

## Barriers to Accessing Healthcare Services and Coping Strategies among People with Hearing Impairments in Ibadan Metropolis, Oyo State, Nigeria

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### Abstract

Barriers experienced by people with hearing impairment when accessing healthcare facilities have resulted in their avoidance of healthcare facilities, misdiagnosis, frustrations and lack of confidence in the health system. A cross-sectional survey design with a purposive sampling technique and snowball approach was used to select 80 respondents. A semi-structured questionnaire was administered and analysed using descriptive statistics and Fisher's exact test at  $\alpha_{0.05}$ . Respondents (68.8%) were single, 63.8% were between 18 and 25 years old, and 66.3% had high school education. The commonly used method of communication among the respondents was sign language (92.5%), and most respondents (63.8%) earned no monthly income. More than half (57.5%) indicated that their health status was very good. However, 66.3% indicated they took ill in the last 12 months before the study. Common barriers on the individual/demand side include lack of finance (65.0%), inability to communicate (62.5%), and fear of misdiagnosis (55.0%). High treatment cost (75.0%), delay before seeing a doctor (68.8%), and absence of sign language interpreters (66.3%) topped the list of the institutional/supply-side barriers. Coping strategies adopted by the respondents include seeking help from other sources (73.8%) and being accompanied by family members to the facilities (67.5%). There was no significant association between the variables stated. Sensitising the deaf about the healthcare facility where they can access health services will improve deaf patients' health seeking behaviour. Training health workers on sign language and its uses will help enhance the deaf's health-seeking behaviour to access healthcare services.

### Keywords:

Hearing impaired,  
Healthcare access,  
Barriers to healthcare,  
Health-seeking behaviour,  
Demand-side barriers,  
Supply-side barriers.

### Des obstacles à l'accès aux services de soins de santé et stratégies d'adaptation chez les personnes avec des maux d'entendre dans la métropole d'Ibadan, État d'Oyo, Nigéria

### Résumé

Les obstacles rencontrés par les personnes qui ont des maux d'entendre lors de l'accès aux établissements de santé leurs faire éviter des établissements de santé. En plus, cela apporte des erreurs de diagnostic, des frustrations et un manque de confiance dans le système de santé. Une conception d'enquête transversale avec une technique d'échantillonnage raisonné et une approche boule de neige a été utilisée pour sélectionner 80 répondants. Un questionnaire semi-structuré a été administré et analysé à l'aide de statistiques descriptives et du test exact de Fisher à  $\alpha_{0,05}$ . Les répondants (68,8 %) étaient célibataires, 63,8 % avaient entre 18 et 25 ans et 66,3 % avaient fait des études secondaires. La méthode de communication couramment utilisée parmi les répondants était la langue des signes (92,5 %) et la plupart des répondants (63,8 %) ne gagnaient aucun revenu mensuel. Plus de la moitié, 57,5 % ont indiqué que leur état de santé était très bon ; cependant, 66,3 % ont indiqué qu'ils étaient tombés malades au cours des 12 derniers mois avant l'étude. Les obstacles courants du côté de l'individu/de la demande comprennent le manque de financement (65,0 %), l'incapacité de communiquer (62,5 %) et la peur d'un diagnostic erroné (55,0 %). Le coût élevé du traitement (75,0 %), le délai avant de consulter un médecin (68,8 %) et l'absence d'interprètes en langue des signes

**Mots-clés:**

les personnes avec des maux d'entendre, accès aux soins de santé, obstacles aux soins de santé, comportement de recherche de soins, obstacles du côté de la demande, obstacles du côté de l'offre

(66,3 %) figuraient en tête de liste des obstacles institutionnels/du côté de l'offre. Les stratégies d'adaptation adoptées par les répondants comprennent la recherche d'aide auprès d'autres sources (73,8 %) et l'accompagnement de membres de la famille vers les établissements (67,5 %). Il n'y avait pas d'association significative entre les variables indiquées. Sensibiliser les sourds à l'établissement de santé où ils peuvent accéder aux services de santé améliorera le comportement de recherche de soins des patients sourds. La formation des agents de santé à la langue des signes et à ses utilisations contribuera à améliorer le comportement de recherche de soins des sourds pour accéder aux services de santé.

**Introduction**

Access to healthcare is crucial to ensuring good health and leading a productive life. However, obtaining quality healthcare services is a significant challenge, and half of the world still lacks essential health services (1).

Accessing healthcare services is a significant challenge for persons with hearing impairments or deaf persons (2). Deafness, unlike other disabilities, is described as 'the silent disability' because it is not visible; deaf people cannot be identified until an attempt is made to communicate with them (3). They encounter difficulties in most areas of their lives (4). This could be one of the primary reasons persons with hearing impairments experience more challenges accessing healthcare services. When people with disability access health care, they often experience stigma and discrimination as well as receive poor quality services (5).

Poor access to healthcare services, information and education by people with hearing impairments have led to avoidance of the health system, misdiagnosis, frustrations, mistrust and lack of confidence in the health system, thereby predisposing them to poor health (6,7). According to the World Health Organisation, more than 5% of people globally, about 466 million have disabling hearing loss (432 million are adults and 34 million are children) (8). About 2.5 million people are hearing impaired in Nigeria, and information about their access to healthcare services is limited (9). The high number of the hearing-impaired population makes it crucial to investigate the factors influencing access to healthcare and coping strategies among this population in Nigeria. Therefore, this study investigated the health-seeking behaviours, barriers, and coping strategies of people with hearing impairments in accessing healthcare services

**Methods****Study Design, Area and Population**

A cross-sectional survey design was adopted for this study. The study area was the Ibadan metropolis, consisting of five urban Local Government Areas (LGAs): Ibadan North, Ibadan South East, Ibadan North East, Ibadan South West, and Ibadan North West. Ibadan metropolis is located in South West Nigeria and is multi-ethnic. The respondents were selected from educational institutions,

religious and vocational centres where the target population can be found within the Ibadan metropolis. Deaf adults, both male and female, living in Ibadan metropolis were recruited.

**Sampling Size and Sampling Techniques**

The sample size was calculated using the Kish (10) formula below.

$$N = \frac{Z^2 pq}{d^2}$$

Where:

N = Minimum sample size

Z = Standard normal deviation set at 1.96 interval

P = Reasonable estimate of key proportion (prevalence of people with hearing loss globally by WHO 2018 is 5%)

$$(q=1-p)q=1-0.05=0.95$$

d = Degree of accuracy set at 0.05

(precision set at 5% significance)

Therefore, sample size is  $N = \frac{(1.96)^2 \times 0.05 \times 0.95}{0.05^2}$

$$N = \frac{0.182476}{0.0025}$$

$$N = 72.9 \approx 73$$

To cater for non-response, incomplete response and attrition, 10% of the calculated sample size, 73, was added.

$$\text{Thus } 10/100 \times 73 = 7.3 = 7.$$

In total, 80 respondents were recruited for the study.

A purposive sampling technique was used to identify and select from educational institutions, religious and vocational centres within Ibadan where the target population can be found. Then a snowball approach was adopted to select 80 respondents in the metropolis.

**Data Collection Tool and Procedure**

A pretested, semi-structured, interviewer-administered questionnaire designed in the English language was used

for data collection. The questionnaire was developed from the literature review according to the study objectives. It was divided into five sections to elicit the following information: socio-demographic information, health-seeking behaviour, individual barriers to accessing health services, information on the institutional barriers to accessing health services, and coping strategies employed by the respondents.

The interviewers were experts in sign language who communicated with the deaf.

**Data analysis**

The data were analysed and reported using descriptive and inferential (Fishers' exact) statistics.

**Ethical considerations**

Ethics approval for the study was obtained from the Oyo State Research Ethical Committee (Ref. № AD 13/479/1467). Written informed consent was obtained from the respondents.

**Results**

**Socio-demographic Characteristics**

Most respondents (68.8%) were single, 77.5% were Christians, and 63.8% were between 18 and 25 years. Majority of the respondents (66.3%) had high school education, and 18.8% had tertiary education. The commonly used method of communication among the respondents is sign language (92.5%); a few (5.0% and 2.5%) used lip-reading and writing, respectively, to communicate with people. Most respondents (63.8%) earned no income, and 11.3% earned a monthly income of between N10,000 and N19,000. About 12.5% earned between N20,000 and N29,000 monthly, 5.0% earned between N30,000 and N39,000 monthly while only a few of the respondents (1.3%) earned N40,000 and above monthly (Table 1).

**Health-seeking Behaviours**

More than half of the respondents (57.5%) indicated that their health status was very good. However, 66.3% indicated they took ill in the last 12 months before the study. About half (49.0%) of those sick in the last 12 months visited hospitals, 13.2% sought advice from friends, and 17.0% took herbal mixtures. Among those unwell before the study, 9.4% waited for the symptoms to pass, and 5.7% sought advice from friends and engaged in self-medication. Of the proportion who visited the hospital when they were sick, most (73.1%) went to government hospitals. Majority (81.3%) reported that they had good experiences during their visits to the hospital, and 71.3% agreed to revisit the hospital if the need arises. Most respondents (76.9%) delayed hospital visits when sick due to one challenge or

the other. Of this proportion, 40.0% delayed visits because of communication barriers, 20.0% delayed hospital visits due to financial constraints, 15% delayed visits because of distance, and 25% for other reasons. Majority of the respondents (78.8%) indicated that seeking healthcare service when sick is the most expensive; 32.5% indicated that going to a hospital is a waste of time (Table 2).

**Table 1:** Socio-demographic characteristics (N= 80)

Variables	№	%
<b>Religion</b>		
Christianity	62	77.5
Islam	18	22.5
Total	80	
<b>Marital status</b>		
Single	55	69
Married	23	29
Divorced	1	1
Widowed	1	1
<b>Age (in years)</b>		
18-25	51	63.8
26-33	10	12.5
34-41	16	20
42-49	3	3.7
<b>Ethnicity</b>		
Yoruba	55	68.7
Igbo	18	22.5
Hausa	4	5
Others	3	3.8
<b>Occupational status</b>		
Employed	20	25
Unemployed	11	13.8
Self-employed	8	10
Student	41	51.2
<b>Monthly income</b>		
No earning	51	63.8
Less than N10,000	5	6.3
N10,000-N19,000	9	11.3
N20,000-N29,000	10	12.5
N30,000-N39,000	4	5.0
Above 40,000	1	1.3
<b>Method of communication</b>		
Sign language	74	92.5
Lip-reading	4	5.0
Writing	2	2.5
<b>Level of education</b>		
Primary	53	66.3
Secondary	7	8.7
Tertiary	15	18.8
Vocational	5	6.2

**Table 2:** Health-seeking behaviour (N=80)

Variables	N <sub>e</sub>	%
<b>An episode of illness in the last 12 months</b>		
Yes	53	66.3
No	27	33.7
<b>If yes, the number of times (n=53)</b>		
1-5 times	31	58.5
6-10 times	17	32.1
11-15 times	5	9.4
<b>What did you do when you were sick (N<sub>e</sub>)</b>		
I just waited for the symptoms to pass	5	9.4
I went to the hospital	26	49
I sought medication advice from my friends	3	5.7
I sought medication advice from my family members	7	36.8
I engaged in self-medication	3	15.8
I took herbs	9	47.0
<b>Health facilities visited in the last 12 months</b>		
Government	19	73.1
Private	7	26.9
<b>Ever delayed in hospital visit because of challenge</b>		
Yes	20	76.9
No	6	23.1
<b>If yes, specify the type of challenge</b>		
Finance	4	20
Distance	3	15
Communication	8	40
Others	5	25
<b>Visiting a hospital is the most expensive means of getting help</b>		
Yes	63	78.7
No	17	21.3
<b>Going to the hospital is a waste of time</b>		
Yes	26	32.5
No	54	67.5
<b>Rating hospital experience</b>		
Good	65	81.3
Bad	15	18.7
<b>Like to revisit the hospital based on your previous experience</b>		
Yes	57	71.3
No	23	28.7

**Individual/Demand-side Barriers**

Individual or demand-side barriers reported by the respondents include difficulty in communicating with healthcare providers (62.5%), the high financial cost (65.0%), hiding some information about their health from the doctor if a family member or friend accompanies them (55.0%), fear of misdiagnosis (50.0%) and lack of support from family members (46.3) (Table 3).

**Institutional/Supply-side Barriers**

On the institutional/supply-side barriers of the respondents, 92.5% of the respondents indicated that unpleasant situations (the waiting time, health workers' attitude, lack of interpreters) experienced in the health facilities prevented them from accessing healthcare services when needed. Other barriers include the high financial cost of medical services (75.0%), delay before seeing a doctor (68.8%), unofficial payments at the health facilities (63.8%), and the high cost of hiring

**Table 3:** Individual/demand-side barriers

<b>Variables</b>	<b>N<sub>o</sub></b>	<b>%</b>
<b>Family members do not encourage me to visit modern healthcare facilities</b>		
Yes	37	46.3
No	43	53.8
<b>The costs of visiting healthcare are high</b>		
Yes	52	65.0
No	28	35.0
<b>Most hospitals do not have sign language interpreters</b>		
Yes	50	62.5
No	30	37.5
<b>Hide some information about my health from the doctor if a family member or friend accompanies me</b>		
Yes	44	55.0
No	36	45.0
<b>I do not know about the various health services carried out in the health facilities</b>		
Yes	36	45.0
No	44	55.0
<b>My religion does not permit visiting modern health facilities</b>		
Yes	22	27.5
No	58	72.5
<b>I do not have confidence in doctors' treatment based on previous experience</b>		
Yes	22	27.5
No	58	72.5
<b>I feel I may be misdiagnosed since the doctors don't understand sign language</b>		
Yes	40	50.0
No	40	50.0
<b>Previous treatments have been ineffective</b>		
Yes	26	32.5
No	54	67.8

interpreters in hospitals where they are available (60%). They also reported the absence of professional sign language interpreters in health facilities (66.3%), language barrier (61.0%), high cost of transportation to the hospital (57.5%) and unfriendly attitude from some healthcare providers (42%) (Table 4).

#### **Coping Strategies**

Common coping strategies adopted by the respondents in overcoming these barriers are seeking help from other

sources (local herbs sellers, drug vendors, friends) (73.8), accompanied by family members who help to ease communication problems (67.5%), writing on paper to communicate with the healthcare providers (65.0%). Other coping strategies include getting health information from the Internet (52.5%), getting health information from their friends (47.5%) and hiring interpreters (45.0%) (Table 5). There was no significant relationship between demand-side barriers and the respondents' health-seeking behaviour.

**Table 4:** Institutional/supply-side barriers to accessing healthcare services

<b>Variables</b>	<b>N<sub>o</sub></b>	<b>%</b>
<b>Situations in the health facilities prevent you from visiting health facilities when necessary</b>		
Yes	74	92.5
No	6	7.5
<b>The attitude of service providers to patients is not friendly</b>		
Yes	34	42.5
No	46	57.5
<b>Doctors are not available when needed</b>		
Yes	29	36.3
No	51	63.7
<b>The health facility is far from home</b>		
Yes	45	56.2
No	35	43.8
<b>Required medicines are not always available</b>		
Yes	25	31.2
No	55	68.8
<b>There are no professional sign language interpreters in the hospitals</b>		
Yes	53	66.2
No	27	33.8
<b>Medical services are costly</b>		
Yes	60	75.0
No	20	25.0
<b>Waiting for a long time before seeing a doctor</b>		
Yes	55	68.8
No	25	31.3
<b>Too many unofficial payments to hospital staff</b>		
Yes	51	63.8
No	29	36.3
<b>High cost of using the hospital interpreters</b>		
Yes	48	60.0
No	32	40.0
<b>The numbers of physicians at the hospital are few</b>		
Yes	49	61.3
No	31	38.8
<b>High cost of transportation to the hospital</b>		
Yes	46	57.5
No	34	42.5
<b>Language barriers</b>		
Yes	49	61.3
No	31	38.8

**Table 5:** Coping strategies

<b>Variables</b>	<b>N<sub>o</sub></b>	<b>%</b>
<b>Sometimes I seek help from other sources</b>		
Yes	59	73.75
No	21	26.25
<b>I go to the hospital with my family members to interpret for me</b>		
Yes	54	67.5
No	26	32.5
<b>I get health information from the Internet</b>		
Yes	42	52.5
No	38	47.5
<b>I get health information from my friends</b>		
Yes	38	47.5
No	42	52.5
<b>I accept things the way I see them</b>		
Yes	46	57.5
No	34	42.5
<b>I go with friends to the hospital to ease communication problems</b>		
Yes	35	43.7
No	45	56.3
<b>I go to the hospital with a hired sign language language interpreter</b>		
Yes	36	45.0
No	44	55.0
<b>I do not visit hospitals again</b>		
Yes	18	22.5
No	62	77.5
<b>The hospital provides sign language interpreters to ease communication problems</b>		
Yes	36	45.0
No	44	55.0
<b>Writing as a means of communicating with the doctor</b>		
Yes	52	65.0
No	28	35.0

**Table 6:** Association between demand-side barriers and Health-seeking behaviour

Demand-side barriers	Health-seeking behaviour							Fishers' Exact	df	p-value
	Waited for symptom	Went to hospital	Medication advice from friends	Medication advice from family	Self-medication	Took herbs				
I do not have money to visit the hospital.	Yes	4	18	2	5	2	6	0.93	5	1.00
	No	1	8	1	2	1	3			
I find it difficult to communicate with the doctor	Yes	3	15	2	3	2	4	1.63	5	0.97
	No	2	11	1	4	1	5			
Misdiagnosis	Yes	2	12	1	3	1	7	4.09	5	0.58
	No	3	14	2	4	2	2			
Family members do not encourage me to visit modern health facilities	Yes	3	15	1	1	1	2	6.95	5	0.20
	No	2	11	2	6	2	7			
I hide information in the presence of a family member	Yes	4	16	1	3	1	6	3.63	5	0.66
	No	1	10	2	4	2	3			
No confidence in doctor's treatment	Yes	1	9	1	1	0	3	2.40	5	0.87
	No	4	17	2	6	3	6			

**Discussion**

The study showed that majority of the respondents had been ill in the last twelve months before the survey, and only about half of this population visited hospitals when sick. This is in contrast to the findings of (9), which revealed that people with hearing impairments do not often seek healthcare services when necessary and have fewer interactions with the healthcare providers. A major reason for this contrast in findings could be because the majority of the respondents indicated they have family members and friends who encourage them to visit hospitals when sick. These people help ease communication problems between the deaf and care providers. It was found that most respondents delayed their hospital visits at one time or another because of a particular challenge. The respondents' inability to communicate with their care providers was a major challenge. This finding is similar to the study conducted by (11) which showed that communication barrier is a major challenge that restricts access to health information and services for people with hearing impairments.

A major reason for this is that most health education and information on mass media are not presented in sign language. Medical training does not include sign language in the curriculum to equip students with skills to communicate with deaf patients. Previous studies have associated individual barriers and access to healthcare services. It was discovered that there was a significant relationship between individual barriers and access to healthcare

services. This finding is in contrast with previous results. This finding indicates that individual barriers such as lack of encouragement from family members, lack of finance to use health facilities, inability to communicate with care providers, knowledge of various services, issues of confidentiality, fear of misdiagnosis etc., exist among the respondents. These however do not influence their decision to seek health care services if the need arises as indicated by the respondents. The major individual barrier is financial barrier. A financial barrier exists among respondents due to their low economic status, affecting their ability to afford healthcare services.

As listed by (12), affordability of health services is one of the major reasons for differences in health care services among people with disabilities in low-income countries. Their inability to communicate with the care providers and fear of misdiagnosis were also major barriers. This agrees with (2) findings where they found a significant communication challenge between people with hearing impairments and their care providers. Although training in sign language is not mandatory for healthcare workers, the system can provide sign language interpreters to cater for the population's unique needs. The majority of the respondents reported they often encountered unpleasant situations in the hospital they visit. This finding agrees with (13) study, where most deaf individuals reported similar barriers in accessing health services. These barriers include an unfriendly attitude of care providers to the respondents, unavailability of doctors



when needed, inability to communicate with patients (language barriers), unofficial payments and patients waiting for a long time before seeing a doctor.

Barriers that occur beyond the control of care providers include the high cost of medical services, transportation to the health facilities, and distance to the facilities. As indicated by the respondents, a major supply-side barrier is the high financial cost of visiting healthcare facilities. There was no significant association between these barriers and the respondents' health-seeking behaviour.

This result is in contrast with (14). They reported that factors such as the high cost of medical services, the inadequacy of healthcare services, physical barriers to accessing healthcare facilities, as well as poor knowledge and skills on the part of care providers prevent people with disabilities from seeking healthcare services. Reasons for this could be traced to the fact that most respondents have resigned to fate, as indicated by the coping strategies employed by the respondents. Some respondents engaged in strategies that helped them cope positively with these barriers, such as going with friends or family members to interpret for them, seeking health information from the Internet, going with a hired sign language interpreter, and using the interpreter provided by the hospital visit. Medical professionals and patients tend to rely on relatives or close friends to interpret for them (15).

### Conclusion

The non-availability of sign language interpreters to communicate with the deaf in hospitals is a significant barrier to the deaf in accessing care. The cost of employing the services of interpreters is usually high for people with hearing impairments when accessing healthcare services. To cope with this challenge, most deaf individuals seek help from other sources, avoid healthcare settings or visit hospitals with their friends or family members who act as interpreters between them and their care providers. For some patients with hearing impairments, the presence of a friend or family member during a doctor's consultation is a breach of privacy. Thus, they hide vital information concerning their health from the care provider. Training of healthcare workers on the use of sign language is recommended. Policy dialogue to ensure that healthcare facilities are friendly to the special population should be initiated to address the problem of poor access to healthcare among people with hearing impairment.

### Conflict of interest

The authors have not declared any conflict of interest.

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