



FACTORS AFFECTING ACCESS TO HEALTHCARE SYSTEMS FOR CHILDREN UNDER FIVE YEARS WITH DISABILITY IN LOW RESOURCE SETTING: A CASE STUDY OF WAJIR COUNTY REFERRAL HOSPITAL, KENYA

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ABSTRACT: *Background: Children with disabilities face inequalities in accessing healthcare systems, particularly in low-resource settings. The situation is particularly dire in Kenya, where disability is still widely viewed as a curse or a punishment, and where many traditional healers claim to have the ability to cure disabilities. As a result, many children with disabilities in Kenya frequently have unmet special healthcare needs. Understanding the challenges faced by differently-abled children under five years old in accessing healthcare in low-resource settings is crucial to developing more responsive and effective healthcare systems for this population. Methods: In this hospital-based cross-sectional study, we aimed to investigate the factors affecting access to healthcare for disabled children under five years old in Wajir County, Kenya. We used a simple random sampling technique to recruit 69 caregivers of disabled children, who were interviewed using an interviewer-administered questionnaire. Ethical approval was granted by the KNH/UON Ethical Committee. We used descriptive and inferential statistics, including chi-square tests, to analyze the data using SPSS version 25.0. Results: The majority of the caregivers were women (75.4%). We found that several factors were significantly associated with healthcare accessibility, including the belief that disability was caused by demon possession ($p=0.019$), reliance on traditional healers for the treatment of disabilities ($p=0.034$), accessibility of healthcare facilities ($p=0.034$), distance to the health facility ($p=0.042$), perceived differential treatment of disabled children ($p=0.047$), medical costs ($p=0.028$), lack of access to physiotherapist services ($p=0.008$), and difficulty in getting appointments suitable for the child ($p=0.015$). Conclusion: Our findings suggest that children with disabilities in Wajir County face significant barriers in accessing healthcare services, which are compounded by socio-cultural beliefs and economic challenges. A more coordinated, collaborative, and multidisciplinary approach is needed to improve healthcare access for this vulnerable population. Policymakers, healthcare providers, and caregivers should work together to address the identified barriers and ensure that disabled children under five years old have access to the healthcare services they need to thrive.*

KEYWORDS: Healthcare access, Disability, Children, Socio-cultural, Healthcare system, Wajir County, Kenya.



BACKGROUND

The term disability is used to characterize individual functioning and activity limitation that usually restricts the participation of disabled people in areas of physical, cognitive, sensory, and intellectual activities (Chabeda-Barthe et al., 2019). A child is said to have a disabling condition if he or she has a health condition or impairment that restricts functioning in one or more areas. These areas can be in the child's physical movement, cognitive and sensory functions, self-care, memory, self-control, learning (Kabia et al., 2018).

Globally, over a billion people have been reported to have one form of disability or another (WHO, 2018). This accounts for about 15% of the world's population. Among this population, it is estimated that 93 million children (5.1%) aged 0–14 years live with moderate or severe disabilities, with 13 million children (0.7%) aged 0-14 years experiencing severe difficulties (WHO, 2018). Among those 15 years and older, the figures were 19.4% (892 million) for those with moderate or severe disabilities and 3.8% (175 million) for those with severe difficulties (Badu et al., 2015). Generally, people with disabilities have lesser access to healthcare services, and because of their special and unique health care needs, they report seeking more health care and also report unmet needs than those without disabilities (Sharby et al., 2015).

Healthcare access among disabled persons differs dramatically across countries and communities. In every society, People with Disabilities (PWDs) lag behind other citizens in accessing healthcare (Scalli, 2018). In developed countries, access to health services among the patients ranges from 80-93% (Alborz et al., 2017; Dassah et al., 2018a; Patel et al., 2017). Healthcare accessibility problem is common to the majority of patients in Africa and most developing countries and widens the access gap between themselves and their counterparts in the developed world (WHO, 2018). Research done in African countries showed that less than 60% of persons with disability access adequate healthcare services. In Namibia 58%, Ghana 53%, Mauritius 60%, Uganda 34%, Tanzania 34% Burundi 30%, and Kenya 41% of persons with disability access adequate healthcare services (LaRoche, 2017; Noyes-Grosser, 2017; Raouafi et al., 2018).

Over time, children living with disabilities have remained a neglected population exposed to social stigma and neglect, and other challenges such as inadequate access to health care (Chabeda-Barthe et al., 2019). Despite the need for specialty services, children with disabilities usually encounter financial, structural, and social challenges in assessing health care services. People with disabilities do not usually benefit from health promotion and prevention activities because they are scarcely targeted. For example, they are less likely to have their weights checked (Mutisya et al., 2017). Generally, young children with disabilities encounter barriers; they do not receive adequate care concerning mainstream programs and services required for their development (WHO, 2011). In Wajir County, no study has been done on the situation of disabled people, even after devolution, children with disability are still required to travel long distances to reach secondary and tertiary healthcare facilities. Hence, we sought to examine the variables that influence the accessibility of the health care system for children under the age of five with disabilities. We included parents of children with any disability who attended the clinic including Cerebral Palsy, Autism, and Down syndrome



MATERIALS AND METHODS

We conducted a hospital-based descriptive cross-sectional study at Wajir County Referral Hospital, located remotely in the North-Eastern part of Kenya. The study utilized a quantitative design through the use of an interviewer-administered semi-structured questionnaire. Our study population consisted of caretakers with disabled children under the age of five. The hospital's medical records indicated that approximately 84 disabled children visited the clinic. To determine the sample size, we used the Fisher et al. (1998) formula and sampled 69 caretakers of disabled children under five years at Wajir County Referral Hospital via simple random sampling method.

We included all caretakers of disabled children less than five years who visited the Wajir County Referral Hospital, were willing to participate in the study, and who were mentally and physically capable of being interviewed. We excluded all participants who were too unwell to participate or who declined to give consent.

Data Analysis and Management:

We performed initial data cleaning by entering the collected data into Excel. The data were then transferred to SPSS version 25.0 software for coding and processing of the quantitative data. Descriptive statistics were used to organize and summarize the data collected. To determine the relationship between the dependent and independent variables, correlation analysis was conducted. A significance level of 0.05 was used. Bivariate analysis was used to determine which independent variables had a strong correlation with the dependent variable in the two-variable case.

Ethical Considerations

Our study was approved by the KNH/UoN-Ethical Review Committee (REF: KNH-ERC/UA/209), and we obtained informed consent from all respondents before collecting data. We ensured the anonymity of the data collected during storage, analysis, and reporting to protect the privacy of the participants. We also obtained permission from the administration of Wajir County Referral Hospital to conduct the study.



RESULTS

Socio-Demographic Characteristics

As shown in Table 1, this study revealed that a majority of caregivers were relatively young, with more than half being under 35 years old. The most common age group was 25-29 years old, while a small proportion were over 45 years old. The mean age was 34.3 years old, with a standard deviation of 5.9 years. In terms of marital status, more than half of the caregivers were married, while a relatively small proportion were either single, divorced/separated, or widowed. Additionally, females made up the majority of caregivers, comprising 75.4% of the total respondents.

Table 1: Socio-Demographic Characteristics of the care-givers of children with disability in Wajir County, Kenya.

Characteristics		Frequency	Percent
Age group	18-24 years	10	14.5%
	25-29 years	14	20.3%
	30-34 years	13	18.8%
	35-39 years	11	15.9%
	40-44 years	12	17.4%
	45 years and above	9	13.0%
Marital status	Single	26	37.7%
	Married	35	50.7%
	Divorced/separated	6	8.7%
	Widowed	2	2.9%
Gender	Male	17	24.6%
	Female	52	75.4%

Accessibility of Healthcare Facility

Regarding the accessibility of healthcare facilities, the study found that almost half of the caregivers (49.3%, n=34) had to travel between 30 miles to 1 hour to reach the health facility. Furthermore, the majority of caregivers (73.9%, n=51) did not have access to a children's hospital or special service provider within their vicinity, which could pose challenges when seeking specialized care for their children with disabilities. Additionally, more than two-thirds of caregivers (66.7%, n=46) reported that the working hours at the facility were not convenient for them, which could make it difficult for them to seek care while juggling their caregiving responsibilities and other obligations..



Table 2: Factors associated with the accessibility of Healthcare Facility by caregivers of children with disability in Wajir County, Kenya.

Characteristics		Frequency	Percent
Distance to Facility	Less than 30 minutes	13	18.8%
	30 minutes-1 hour	34	49.3%
	More than 1 hour	22	31.9%
Availability of children's hospital	Yes	18	26.1%
	No	51	73.9%
Convenient operating hours	Yes	23	33.3%
	No	46	66.7%
Easy to seek care	Yes	36	52.2%
	No	33	47.8%
Difficulty moving around the facility	Yes	19	27.5%
	No	50	72.5%

Socio-Cultural Factors Affecting Accessibility of Healthcare System

Table 3 displays the socio-cultural factors that influenced the accessibility of healthcare among the respondents. Our findings indicate that caregivers who held the belief that disabilities were caused by demonic possession had significantly lower access to healthcare services, with only 22.7% reporting accessibility ($p=0.019$). In addition, those who believed that traditional healers were necessary for treating disabilities were less likely to access the healthcare system ($p=0.034$).



Table 3: Factors Affecting Accessibility of Healthcare System by caregivers of children with disability in Wajir County, Kenya.

		Yes		No		Statistic
		n=32	Percent	n=37	Percent	
Disabilities are possessed by demons	Yes	5	22.7%	17	77.3%	$\chi^2=6.841$ p=0.019
	No	27	57.4%	20	42.6%	
Traditional healers are necessary	Yes	13	35.1%	24	64.9%	$\chi^2=5.858$ p=0.034
	No	19	59.4%	13	40.6%	
Medical treatment is necessary	Yes	27	50.9%	26	49.1%	$\chi^2=2.082$ p=0.069
	No	5	31.3%	11	68.8%	
Prayers can treat disability	Yes	11	42.3%	15	57.7%	$\chi^2=1.013$ p=0.303
	No	21	48.8%	22	51.2%	

Healthcare System Factors Affecting Accessibility of Healthcare System

We found that certain healthcare system factors had a significant impact on the accessibility of healthcare services among the caregivers. Table 4 shows that receiving services from physiotherapists was significantly associated with accessibility of healthcare services, with a low p-value of 0.008. On the other hand, the attitude of healthcare workers did not have a significant impact on the accessibility of healthcare services, as evidenced by a high p-value of 1.000. Variables with p-values less than 0.05 included appointment scheduling that suits the child (p=0.015), postponement of medical care due to cost (p=0.028), possession of health insurance cover, and distance to the health facility (both with a p-value of 0.042). Furthermore, respondents who felt that they were treated differently had a p-value of 0.047.



Table 4: Healthcare System Factors Affecting Accessibility of Healthcare System by caregivers of children with disability in Wajir County, Kenya.

Variable		Yes		No		Statistic
		n=32	Percent	n=37	Percent	
Distance to the health facility	< 4 km	9	60.0%	6	40.0%	$\chi^2=3.945$ p=0.042
	4-9 km	18	52.9%	16	47.1%	
	> 9 km	5	25.0%	15	75.0%	
Treated differently	Yes	8	27.6%	21	72.4%	$\chi^2=5.103$ p=0.047
	No	24	60.0%	16	40.0%	
Health insurance cover	Yes	25	49.0%	26	51.0%	$\chi^2=5.676$ p=0.042
	No	7	38.9%	11	61.1%	
Postpone medical care due to cost	Yes	12	26.7%	33	73.3%	$\chi^2=4.999$ p=0.028
	No	20	83.3%	4	16.7%	
HCW are courteous, polite, respectful	Yes	4	26.7%	11	73.3%	$\chi^2=0.987$ p=1.000
	No	10	41.7%	14	58.3%	
	Sometimes	18	60.0%	12	40.0%	
HCW answer all questions	Yes	20	54.1%	17	45.9%	$\chi^2=2.000$ p=0.054
	No	5	38.5%	8	61.5%	
	Sometimes	12	63.2%	7	36.8%	
Get services from a physiotherapist	Yes	23	47.9%	25	52.1%	$\chi^2=7.489$ p=0.008
	No	9	42.9%	12	57.1%	
Get an appointment suiting the child	Yes	16	72.7%	6	27.3%	$\chi^2=6.764$ p=0.015
	No	6	33.3%	12	66.7%	
	Sometimes	10	34.5%	19	65.5%	

DISCUSSION

Our study revealed that caregivers below the age of 35 years accounted for more than half of the sample (n=37; 53.6%), with the majority being between 25-29 years (n=14; 20.3%). The mean age was 34.3 (SD 5.9) with a range of 18 to 56 years. This age distribution is in line with the general population, as 75.1% of Kenyans are below the age of 35 years (NCPD & UNFPA, 2020). Moreover, 35 (50.7%) of the respondents were in marital union, and 52 (75.4%) were females. These findings suggest that relatively young married women make up the majority of caregivers, which may have implications for the provision of healthcare services to people with



disabilities. This finding is consistent with Alborz et al. (2017) who reported that the majority of caregivers of children with disabilities were married women.

Our study also found that believing that disabilities are possessed by demons affected accessibility to the healthcare system ($p=0.019$), with only five (22.7%) of the respondents who held this belief having access to healthcare services. Additionally, 64.9% of respondents who believed that traditional healers were necessary for the treatment of disabilities did not access healthcare, which significantly affected their accessibility to healthcare facilities ($p=0.034$). These results suggest that socio-cultural beliefs play a significant role in determining access to healthcare services for people with disabilities, highlighting the need for culturally sensitive approaches to healthcare provision. Our results are in agreement with Harawo and Mprah (2022) who reported that misconceptions and negative belief systems have been found to hinder the utilization of health systems by children with disabilities in another semi-arid area in Kenya. Alborz et al. (2017) also found that Bangladeshi villagers adhere to a series of practices, including keeping away from spiritualists, wearing talismans, drinking holy water, and performing religious rites. Salas (2019) found that in the island of Nicobar, India, 56% of childcare services were carried out by mothers-in-law. Since the mother-in-law makes decisions in these countries, her attitude and knowledge of child healthcare practices could have a significant impact on the decisions regarding when health care facilities are accessed. Moreover, people's perceptions about disabilities and their overall well-being, as well as their search for assistance, were major obstacles to greater use of healthcare services (Patel et al., 2017; Mkabile & Swartz, 2022).

Our study established that several factors hindered the accessibility of healthcare services for children with disabilities, including distance to health facilities ($p=0.042$), feeling of being treated differently from abled children ($p=0.047$), and medical cost ($p=0.028$). Caregivers of children with disabilities in Marsabit county of Kenya also faced similar challenges (Harawo & Mprah, 2022). Dassah et al. (2018b) found that perceived distance is one of the most important variables regarding utilization, with utilization increasing as perceived distance increases, and decreasing as perceived distance decreases (Baart & Taaka, 2017). The impact of distance on service use has been found in various parts of the world, including in Nigeria (Alborz et al., 2017), Pakistan (Scheer et al., 2013), and the Democratic Republic of Congo (Noyes-Grosser, 2017). Kanyange and Uwizeye (2019) identified personal and economic reasons for not using healthcare services. Sharby et al. (2015) found that ASD screening can be expensive, while Guets and Behera (2022) found that families with a member with disability were at higher financial risk.

Adugna et al. (2020) have documented the challenges faced by children with disabilities in accessing health services due to physical inaccessibility and poor road infrastructure. The authors further report that in some places, health systems access may be out of reach for those with limited resources. In Wajir County, for instance, most of the roads are rough and are affected by floods, thereby delaying access to health services. Additionally, seeking healthcare services is hindered by long distances to the health facility.

Our study found that lack of physiotherapist services ($p=0.008$) and lack of getting appointments suiting the child ($p=0.015$) could hinder access to health services. The role of physiotherapists in caring for children with disabilities has been underscored (Harawo & Mprah, 2022), and late referral to a physiotherapist has been reported as a hindrance to seeking services. We also found that healthcare providers' attitudes would facilitate or hinder access to



healthcare, supporting findings by Sadiki (2022) and Mutisya et al. (2017), who reported attitudinal barriers due to the lack of training of healthcare providers in the care of individuals with developmental disabilities. Negative views and attitudes of healthcare providers, as well as community health workers, towards children with disabilities have also been reported elsewhere (Badu et al., 2015; Kabia et al., 2018).

Furthermore, our study found that low knowledge levels and negative attitudes of healthcare providers reduce parents'/caregivers' trust in the healthcare system. This highlights the need for the training of specialist healthcare providers.

CONCLUSION

In conclusion, our study highlights important factors that hinder accessibility to healthcare services for children with disabilities. Female caregivers were found to be more likely to seek healthcare services compared to male caregivers, and age was found to be negatively associated with healthcare-seeking behaviors. Superstitious beliefs such as the belief that disabilities are possessed by demons and the reliance on traditional healers were also found to negatively affect healthcare accessibility.

Barriers such as distance to healthcare facilities, perceived discrimination, high medical costs, lack of physiotherapist services, and inadequate scheduling of appointments were identified as additional factors contributing to poor healthcare accessibility. To improve the accessibility of healthcare services for children with disabilities, there is a need for targeted interventions that address these barriers.

RECOMMENDATION

We recommend conducting a large-scale study to confirm the findings of this study and identify other barriers to healthcare access for children with disabilities. A qualitative study could also provide deeper insights into the factors influencing healthcare-seeking behaviors. Moreover, it is important to conduct a comprehensive study that considers the diverse health-seeking behaviors of caregivers of children with different disabilities. This will inform the development of effective interventions that address the specific needs of different groups.

Declaration of Conflicting Interests

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