitation services among adolescents with handicaps in Kano Metropolis.

**Table 4: Association between Policy Awareness and Rehabilitation Utilization**

| Policy Awareness   | Regular Utilization | Poor Utilization | Total |
|--------------------|---------------------|------------------|-------|
| Low awareness      | 28                  | 82               | 110   |
| Moderate awareness | 36                  | 34               | 70    |
| High awareness     | 22                  | 18               | 40    |
| Total              | 86                  | 134              | 200   |

#### Chi-square Result for Table 4: $\chi^2 = 14.26$ , $p = 0.001$

The result indicates a significant relationship between policy awareness and rehabilitation utilization. This suggests that caregivers with higher awareness are more likely to utilize rehabilitation services regularly. Smith and Carter (2023) similarly found that policy awareness improves healthcare utilization among families of persons with disabilities. This highlights the importance of community education, policy dissemination, and advocacy programs aimed at improving rehabilitation service awareness among caregivers.

The findings indicate that weak implementation of disability policies is the most significant barrier affecting rehabilitation services. This aligns with Ojo and Abdullahi (2020), who reported that poor enforcement of disability laws in Nigeria significantly limits access to rehabilitation services. Similarly, WHO (2023) emphasized that policy implementation gaps are a major challenge in low-income health systems. Lack of monitoring and accountability structures further weakens service delivery efficiency.

#### CONCLUSION

The study concluded that policy and health system barriers significantly affect rehabilitation service delivery for adolescents with handicaps in Kano Metropolis. Weak policy implementation, inadequate funding, shortage of rehabilitation professionals, and poor health system integration were identified as major challenges. Strengthening policy enforcement, improving funding mechanisms, and expanding rehabilitation workforce capacity are essential to improving service utilization.

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