

Assessment of knowledge of and barriers to accessing healthcare amongst patients in Nnamdi Azikiwe University Teaching Hospital (Nauth), Nnewi

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Abstract

Background: Patients' knowledge on accessing healthcare can improve their health outcome and overcome any barrier that hampers healthcare access at various levels. This study assessed patients' knowledge of barriers to healthcare access and the socio-demographic factors influencing these barriers in Nnewi, South-East Nigeria.

Methods: A cross-sectional analytical study was conducted among 207 patients and caregivers attending outpatient clinics or admitted at Nnamdi Azikiwe University Teaching Hospital. Respondents were selected using a multistage sampling technique. Data were collected using a pretested interviewer-administered questionnaire and analyzed with IBM SPSS Statistics version 23.

Results: Overall, 63.8% of respondents were aware of barriers to healthcare access. Good, fair, and poor knowledge scores were observed in 63.3%, 23.2%, and 13.5% of participants respectively, with a mean knowledge score of 77 ± 18 . Delays in recognizing the need for healthcare and deciding to seek care were the most commonly reported barriers (99.5%), followed by delays in reaching healthcare facilities (93.2%), receiving care (77.8%), and remaining in care (67.6%). Religion, marital status, and educational level were significantly associated with knowledge of healthcare barriers ($p < 0.05$).

Conclusion: Although respondents demonstrated fair knowledge of barriers to healthcare access, cultural and spiritual beliefs remained major obstacles to timely healthcare utilization. Public health interventions focusing on education of patients, caregivers, and the wider community are recommended to improve healthcare access.

Keywords: Knowledge; Barriers; Healthcare Access; Patients; Nnewi; South-East Nigeria

1. Introduction

Access to quality healthcare remains a major global health priority and a key component of universal health coverage. Despite efforts by the World Health Organization and member countries to improve primary healthcare services, many low- and middle-income countries (LMICs), including Nigeria, continue to experience significant barriers to healthcare access [1]. Access to healthcare encompasses availability, affordability, accessibility, and acceptability of health services. However, disparities in healthcare access persist globally, particularly in resource-limited settings where healthcare infrastructure and financing remain inadequate [1, 2].

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Health literacy plays an important role in overcoming healthcare barriers, as it enables individuals to obtain, understand, and utilize health information necessary for maintaining good health. Poor knowledge of healthcare barriers has been associated with poor health outcomes, increased hospital admissions, poor treatment adherence, and underutilization of preventive healthcare services [3,4]. Understanding these barriers is therefore essential for developing interventions that improve healthcare utilization and health outcomes.

Several studies have identified barriers to healthcare access using the four-delay model. Delay 1 involves delay in recognizing illness and deciding to seek care, influenced by socio-cultural, educational, demographic, and financial factors. Delay 2 refers to challenges in reaching healthcare facilities, including transportation and geographic barriers. Delay 3 involves delays in receiving adequate care at health facilities due to overcrowding, inadequate infrastructure, shortage of healthcare personnel, and prolonged waiting time. Delay 4 relates to barriers affecting continuity of care and follow-up services. Accumulation of these barriers negatively impacts healthcare outcomes and increases the use of emergency and intensive care services [5,6].

Although patient-centered healthcare has improved considerably in many developed countries, the healthcare system in Nigeria continues to face major challenges, including inadequate healthcare funding, low life expectancy, and poor health indices [1,7]. Many barriers to healthcare access remain poorly understood and inadequately addressed, particularly in South-East Nigeria. Previous studies have largely focused on specific illnesses or patient groups, with limited attention to patients' knowledge of healthcare access barriers.

This study therefore assessed the knowledge of and barriers to accessing healthcare among patients attending Nnamdi Azikiwe University Teaching Hospital. Specifically, the study evaluated patients' awareness and level of knowledge of healthcare barriers, identified common barriers affecting healthcare access, and determined socio-demographic factors influencing knowledge and access to healthcare. Findings from this study may guide policymakers and healthcare providers in designing targeted interventions aimed at improving healthcare accessibility and utilization.

2. Materials and methods

This was a hospital-based cross-sectional analytical study conducted among patients attending clinics and those admitted into various wards from March to September, 2024, at Nnamdi Azikiwe University Teaching Hospital in Nnewi, Anambra state, South Eastern Nigeria .

The study included 207 eligible participants, comprising patients admitted in the wards who consented to participate, their caregivers, and patients attending outpatient clinics who were not first time attendees. Patients who declined consent, were absent during data collection, or were too ill to participate were excluded from the study.

A multistage sampling technique was employed. Three outpatient clinics and seven wards were selected using simple random sampling in stage one. In stage two, stratified sampling with equal allocation was used to distribute the sample size across 10 selected strata. Finally systematic random sampling was used to recruit respondents from the outpatient clinics using attendance and simple random sampling in wards.

Data were collected using a pretested semi-structured interviewer-administered questionnaire adapted from related studies [8]. The questionnaire assessed socio-demographic characteristics, awareness of healthcare barriers, knowledge of barriers to healthcare access, and barriers experienced in accessing healthcare services. Ten trained research assistants fluent in English and Igbo assisted with data collection, while pretesting was done among 21 patients at Chukwuemeka Odumegwu Ojukwu University Teaching Hospital to assess clarity, feasibility, and comprehensibility.

Knowledge of barriers to healthcare access was assessed using 10 questions scored over 100%, with scores categorized as poor (<50%), fair (50-70%), and good (>70%). Data were cleaned, entered into Microsoft Excel for completeness and accuracy. Statistical analysis was carried out using IBM SPSS Statistics version 23. Descriptive statistics were presented as means, standard deviations, frequencies, and percentages. The results from this were represented in tables and charts. Associations between variables were assessed using Chi-square test or Fisher's exact test where appropriate, with statistical significance set at $p \leq 0.05$.

Ethical approval was obtained from the Health Research Ethics Committee of Nnamdi Azikiwe University Teaching Hospital. Participation was voluntary, informed consent was obtained from all respondents, and confidentiality and anonymity were strictly maintained throughout the study. The study was conducted in accordance with the principles of the Declaration of Helsinki.

3. Results

3.1. Socio-demographic Characteristics of Respondents

Table 1 Socio-demographic Variables

Variable	Frequency (N=207)	Percentage (%)
Age Groups		
11-20	38	18.4
21-30	83	40.1
31-40	36	17.4
41-50	26	12.6
51-60	8	3.9
61-70	11	5.3
71-80	4	1.9
81-90	1	0.5
MEAN AGE $\pm$ S.D.	33 $\pm$ 14 years	
Sex		
Male	68	67.1
Female	139	32.9
Ethnic group		
Igbo	205	99.0
Itsekiri	1	0.5
Yoruba	1	0.5
Religion		
Christian	204	98.6
Traditional religion	3	1.4
Marital status		
Never married	113	54.6
Currently married	74	35.7
Divorced	2	1.0
Widowed	12	5.8
Separated	5	2.5
Others	1	0.5
Highest level of Education		
None	1	0.5
Primary	17	8.2
Secondary	72	34.7
Tertiary	94	45.4
Postgraduate	23	11.1

Area of residence		
Rural	77	37.2
Urban	130	62.8
Employment status		
Unemployed	59	28.5
Business	48	23.2
Artisan	8	3.9
Civil servant	33	15.9
Self employed	52	25.1
Pension	7	3.4
Average monthly family Income (Naira)		
<30,000	48	23.2
30,000-100,000	86	41.5
100,000-500,000	38	18.4
500,000-1,000,000	18	8.7
>1,000,000	17	8.2

The mean age of respondents was 33 ± 14 years, with the majority aged 21–30 years (40.1%). Most respondents were females (67.1%), of Igbo ethnicity (99.0%), and Christians (98.6%). More than half of the respondents were never married (54.6%), while 45.4% had tertiary education. Most respondents resided in urban areas (62.8%). Regarding employment status, 28.5% were unemployed, while 25.1% were self-employed. The commonest monthly family income range was ₦30,000–₦100,000 (41.5%).

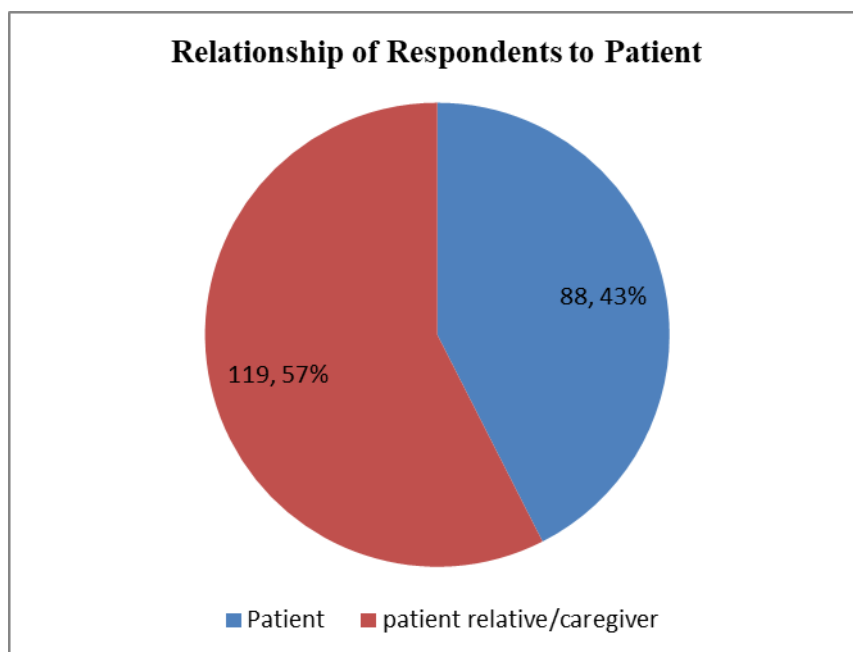


Figure 1 Pie Chart Showing Relationship of Respondents to the Patient.

More than half of the respondents (57%) were caregivers or relatives of patients, while 43% were patients themselves.

Table 2 Awareness of Barriers to Healthcare Access

Variable	Frequency	Percentage
Have you heard of the concept “barriers to accessing healthcare”?		
Yes	132	63.8
No	75	36.2
TOTAL	207	100.0
If (Yes), what source of information?		
Health worker	64	48.1
Friends	39	29.3
Radio/TV	31	23.3
Internet	51	38.3
Neighbours	12	9.0

Overall, 63.8% of respondents had heard about the concept of barriers to healthcare access. Among those aware, health workers were the commonest source of information (48.1%), followed by the internet (38.3%), friends (29.3%), and radio/television (23.3%).

Table 3 Grade and Level Of Knowledge OfThe Barriers To Accessing Healthcare

Variables	Frequency	Percentage
You know about the concept “ barriers to healthcare” and some examples of such barriers		
Yes	140	67.6
No	67	32.4
You can mention 5 possible reasons why people don’t come to the hospital when they are sick		
Yes	176	85.0
No	31	15.0
Factors preventing people from coming to the hospital are not harmful to their health		
Yes	93	44.9
No	114	55.1
You recognize these factors as barriers to accessing healthcare		
Yes	184	88.9
No	23	11.1
You believe that going to prayer house is more effective than coming to the hospital		
Yes	64	30.9
No	143	69.1
Poverty and illiteracy can prevent one from getting the right care		
Yes	176	85.0
No	31	15.0
Herbalists are the first people to meet when it comes to health problems		

Yes	24	11.6
No	183	88.4
Knowing about your healthcare barriers affects your approach to health		
Yes	155	74.9
No	52	25.1
You discuss these barriers with other people		
Yes	153	73.9
No	54	26.1
You find solution to healthcare barriers and encourage people on the right step to take		
Yes	171	82.6
No	36	17.4
Level of Knowledge	Frequency	Percentage
Poor	28	13.5
Intermediate	48	23.2
Good/High	131	63.3
Mean $\pm$ S.D	77 $\pm$ 18	

Most respondents demonstrated good understanding of healthcare barriers. About 67.6% knew about barriers to healthcare access and examples of such barriers, while 85.0% could identify reasons why patients fail to seek hospital care. Furthermore, 88.9% recognized these factors as barriers to healthcare access, and 85.0% acknowledged poverty and illiteracy as important contributors.

However, 30.9% believed that prayer houses were more effective than hospitals, while 11.6% considered herbalists as the first point of contact for healthcare problems. Most respondents reported discussing healthcare barriers with others (73.9%) and encouraging solutions to overcome these barriers (82.6%).

Knowledge scores showed that 63.3% of respondents had good knowledge, 23.2% had intermediate knowledge, and 13.5% had poor knowledge of healthcare barriers, with a mean knowledge score of 77 ± 18 .

Table 4 Barriers to Accessing HealthCare Among Patients

Variable	Frequency	Percentage
Which do you go first before coming to the hospital		
Home treatment	55	26.6
Chemist	91	44.0
Traditional healers	4	1.9
Prayer house	4	1.9
Primary health centre	49	23.7
Others	4	1.9
Do you have any cultural beliefs that prevent you from accessing health care		
Yes	12	5.8
No	195	94.2

Which of these cultural barriers relates to you		
Father is absent to make decision	104	50.0
Elders' opinion	86	41.7
Others- not applicable	17	8.3
Do you think your problem is spiritual?		
Yes	35	16.9
No	172	83.1
Do you have any religious beliefs that may prevent you from accessing health care		
Yes	16	7.7
No	191	92.3
If Yes		
Fasting	4	25.0
Medical procedure rejection	10	62.5
Food selection	2	12.5
During the past 6 months, was there a time when you: had a medical problem but did not visit a doctor because of the cost		
Yes	103	49.8
No	104	50.2
How long does it take to present to hospital when you fall sick?		
Less than 1 day	24	11.6
1-3 days	47	22.7
3-7 days	53	25.6
1-3 weeks	43	20.8
>1 month	40	19.3
Do you make all your health decision yourself?		
Yes	100	48.3
No	107	51.7
Do you feel that the hospital is far from your residence		
Yes	128	61.8
No	79	38.2
Does the distance from residence to hospital prevent you from accessing health care?		
Yes	84	40.6
No	123	59.4
Do you have a readily available means of transport from your residence to hospital		
Yes	120	58.0
No	87	42.0
How long does it take to arrive at this hospital from your residence		
Less than 30 mins	63	30.4

30 mins-1 hr	73	35.3
1-3 hrs	53	25.6
3-5 hrs	13	6.3
>5 hrs	5	2.4
Is bad road a factor that hinders you from accessing health care		
Yes	103	49.8
No	104	50.1
Are the street gates easily accessible at night?		
Yes	104	50.2
No	103	49.8
Does patient waiting time discourage you from coming to the hospital		
Yes	130	62.8
No	77	37.2
How long did it take from time you arrived in hospital to time you were attended to by the doctor		
Less than 30 mins	33	15.9
30 mins-1 hr	72	34.8
1-3 hrs	67	32.4
3-5 hrs	30	14.5
>5 hrs	5	2.4
Do you think that hospital card and hospital policies discourage you from coming to the hospital		
Yes	93	44.9
No	114	55.1

The most common first point of care before hospital presentation was chemists or patent medicine stores (44.0%), followed by home treatment (26.6%) and primary healthcare centers (23.7%). Only 1.9% sought care initially from traditional healers or prayer houses.

Cultural beliefs preventing healthcare access were reported by 5.8% of respondents, mainly related to absence of fathers in healthcare decision-making (50.0%) and influence of elders (41.7%). Additionally, 16.9% believed their illnesses were spiritual, while 7.7% had religious beliefs limiting healthcare utilization, mostly involving rejection of medical procedures (62.5%).

Nearly half of respondents (49.8%) reported avoiding hospital visits because of healthcare costs. Delayed presentation to hospital was common, with 25.6% presenting within 3–7 days after onset of illness and 19.3% presenting after more than one month. Over half of respondents (51.7%) did not make healthcare decisions independently.

Distance and transportation-related barriers were also common. About 61.8% perceived the hospital to be far from their residence, although 59.4% stated that distance did not prevent them from seeking care. While 58.0% had available transportation, 49.8% reported poor roads as barriers to healthcare access.

Healthcare system-related barriers were frequently reported. Patient waiting time discouraged 62.8% of respondents from attending the hospital, while 44.9% considered hospital policies and card registration processes discouraging. Most respondents waited between 30 minutes and 3 hours before being attended to by a doctor.

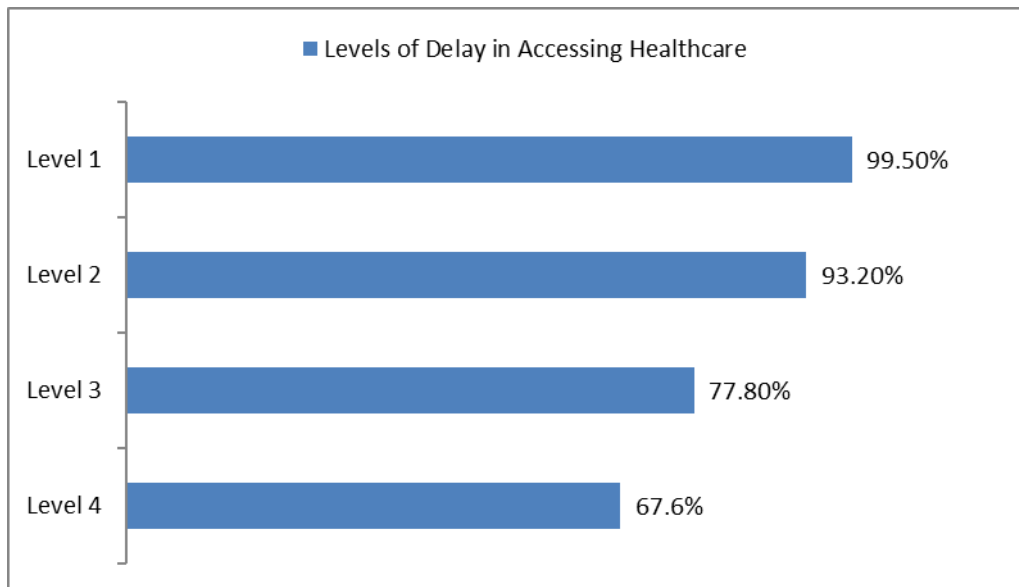


Figure 2 Levels of Delay in Accessing Healthcare

Almost all respondents (99.5%) experienced Level 1 delay (delay in recognizing illness and deciding to seek care). Level 2 delay (delay in reaching healthcare facilities) affected 93.2% of respondents, while Level 3 delay (delay in receiving care) and Level 4 delay (delay in remaining in care) affected 77.8% and 67.6% respectively.

Table 5 Significant Association Between Variables

Variables	χ^2	p-value
Religion vs Knowledge	7.492	0.024
Marital status vs Knowledge	22.097	0.015
Education vs Knowledge	23.789	0.002
Marital status vs Level 2 Delay	16.823	0.005
Education vs Awareness	15.737	0.003
Age vs Distance Barrier	11.528	0.009

There were statistically significant associations between level of knowledge of healthcare barriers and religion ($\chi^2 = 7.492$, $p = 0.024$), marital status ($\chi^2 = 22.097$, $p = 0.015$), and educational level ($\chi^2 = 23.789$, $p = 0.002$). Respondents with higher educational attainment demonstrated better knowledge of healthcare barriers.

Among the socio-demographic variables examined, only marital status showed significant association with Level 2 delay ($\chi^2 = 16.823$, $p = 0.005$).

Additionally, educational level was significantly associated with awareness of barriers to healthcare access ($p = 0.003$). Cultural beliefs preventing healthcare access were significantly associated with marital status ($p = 0.025$), educational level ($p < 0.001$), and area of residence ($p = 0.005$). Religious beliefs affecting healthcare access were also significantly associated with educational level ($p = 0.004$).

Distance to hospital as a barrier to healthcare access was significantly associated with age group ($\chi^2 = 11.528$, $p = 0.009$), with older respondents more likely to perceive distance as a challenge.

4. Discussion

This study assessed the knowledge of and barriers to accessing healthcare among patients and caregivers attending Nnamdi Azikiwe University Teaching Hospital. The majority of respondents were caregivers and female suggesting

greater healthcare utilization among women which aligns with previous Nigerian studies reporting gender differences in healthcare seeking behaviours [9].

Most respondents were of Igbo and Christian, reflecting the demographic pattern of South-East Nigeria. The study observed that unmarried respondents appeared to have greater autonomy in making healthcare decisions compared to married respondents. Similar findings were reported in a study conducted in Zaria, where married women experienced reduced healthcare access due to dependence on their spouses for healthcare-related decisions and expenses [10]. In the present study, reduced autonomy among married women appeared to be related more to male authority in decision-making than financial dependency.

Although many respondents had tertiary education and resided in urban areas, utilization of primary healthcare centers remains. Many respondents preferred seeking care directly at the teaching hospital due to greater confidence in the expertise of healthcare workers and availability of specialized services. Similar observations have been reported in studies evaluating underutilization of primary healthcare facilities in Nigeria, contributing to congestion and increased burden tertiary [1].

Socioeconomic status positively influenced healthcare access among respondents; however financial barriers remained significant despite relative high employment rates. Nearly half of the respondents reported skipping investigations or treatment because of cost. This finding agrees with previous studies showing that out-of-pocket healthcare expenditure remains a major barrier to healthcare utilization in LMICs and contributes to the delayed presentation and poor health outcomes [11].

Cultural and spiritual beliefs continued to contribute significantly affect healthcare- seeking behavior. Some believed prayer houses were more effective than hospitals or considered their illnesses spiritual in origin. Similar findings were reported by Mabvurira, who observed that African traditional religion and spirituality significantly influence healthcare-seeking behavior and may delay presentation to hospitals [12].

A substantial proportion of respondents initially sought treatment through self medication, chemists' shops or home treatment before presenting to the hospital. Such practices may worsen disease severity and delay appropriate treatment. Financial constraint, poor road networks, and prolonged waiting time were identified as major barriers to healthcare access, consistent with finding from other Nigerian and international studies [2]. Although many respondents perceived the hospital to be far from their residence, distance alone did not significantly discourage healthcare utilization, possibly due to relatively better road connectivity and ease of transportation within Anambra State.

Level 1 delay, involving delay in recognizing illness and deciding to seek care was the most common barrier identified, followed by delay related to transportation, health care delivery, and continuity of care. This finding differs from studies in Enugu, where transportation related delays were prominent [13]. Differences in transportation access and environmental factors may explain this variation.

Significant associations were found between level of knowledge and religion, marital status, and educational level, indicating that these socio-demographic factors influence understanding of healthcare barriers. Marital status was also significantly associated with Level 2 delays, while older respondents were more likely to perceive distance as a major barrier to healthcare access. Further multicenter studies are recommended to explore these relationships and guide targeted interventions aimed at improving healthcare access.

5. Conclusion

This study revealed a relatively high level of awareness and knowledge of barriers to health care among respondents. Despite this, significant barriers including financial constraint, limited autonomy in healthcare decision-making, distance to healthcare facilities, transportation difficulties, and prolonged waiting time, socio-cultural and spiritual beliefs continued to hinder timely health care utilization. Knowledge of healthcare barriers was significantly associated with religion, marital status, and educational level, while marital status also influenced barriers to healthcare access. Overall, the findings demonstrate that socio-cultural, economic, and health system factors remain important determinants of healthcare access.

Compliance with ethical standards

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Disclosure of conflict of interest

All authors have no conflicts of interest regarding the study. All findings were paid for, out of pockets, by the authors.

Statement of informed consent

Written informed consent was obtained from all participants before administration of the questionnaire. Participation was voluntary, and respondents were assured of confidentiality and anonymity throughout the study.

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