

# Barriers to oral health care service utilization in Awo-Gareji community, Ankpa Local Government Area, Kogi State, Nigeria

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## ABSTRACT

### Introduction

Lack of access to oral health care can result in delayed diagnosis, untreated oral diseases, compromised health status, and, occasionally, death. People who have access to oral health care services are more likely to receive basic preventive care and education on personal behavioural modifications.

### Purpose

This study investigates the barriers to utilizing oral health care services in Awo-Gareji community, Ankpa LGA, Kogi State, Nigeria.

### Methods

A cross-sectional survey research design was adopted for this study. A total of 399 adults in the community were meant to participate; however, 200 respondents who expressed interest in the study (through verbal consent) were conveniently selected from a population of over 2,000 adults. The instrument for data collection was a structured questionnaire, similar to those used by other authors but with slight modifications.

### Results

Oral health problems among the respondents included deposits such as dental plaque (15; 7.50%), stains (12; 6.00%), and dental calculus (9; 4.50%). Dental disease conditions reported included dental caries (10; 5.00%), gingivitis (70; 35.00%), and periodontitis (21; 10.50%). Other oral health problems identified were fractures (2; 1.00%), abrasion (19; 9.50%), attrition (40; 20.00%), and erosion (2; 1.00%). The study also revealed that awareness of the availability of oral health care services was significantly low among the respondents, with 89 (44.50%) unaware of such services, while only 60 (30.00%) were aware. Regarding barriers to the utilization of oral health care services, 62 (31.00%) of respondents identified the unavailability of a dental clinic in the community as the primary barrier. Additionally, 46 (23.00%) cited a lack of funds as a serious challenge, while 40 (20.00%) reported a lack of awareness about the importance of oral health care as a barrier. A few respondents (5; 2.50%) identified the high cost of dental treatment as a limiting factor. The hypothesis test results showed that the p-value was 0.073756, indicating that barriers to the utilization of dental services exist among the community members.

### Conclusion

Oral health awareness should be promoted in rural areas, and state and local governments should integrate dental health services into existing primary health care centres.

## INTRODUCTION

Good oral health is more than just having healthy teeth; it implies freedom from oral diseases, disorders, and pain (Reethu & Ramankutty, 2021). Maintaining good oral health is essential for an individual's overall well-being, as it impacts health outcomes and quality of life (Ajayi & Arigbede, 2013; Thomas, 2016). Unfortunately, dental health is often neglected by a vast majority of the population, contributing to the global burden of oral diseases, which is more severe in poor and disadvantaged population groups (Taiwo et al., 2016).

Oral diseases such as dental caries, periodontitis, halitosis, orofacial tumors, and oral cancers are significant public health concerns in both developed and developing countries (Osadolor et al., 2023). Osadolor et al. (2023) further explained that oral diseases restrict activities at school, work, and home, leading to millions of lost school and work hours annually. Additionally, the psychosocial impact of these diseases significantly diminishes quality of life. It is important to note that dental diseases such as caries and gingivitis are preventable with regular access to preventive dental services. Therefore, access to oral health care services is crucial for promoting and maintaining good oral health (Reethu & Ramankutty, 2021). People who have access to oral health care services are more likely to receive basic preventive services, education on personal behaviour, early detection of oral diseases, and necessary restorative care (Reethu & Ramankutty, 2021). In contrast, a lack of access to oral health care can result in delayed diagnosis, untreated oral diseases, compromised health status, and, in some cases, death (Osadolor et al., 2023).

Dental service utilization is defined as the percentage of the population that accesses dental services over a specified period (Osadolor et al., 2023). Osadolor et al. (2023) further stressed that the availability and accessibility of dental/oral health services in rural areas are limited, and the provision of oral health care remains inadequate. Limited availability and accessibility of oral/dental health services are potential risk factors for poor oral health, particularly in sub-Saharan Africa. According to Nadia et al. (2018), some barriers to the utilization of dental health services include the cost of services, difficulties obtaining dental appointments, fear of

dentists, availability of oral health care services, and access to oral health services. Gambhi et al. (2018) identified additional barriers such as socio-economic status, age, gender, ethnicity, perception of need, dental anxiety, feelings of vulnerability, cost of treatment, individual health status, cultural isolation, unemployment, rural residence, special needs, and transportation challenges.

Previous studies have reported low dental service utilization, ranging from 15.5% to 56.5% in Enugu and 14.9% in Lagos (Subait et al., 2015). Subait et al. (2015) emphasized the need for regular dental visits even in the absence of dental problems to facilitate early disease detection and prompt treatment. Maintaining good oral health is not only essential for a person's appearance and well-being but also for preserving oral functions.

In Nigeria, awareness of oral health issues remains low among different population groups. This limited awareness may directly affect health-seeking behaviour and access to oral health facilities (Osadolor et al., 2023). A 2008 study reported that knowledge about the utilization of dental services in Nigeria, particularly in rural areas, is inadequate, with only a small proportion of the population visiting dentists regularly, as evidenced by limited literature and anecdotal reports (Kola-Jebutu et al., 2020).

A literature search on the utilization of available oral health care services in rural communities in Nigeria reveals a paucity of data on the subject (Osadolor et al., 2023). Kogi State, like other states in Nigeria, may not be exempt from this trend. Therefore, the pertinent research questions for this study are: What are the barriers that limit the utilization of oral health care services in Awo-Gareji community? Which of these barriers most significantly hinder the community from utilizing oral health care services?

## METHODS

### *Study Area*

The study was conducted in Awo-Gareji, one of the 14 communities that constitute Awo District. Other communities include Awo-Ojuwo, Awo-Udaba, Awo-Ate, Awo-Akpolokuta, Awo-Akpali, Awo-Akukunda, Awo-Efagbo, Awo-Efiga, Awo-Olikpochipo, Awo-Anekpa, Awo-Etukwo, Awo-Ofe-Okume, and Awo-Ereche. Awo-Gareji was founded in the early 18th century by the late

Elder Aba and his brother Okoh, who originally lived in Awo-Efiga before relocating to what is now known as Awo-Gareji.

Awo-Gareji is bordered to the north by Akpene, to the east by Awo-Ofe-Okume, to the west by Awo-Etukwo, and to the south by Awo-Anekpa. The community is predominantly agrarian, with most residents engaged in peasant farming. However, there are a few state civil servants and retired military and paramilitary personnel among them.

#### *Study Design, Population, Sampling Technique, and Sample Size*

This study adopted a cross-sectional survey research design, which was deemed appropriate for reaching a large population at a single point in time. Storm's formula was used to determine a sample size of 399 respondents from an estimated population of 2,000 adults. However, only 200 individuals, who expressed interest in participating by providing verbal consent, were included in the study.

A non-probability sampling technique (convenience sampling) was employed to select the 200 study participants. Convenience sampling was used due to accessibility and willingness to participate. While this technique may limit generalizability and introduce estimation bias, it is cost-effective, efficient, and easy to implement (Justin et al., 2017).

#### *Research Instrument and Data Collection Process*

The data collection instrument was a structured questionnaire, adapted from previous studies (Reethu & Ramankutty, 2021; Kola-Jebutu et al., 2020; Nadia et al., 2018) with minor modifications to enhance validity and reliability. The questionnaire comprised sections on demographic information and barriers to oral health care access.

Interested participants were gathered at the residence of the community head, where the questionnaire was administered with the assistance of two dental therapists serving as research assistants. Some medical terms in the questionnaire were explained to participants who required clarification. The completed questionnaires were collected immediately after completion. Participants were

compensated with a small tube of Close-up toothpaste and a toothbrush each. The data collection process lasted three days.

#### *Ethical Approval*

Ethical approval for this study was obtained from the Department of Dental Therapy, Federal College of Dental Technology & Therapy, Enugu, Nigeria. Additionally, approval was obtained from village head of the community. Participants were adequately informed about the study's purpose, assured of anonymity and confidentiality, and informed that their responses would be used solely for research purposes.

#### *Data Analysis*

Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) software version 25. Descriptive statistics were used to determine participants' demographic characteristics. Additionally, a one-tailed t-test was conducted to assess the presence of barriers preventing access to oral health care facilities.

## RESULTS

The data collected were subjected to different analytical procedures to determine the extent to which the research questions have been answered.

**Table 1:**  
Socio-Demographic Data of Respondents

Variables	Frequency	Percent (%)
<b>Age Range</b>		
21-30	39	19.50
31-40	45	22.50
41-50	68	34.00
51-60	32	16.00
61 and above	16	8.00
<b>Gender</b>		
Male	87	43.50
Female	113	56.50
<b>Marital Status</b>		
Single	68	34.00
Married	95	47.50
Separated	8	4.00
Widow/Widower	29	14.50
<b>Educational Status</b>		
Primary	21	10.50
Secondary	103	51.50
Tertiary	53	26.50
Non-formal	23	11.50

Variables	Frequency	Percent (%)
<b>Occupation</b>		
Farmers	60	31.00
Traders	16	8.00
Artisan	19	9.50
Petty Business	28	14.00
Government Workers	26	13.00
Patent Medicine Sellers	21	10.50
Pensioners	30	15.00
<b>Income (₦)</b>		
Below 10,000	43	21.50
10,000–20,000	61	30.50
21,000–30,000	48	24.00
31,000–40,000	22	11.00
41,000–50,000	12	6.00
Above 50,000	14	7.00
<b>Total</b>	<b>200</b>	<b>100.00</b>

Source of data: Field data (2022).

**Table 1** presents the socio-demographic characteristics of the respondents. The age distribution shows that 39 (19.50%) were between 21–30 years, 45 (22.50%) were between 31–40 years, 68 (34.00%) were between 41–50 years, 32 (16.00%) were between 51–60 years, and 16 (8.00%) were 61 years or older. The highest number of respondents fell within the 41–50 years age bracket.

Regarding gender, 87 (43.50%) of the respondents were male, while 113 (56.50%) were female, indicating a higher representation of females.

For marital status, 68 (34.00%) were single, 95 (47.50%) were married, 8 (4.00%) were separated, and 29 (14.50%) were widowed. The majority were married.

The educational status of respondents reveals that 21 (10.50%) had only primary education, 103 (51.50%) completed secondary education, 53 (26.50%) had tertiary education, and 23 (11.50%) had no formal education. Those with secondary education formed the largest group. In terms of occupation, the highest proportion of respondents were farmers (60, 31.00%), followed by pensioners (30, 15.00%) and petty business owners (28, 14.00%).

Income distribution indicates that 43 (21.50%) earned below ₦10,000, while 61 (30.50%) earned between ₦10,000–₦20,000. The lowest category was those earning above ₦50,000 (14, 7.00%).

### Research Question 1: What Are the Oral Health Problems of the Indigenes of Awo-Gareji Requiring Oral Health Care Services?

**Table 2:**  
Common Oral Health Problems in Awo-Gareji Community

Problems	Categories	Frequency	Percent (%)
<b>Deposits</b>	Dental Plaques	15	7.50
	Stains	12	6.00
	Dental Calculus	9	4.50
	<b>Total</b>	<b>36</b>	<b>18.00</b>
<b>Disease</b>	Caries	10	5.00
	Gingivitis	70	35.00
	Periodontitis	21	10.50
	Oral Thrush	0	0.00
	<b>Total</b>	<b>101</b>	<b>50.50</b>
<b>Others</b>	Fracture	2	1.00
	Abrasion	19	9.50
	Attrition	40	20.00
	Erosion	2	1.00
	<b>Total</b>	<b>63</b>	<b>31.50</b>

Source of data: Field data (2022).

**Table 2** highlights the common oral health problems in Awo-Gareji. Deposits were observed in 18% of respondents, with dental plaques (7.50%) being the most common. Gingivitis (35.00%) was the most prevalent oral disease, followed by periodontitis (10.50%) and caries (5.00%). Other conditions, such as attrition (20.00%) and abrasion (9.50%), were also noted.

### Research Question 2: How Do They Manage Their Oral Health Problems?

**Table 3:**  
Management of Oral Health Problems

Managing OHP	Frequency	Percent (%)
Visit Dental Clinic	33	16.50
Chemist	26	13.00
Herbal Remedy	58	29.00
No Treatment	83	41.50
<b>Total</b>	<b>200</b>	<b>100.00</b>

Source of data: Field data (2022).

**Table 3** shows that 41.50% of respondents did not seek any treatment for oral health issues. A significant proportion (29.00%) relied on herbal remedies, while only 16.50% visited dental clinics.

**Research Question 3: Awareness of Availability of Oral Healthcare Services**

**Table 4:**  
Awareness of Oral Healthcare Services

Awareness	Frequency	Percent (%)
Aware	60	30.00
Not Aware	89	44.50
Undecided	51	25.50
<b>Total</b>	<b>200</b>	<b>100.00</b>

Source of data: Field data (2022).

**Table 4** indicates that 44.50% of respondents were unaware of available oral healthcare services, while only 30.00% were aware.

**Research Question 4: Barriers to Utilization of Oral Healthcare Services**

**Table 5:**  
Barriers to Oral Healthcare Utilization

Barriers	Frequency	Percent (%)
Lack of Awareness	40	20.00
No Dental Clinic in Community	62	31.00
Distance to Nearest Facility	6	3.00
Lack of Funds	46	23.00
Lack of Time	31	15.50
High Cost of Dental Care	5	2.50
Fear of Dental Procedures	6	3.00
Bad Past Experience	3	1.50
Health Condition	1	0.50
<b>Total</b>	<b>200</b>	<b>100.00</b>

Source of data: Field data (2022).

**Table 5** reveals that the most significant barrier was the non-availability of dental clinics (31.00%), followed by lack of funds (23.00%) and lack of awareness (20.00%).

*Hypothesis Testing*

The t-test results indicate a p-value of 0.073756, which is greater than 0.05, suggesting that barriers significantly limit access to dental healthcare services in Awo-Gareji.

**DISCUSSION**

This study on barriers to the utilization of dental services among the people of Awo-Gareji in Ankpa LGA, Kogi State, was carried out between January and May 2023. A

total of 399 adults in the community were expected to participate in this study; however, only 200 respondents who showed interest in participating (through verbal consent) were included. The participants were between the ages of 21 and 80 years. The majority of respondents were aged 41–50 years (n = 68, 34.00%), while those aged 61 years and above were the least represented (n = 16, 8.00%). Females (n = 113, 56.50%) were more than males (n = 87, 43.50%). Most of the respondents were married (n = 95, 47.50%), while 68 (34.00%) were single. The majority of respondents had a secondary school education (n = 103, 51.50%), while 53 (26.50%) had tertiary education. Regarding income levels, most respondents (n = 61, 30.50%) earned between ₦10,000–₦20,000, while 43 (21.50%) earned below ₦10,000 monthly.

*Prevalence of Oral Health Problems*

Common oral health problems among the participants included dental deposits, with 15 (7.50%) having dental plaque, 12 (6.00%) having stains, and 9 (4.50%) having dental calculus. Dental diseases were also prevalent, with 10 (5.00%) respondents reporting dental caries, 70 (35.00%) suffering from gingivitis, and 21 (10.50%) experiencing periodontitis. Other oral health conditions included fractures (n = 2, 1.00%), abrasion (n = 19, 9.50%), attrition (n = 40, 20.00%), and erosion (n = 2, 1.00%).

*Management of Oral Health Problems*

Findings from this study indicate that the majority of respondents (n = 83, 41.50%) did not seek treatment when experiencing oral health challenges such as toothaches, severe pain, and tooth decay. Instead, 58 (29.00%) opted for herbal remedies. Dental visits were notably low, with only 33 (16.50%) of respondents seeking professional dental care. This finding aligns with studies by Kola-Jebutu et al. (2020) and Vikran et al. (2019), who reported that many individuals endure pain and only seek dental help when it becomes severe and unbearable.

*Awareness of Oral Health Services*

The study revealed that awareness of oral health services was significantly low, with 89 (44.50%) respondents unaware of the availability of oral healthcare services, while only 60 (30.00%) had knowledge of such services. This finding supports the study by Osador et al. (2023), which found that most rural residents lack awareness of oral healthcare services.

### Barriers to Utilization of Oral Health Services

Several barriers to oral healthcare utilization were identified in the study. The most frequently cited barrier was the unavailability of a dental clinic in the community (n = 62, 31.00%), followed by financial constraints (n = 42, 21.00%). These findings are consistent with previous studies conducted by Osadolor et al. (2023), Rekhu and Ramankutty (2021), and Kola-Ojebutu et al. (2020), which also highlighted these challenges in rural areas. Lack of awareness about the importance of oral healthcare was the third most reported barrier (n = 40, 20.00%), aligning with the findings of Nadia et al. (2018). Additionally, high treatment costs were reported as a barrier by a few respondents (n = 5, 2.50%), which corroborates the findings of Thompson (2018).

### Limitations of the Study

Several limitations may affect the outcomes of this study. Firstly, reliance on self-reported data may introduce biases, as participants may underreport barriers to the utilization of oral health services or overestimate their compliance levels due to social desirability (Akinmoladun et al., 2020). Secondly, the sample size and the use of convenience sampling may limit the generalizability of the findings, as the selected sample may not fully represent the diversity of the Awo-Gareji community.

### CONCLUSIONS

The major barriers to oral healthcare utilization among people in rural communities include the unavailability of a dental clinic, financial constraints, lack of awareness, distance to available dental facilities, fear of dental procedures due to perceived pain, and the high cost of treatment. The findings suggest that promoting awareness of oral health is essential to improving service utilization. Socioeconomic and educational status were identified as significant predictors of oral healthcare service utilization. This study underscores the urgent need for improved oral healthcare infrastructure in rural communities. Therefore, it is imperative for the government to implement community-based dental health programmes in rural areas to address the growing disparity in access to dental services.

### Recommendations

In view of the findings, the following recommendations are made:

1. **Community oral health education** should be promoted in rural areas to increase awareness among underserved communities.
2. **Oral health programmes** should be disseminated through mass media, such as radio and television, as well as newspapers and magazines, to provide people with accessible information on oral health prevention and care.
3. **State and local governments** should integrate dental clinics into existing Primary Health Care (PHC) centres to ensure that rural communities have access to essential oral healthcare services.

**Ethical Approval:** This study was reviewed and approved by the Department of Dental Therapy, Federal College of Dental Technology & Therapy, Enugu, Nigeria.

**Conflicts of Interest:** None declared.

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