Sokoto Journal of the Social Sciences Volume 13: Number 1, April, 2023 **Print ISSN 1595-2738**
© Faculty of Social Sciences, Usmanu Danfodiyo University, Sokoto **Online ISSN 2384-7654**

SOCIO-ECONOMIC DETERMINANTS OF THE UTILIZATION OF HEALTHCARE SERVICES IN THE WUSHISHI LOCAL GOVERNMENT AREA OF NIGER STATE, NIGERIA

[1]Ishaq A. B. [2]Mukhtar F. [1]Odekunle M. O. [1]Ahmed Y. [1]Usman M. N. and [1]Waziri A. M.

Department of Geography, Federal University of Technology, Minna, Niger State
Department of Sociology and Anthropology, University of Maiduguri, Borno State

Corresponding Author's email: aishaq@futminna.edu.ng

(TETFund/ESS/UNI/SOKOTO/ARJ/2)

Abstract

This study investigated the socioeconomic factors influencing the utilization of healthcare services in the Wushishi Local Government Area of Niger State. The study became necessary due to the decline of key health indicators in the State. Primary and secondary data were used to conduct the research. The primary data were collected through a questionnaire, while the secondary data were sourced from the Niger State Ministry of Health and National Population Commission. The results were analyzed using descriptive and inferential statistics, including frequency distribution, chi-square tests, and multinomial logistic regression. Purposive sampling, was used to administer 400 questionnaire copies to the respondents. The study revealed significant differences in educational attainment, income, and age of respondents in relation to their use of healthcare services between the four healthcare service providers as well as between the two study areas. The findings of the multinomial logistic regression analysis for the Sabon Gari ward indicated that income, occupation, educational attainment, and deciders and payers of treatment had significant impacts on the choice and utilization of healthcare services. In the case of the Maito ward, the results indicated the significance of occupation, age, income, number of children, and deciders and payers of treatment in influencing the choice and utilization of healthcare services. Several factors influence the choice and utilization of healthcare services within the study area. Therefore, state government should provide adequate health education campaigns for citizens, reduce the financial burden of medical treatment, empower young women to afford treatment costs, and ensure the accessibility of healthcare services to the people.

Keywords: Healthcare services, socioeconomic determinant, Utilization, **Healthcare service providers**

Introduction

Maintaining optimal health is of paramount importance to the overall well-being of individuals, encompassing physical, mental, and social dimensions and extending beyond the mere absence of disease. According to the World Health Organization {WHO} (2023), health represents a holistic state of well-being that enables individuals to lead productive lives, serving as a means to an end and providing resources for individuals to achieve the highest level of mental, emotional, and physical stability. As a fundamental human right access to good health should be made easy for every member of the society (WHO, 2010), as it is essential for economic and social development (Federal Ministry of Health, 2010). The significance of maintaining good health is

further emphasized in light of the fact that humans are responsible for all economic activity. Therefore, optimal health not only enhances the quality of life but also contributes to sustained economic and social development.

Healthcare services are those services that are rendered by professional health workers and auxiliary staff to those in need to protect, promote and maintain the health of the individual as well as prevent individual health from breaking down (WHO, 2010). In the utilization of these healthcare services, various parameters tend to have an influence. These include physical distance, race, ability to pay, and social distance, among others. The language used by doctors, the ability to understand and be understood, and the attitude of medical staff toward patients matter a lot (Melinda and Michael 2010).

The utilization of healthcare services holds paramount importance, as it is believed to enhance access and utilization of healthcare services, subsequently elevating the overall health status of the population. Healthcare in Nigeria is subject to the influence of diverse local and regional factors, which can affect either the quality or quantity of services available in a particular location. Because of the aforementioned reasons, the healthcare system in Nigeria has exhibited spatial disparities concerning the availability and quality of facilities relative to need (FMOH, 2010). Nevertheless, this is largely a result of the level of state and local government involvement and investment in healthcare programs and education (FMOH, 2010).

Good utilization of health services serves to improve the health status of the population (Adam and Awunor, 2014). Studies have shown that the mere presence of healthcare facilities does not guarantee their utilization, as various socioeconomic factors can impact access and subsequent utilization. Furthermore, the limited utilization of health facilities can be attributed to inadequate service quality and staff attitudes, as evidenced by studies conducted by Katung (2001), Chukwuani et al. (2006), and Sule et al. (2008). A study conducted within a rural community in Plateau State, Nigeria, involving 360 mothers, unveiled significant factors contributing to non-attendance at healthcare facilities. The factors included high cost of medications (29.0%), service fees (19.0%), convenient access to traditional healers (39.0%), and challenges in securing transportation to a health facility (30.0%) (Katung, 2001).

Barriers to the utilization of healthcare facilities have been identified in various Nigerian studies (Katung, 2001 and Chukwuani et al., 2006), as well as studies conducted in Ghana (Krumkamp, Sarpong, Kreuels, Ehlkes, 2013 and Danso, Stolk, Bosompem, Otchere, 2010), Ethiopia (Okwaraji, Cousens, and Berhane, 2012), Kenya (Mwaniki, Kabiru, and Mbugua, 2002), India (Dalal and Dawad, 2009), and Greece (Galanis, Sourtzi, and Bellali, 2013). These barriers include inadequate education regarding appropriate care-seeking, poverty, perceived high service costs, insufficient available services such as limited drug availability and basic laboratory services, insufficient number of healthcare workers, inadequate care, and facility proximity issues.

Certain studies, such as those by Bertakis, Azari, and Helms (2000) and Awoyemi et al. (2011), have recognized age, gender discrepancies, educational attainment, and income levels as factors contributing to the variation in the frequency of healthcare utilization and the extent of coverage provided by healthcare packages. Lack of community engagement and local ownership of healthcare initiatives at the grassroots level also stand as obstacles to health utilization. Furthermore, inadequate staff-community relationships have been identified as a nationwide hindrance to health service utilization (Musgrove, Zeramdini, and Carrin, 2002). The impact of sociocultural and religious factors on healthcare utilization is profound, as demonstrated by studies conducted by Chukwani, Olugboji, and Akutto (2006), Anderson, Wakerman, Aboriginal and Torres (2004), and Shamaki and Buang (2014). Primary healthcare facilities should therefore

be provided in line with the social, religious, cultural, and other peculiarities of the people. Healthcare utilization is influenced by a range of additional factors, including socioeconomic status, health literacy, educational attainment, possession of livelihood assets regardless of wealth, and patterns of health-seeking behavior (National Population Commission, 2008). All of these factors and practices play a significant role in shaping how healthcare is accessed across primary, secondary, and tertiary levels. As a result, the barriers to healthcare service utilization are numerous, multifaceted, and intricate. To comprehensively understand these barriers, it is essential to have a deep understanding and appreciation of the specific local characteristics of the community.

In view of the above, the primary objective of this study Is to investigate the factors influencing the utilization of healthcare services in the Wushishi local government area of Niger State. Furthermore, the study will also examine the differences in the utilization of healthcare services among people with different socioeconomic variables. The importance of conducting this research Is further emphasized by the concerning decline in several critical health indicators within the state.

Theoretical Framework

Psychosocial Models

Psychosocial models, including pathways models (Suchman, 1965, cited in Mackian et al., 2004), and health belief models (Hochbaum, 1958, as cited in Pokhrel and Sauerborn, 2004) consider motivating forces and discuss the idea of decision making through perceptions and evaluating the cost benefit of actions in relation to illness (Mackian et al., 2004). Explanatory models (Kroeger, 1983; Pillai et al., 2003) are centred on the labeling of particular signs and symptoms of an illness, and the interpretation of these in a decision making process based upon experience, “community norms and expectations” and household behaviours to a resolution of the problem through recommended and accepted remedies and treatment (Oberlander and Elverdan, 2000; Olenja, 2003). Interpretation and decision making are the more cognitive elements which are far from predictable in themselves. Therefore we also rely upon the non-cognitive factors which could affect health seeking and put this process into a contextual situation, such as the context of socio-cultural and economic fundamentals, often referred to as determinants which lead us to the behavioural model of utilization (Phillips et al., 1998). According to Phillips et al. (1998) the use of this model for examining the context in which utilization occurs has been somewhat neglected.

Behavioural Models

Behavioural models consist of predisposing factors such as sex, age, occupation, education; enabling factors such as income, household materials; and need factors, that is, perception of illness and service indicators (Pokhrel and Sauerborn, 2004). These models are based on determinants that affect decision-making and take into account economic circumstance, distances to travel, level of education, previous consumer satisfaction and perceived quality of services. For example, while other cultural, social, organizational, environmental, geographic and economic aspects that appear to affect peoples’ health are the prerogative of the investigators, consideration is given to individual level, household level and health systems level characteristics (Pokhrel and Sauerborn, 2004). Health seeking and health service use are determined by social, cultural, political and economic factors as seen by the individual and as defined by the community (Solomon, 2005). This kind of analysis of healthcare use leads to a recognition of the importance of the social determinants of health, where the concept of social capital becomes increasingly

important (Baum, 1999; Baum and Ziersch, 2003; Harpham and Grant, 2002) and has become a body of research in its own right.

Materials and Methods

Study Area

The research was conducted within the Wushishi Local Government Area (L.G.A) of Niger State, located in the north-central geopolitical division of Nigeria. Geographically, it is positioned between longitudes 9°30'E to 9°50'E and latitudes 5°04'N to 6°20'N (Niger State Government, 2015). According to the 2006 Population and Housing Census, the population of Wushishi was 81,783. However, as of 2021, the estimated population had grown to 128,688 (Projected Population, 2021). The administrative headquarters is located in Wushishi town. This local government area shares its boundaries with the Mashegu, Rafi, Lavun, Gbako, and Bosso local government areas.

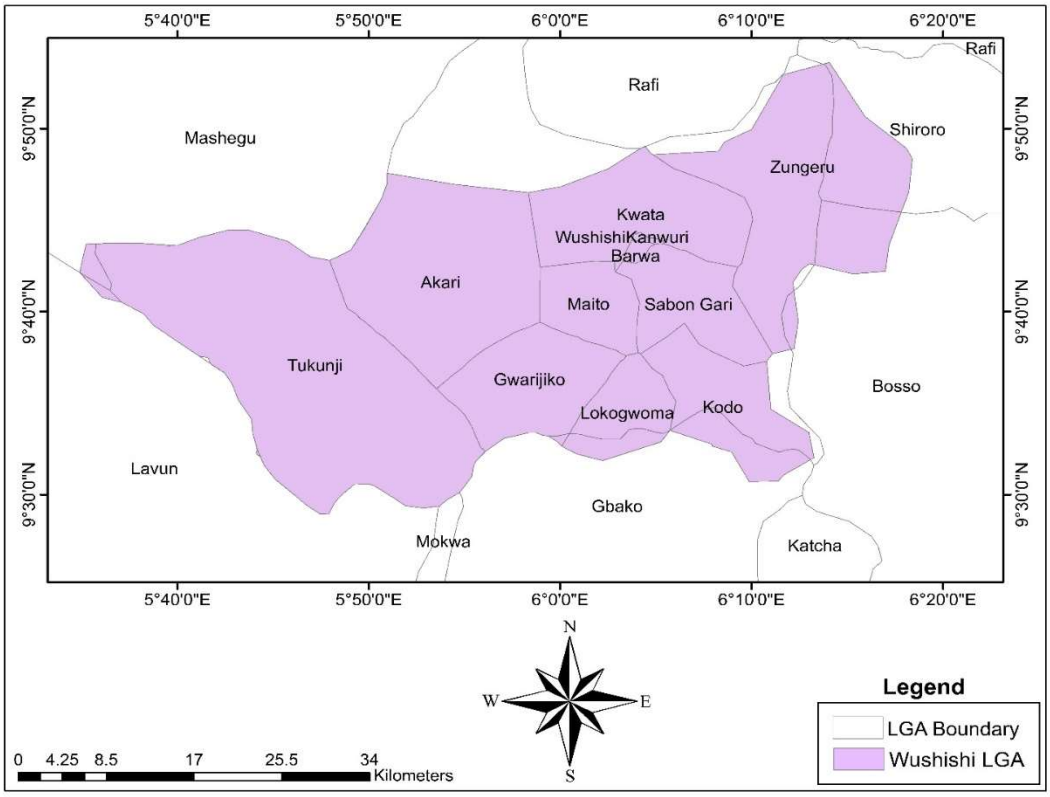

Figure 1: Study Area

Source: Department of Geography BUK (2020).

Methods

Data Collection and Sources

This study relied on primary data, comprising information on sociodemographic characteristics of the respondents (age, number of children, occupation, educational attainment, monthly income and deciders and payers of the cost of services). Survey research design was employed using questionnaire schedules to collect the primary data.

The secondary data that were collected included the numbers, types and ownership of health facilities and the population of Wushishi LGA. The sources of the data include health records from Niger State Ministry of Health, National Population Commission (NPC) publications, published and unpublished information obtained from books, journals, seminar papers, and student projects, among others.

Table 1: Healthcare facilities in Wushishi LGA by ownership

Type of Health Facility	Public	Private	Total
General Hospital	1	0	1
Primary Health Centre	10	2	12
Health Clinic	15	3	18
Maternity Home	0	4	4
Health Post	7	0	7
Total	**33**	**9**	**42**

Source: Niger State Ministry of Health (2021)

Sample and Sampling Procedure

The study was conducted in Wushishi LGA of Niger State. One urban and a rural ward were selected. The two wards selected are Sabon Gari (urban) which is the administrative headquarters of Wushishi local government and Maito which is a rural area. This was done to include both homogeneous and heterogeneous populations from rural and urban settings as well as to accommodate various cultural and socioeconomic settings of the LGA.

Table 2: Wards in Wushishi LGA

Wards in Wushishi LGA	Wards in Wushishi LGA	Wards in Wushishi LGA
1. Akare	5. Kodo	9. Sabon Gari
2. Barwa	6. Kwata	10. Tukunji/Yamigi
3. Gwarjiko	7. Lokogoma	11. Zungeru
4. Kanwuri	8. Maito	

Source: National Population Commission (2006).

The population for Wushishi local government area was projected to 2021 using an exponential growth model at a growing rate of 3% per annum. The following formula was used to determine the population based on Adamu and Sani (2017).

$PP = P_0 (1+r/100)t$ …….. (1)

Where PP = Projected Population, P_1 = Population at present time, P_0 = Initial Population,

r = Annual rate of growth, t = Difference between the projection year and previous census

Yamane (1961) used the sample size of a given population to calculate the number of questionnaire to be administered. The formula is as follows:

Finite population (n_2) = N …….. (2)

$$1+ N (e)^2$$

Where: n= Sample size, e = Level of significance (0.05 degree of freedom), N= Population Size

$$(n_2) = \frac{128688}{1+128688\ (0.05)^2} = \frac{128688}{321.72} = 400$$

Data Analysis

Frequency distribution tables are presented to show the demographic characteristics of the respondents. The chi-square test and multinomial logistic regression were used to determine the factors influencing the utilization of healthcare services the most and whether there were variations among the respondents with different socioeconomic variables in regard to utilizing healthcare services.

Results and Discussions

Socioeconomic Determinants of Place of Treatment

The decision regarding where to seek medical treatment is a complex process influenced by a multitude of factors, among which socioeconomic determinants play a significant role. The interplay between an individual's socioeconomic status and their choice of healthcare facility is a crucial aspect of healthcare access and utilization. The research examined various socioeconomic factors, including age, number of children, occupation, educational attainment, monthly income, and deciders and payers of the cost of treatment with a view to determining the differences in respect to the utilization of healthcare services among various individual with different socioeconomic characteristics as well as to ascertain which of these socioeconomic variables influence the utilization of healthcare services the most.

3.1.1 Age of Respondents in Relation to Place of Treatment

According to Table 3, it is evident that a significant proportion of individuals in Sabon Gari prefer utilizing the modern private healthcare facilities, constituting 50% of the total. Notably, majority of these individuals fall within the youth demographic, specifically in the age range of 21 to 45, accounting for 45.5%. Conversely, those from 46 years and above display a preference for modern public and traditional healthcare facilities. In the case of Maito, the populace predominantly prefers utilizing the modern public healthcare facilities, representing 38% of the total. Similarly, a significant portion of these individuals fall within the youth category, specifically those aged between 15 and 45, accounting for 31%. Nevertheless, the older population in Maito also has more preference for modern public healthcare services, comprising 7%, in contrast to the comparatively lower preference of 3% for modern private healthcare services.

The results of the chi-square test presented in Table 3 indicate significant differences in the utilization of healthcare services across people with different age groups, ($P < 0.05$). It becomes apparent that people's choices of healthcare facilities and services change as they advance in age.

Table 3: Age in relation to place of treatment

Age	Sabon Gari Place of Treatment				Total (%)	Maito Place of Treatment					Total (%)
	Pharmacy (%)	Traditional (%)	Public (%)	Private (%)		Pharmacy (%)	Traditional (%)	Religious (%)	Public (%)	Private (%)	
15 –20	0.0	0.0	0.5	0.5	1.0	2.0	5.0	0.0	5.0	7.0	19.0
21– 25	1.0	0.0	9.0	9.5	19.5	0.0	3.0	0.0	1.0	2.0	6.0
26– 30	1.5	0.5	5.5	13.0	20.5	0.0	7.0	3.5	9.0	5.5	25.0
31– 35	0.5	1.5	6.0	7.5	15.5	2.0	2.0	0.5	8.0	2.5	15.0
36– 40	0.0	2.0	3.0	12.5	17.5	0.0	3.5	2.0	4.5	5.0	15.0
41– 45	0.0	1.0	2.0	3.0	6.0	0.0	2.0	0.0	3.5	1.0	6.5
46– 50	0.5	1.5	5.5	2.0	9.5	1.0	2.0	0.0	1.5	1.0	5.5
51– 55	0.5	3.5	2.5	1.0	7.5	0.0	0.5	0.0	0.5	0.5	1.5
56– 60	0.0	0.0	0.5	0.5	1.0	0.0	0.0	0.0	3.5	1.0	4.5
61– 65	0.0	0.0	1.5	0.5	2.0	0.0	0.0	0.0	0.5	0.0	0.5
71and Above	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.5
Total	4.0	10.0	36.0	50.0	100.0	5.0	25.0	6.0	38.0	26.0	100.0
	Pearson Chi-Square = 54.819					*P* Value = .001					

Source: Field Work (2021)

In view of the above, age plays an important role in shaping decisions regarding utilization of healthcare services. Furthermore, individuals' attitudes toward utilizing different healthcare facilities tend to differ based on their age. The youth are often less tolerant of extended waiting times and lack patience. In many cases, they have more money, making them prefer healthcare facilities that provide immediate services. This inclination arises from the fact that young individuals are typically more productive than older individuals, engaging in longer work hours and generating higher agricultural yields. On the other hand, the older population generally has greater patience, often due to potential financial constraints, particularly in rural areas. The ailments commonly encountered by the older population predominantly consist of chronic diseases, mostly as a result of lifestyle habits, which demand consistent medical monitoring and ongoing consultations with physicians. Consequently, the older population tends to prefer modern public healthcare facilities, particularly in rural areas.

Income per Month in relation to Place of Treatment

Income significantly influences the utilization of healthcare services, as it typically determines an individual's affordability of various types of healthcare facilities and services. Table 4, shows that the prevalence of poverty is relatively low in the study areas, with 45% of the population in Sabon Gari and 49% in Maito earning monthly incomes exceeding ₦50,000. However, a higher percentage of individuals in Sabon Gari, comprising 25%, earn monthly incomes surpassing ₦100,000, in contrast to the 13% observed in Maito. These differences can be attributed to Sabon

Table 4: Income per month in relation to place of treatment

Sabon Gari	Place of Treatment				Total	Place of Treatment				Maito	Total
Income/month	Pharmacy (%)	Traditional (%)	Public (%)	Private (%)	(%)	Pharmacy (%)	Traditional (%)	Religious (%)	Public (%)	Private (%)	(%)
Below 10,000	2.0	2.0	9.0	0.0	13.0	2.0	4.0	0.0	5.0	0.0	11.0
10,001 - 20,000	0.0	0.0	10.0	6.0	16.0	0.0	1.0	0.0	7.0	1.0	9.0
20,001 - 30,000	1.0	2.0	0.0	4.0	7.0	0.0	2.0	2.0	8.0	4.0	16.0
30,001 - 40,000	0.0	0.0	0.0	6.0	6.0	0.0	6.0	2.0	2.0	5.0	15.0
40,001 - 50,000	0.0	2.0	4.0	7.0	13.0	3.0	6.0	2.0	1.0	4.0	16.0
50,001 - 60,000	0.0	0.0	0.0	3.0	3.0	0.0	2.0	0.0	1.0	1.0	4.0
60,001 - 70,000	0.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	4.0
70,001 - 80,000	0.0	0.0	1.0	1.0	2.0	0.0	2.0	0.0	2.0	1.0	5.0
80,001 - 90,000	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	1.0	1.0
90,001- 100,000	1.0	0.0	8.0	2.0	11.0	0.0	0.0	0.0	6.0	0.0	6.0
100.001&Above	0.0	4.0	2.0	19.0	25.0	0.0	0.0	0.0	6.0	7.0	13.0
Total	4.0	10.0	36.0	50.0	100.0	5.0	25.0	6.0	38.0	26.0	100.0
	Pearson Chi-Square = 125.320					*P* Value = .000					

Source: Field Work (2021)

Gari larger population in civil service and business sector. Additionally, Sabon Gari serves as the administrative headquarters of the Wushishi Local Government Area, contributing to higher monthly income population in comparison to Maito. This is in contrast to Maito, where the predominant sources of livelihood are farming and small-scale businesses. This shows that a significant portion of the population is economically stable, enabling them to access various healthcare services.

In terms of the differences between income and place of treatment, the chi-square test in Table 4 shows that there are great differences in the utilization of healthcare services among people with different incomes ($P < 0.05$). This means that the higher the monthly income is, the greater the likelihood that people will utilize modern private healthcare services. For instance, 26% of the people who earn ₦100,000 and above monthly utilize modern private healthcare facilities more in both cases.

Educational Attainment in relation to Place of Treatment

Educational attainment also holds a crucial role in the decision-making process for healthcare service utilization. This is because individuals with higher levels of education are more likely to possess broader understanding of information, enabling them to make informed choices about the type of healthcare facilities and services to access. The respondents exhibit a significant level of literacy, with the majority having attained some forms of education, as depicted in Table 5. Sabon Gari has the highest proportion of individuals with varying educational attainments with 92%, while Maito follows closely with 73%. Furthermore, Sabon Gari also has the highest percentage of individuals with tertiary education, at 23%, whereas Maito records a slightly lower figure of 16%.

Table 5: Educational attainment in relation to place of treatment

Sabon Gari	Place of Treatment				Total	Maito	Place of Treatment				Total
	Pharmacy (%)	Traditional (%)	Public (%)	Private (%)	(%)	Pharmacy (%)	Traditional (%)	Religious (%)	Public (%)	Private (%)	(%)
Basic Adult	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	2.0	1.0	3.0
Primary	2.0	1.0	8.0	11.0	29.0	0.0	7.0	2.0	7.0	4.0	20.0
Secondary	1.0	7.0	13.0	18.0	39.0	2.0	13.0	2.0	19.0	13.0	34.0
Tertiary	0.0	0.0	8.0	15.0	23.0	1.0	1.0	2.0	4.0	8.0	16.0
None	1.0	2.0	1.0	1.0	5.0	2.0	16.0	0.0	3.0	0.0	21.0
Others	0.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	6.0
Total	4.0	10.0	36.0	50.0	100.0	5.0	25.0	6.0	38.0	26.0	100.0
	Pearson Chi-Square = 35.688							*P* Value = .002			

Source: Field Work (2021)

The chi-square test results in Table 5 show that there are differences in the utilization of healthcare services among people with different educational levels, (P < 0.05). Individuals with higher levels of education tend to make greater use of both modern public and modern private healthcare facilities compared to those with lower levels of education. This finding aligns with the results of a study conducted by Sule et al. (2008), which similarly indicated a positive correlation between education and utilization of primary healthcare services.

Deciders and Payers of Treatment in relation to Place of Treatment

Generally, it is the husbands who make the decisions and pay for services especially in modern public and modern private healthcare facilities, where the fees charged are sometimes high (Table 6). Only 1% of the women decide and pay for the cost of treatment in Sabon Gari, while all of the women wait for their husbands to make the decision and make payment for their healthcare services in Maito. Most women therefore depend on their husbands a lot in everything that involves money because of their financial situation, which is very poor, their level of education, which is low, lack of empowerment of women, and the culture and religion of the north, which makes men the breadwinners, thereby weakening the capacity of the wives to pay and make decisions in the choice of healthcare facilities and services to utilize (Ahmed, 2012).

Table 6: Deciders and payers of treatment in relation to place of treatment

	Sabon Gari	Place of Treatment			Total	Maito	Place of Treatment				Total
	Pharmacy (%)	Traditional (%)	Public (%)	Private (%)	(%)	Pharmacy (%)	Traditional (%)	Religious (%)	Public (%)	Private (%)	(%)
Husband (Father)	4.0	10.0	35.0	50.0	99.0	5.0	25.0	6.0	38.0	26.0	100.0
Wife	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.0	10.0	36.0	50.0	100.0	5.0	25.0	6.0	38.0	26.0	100.0
	Pearson Chi-Square = 10.897							*P* Value = .092			

Source: Field Work (2021)

The chi-square test results in Table 6 show that there are no differences in the utilization of healthcare services regardless of who decides and pays for the cost of services, (P > 0.05).

Furthermore, these findings align with those of previous studies conducted by Bertakis, Azari, and Helms (2000), as well as Awoyemi et al. (2011), which revealed that factors such as age, gender disparities, educational attainment, and income level significantly influence the frequency of healthcare service utilization.

Factors Influencing the Utilization of Healthcare Services

The results of the multinomial logistic regression for Sabon Gari ward in Table 7 present the likelihood ratio tests that indicate which independent variables (factors) are statistically significant in relation to the utilization of healthcare services. The results indicate that income, occupation, educational attainment, and deciders and payers of treatment are all statistically significant with ($P < 0.05$). These factors influence the choice and utilization of healthcare services across the four healthcare service providers of traditional, religious, modern public, and modern private to varying degrees. However, income and occupation were identified as the major factors influencing healthcare service utilization in Sabon Gari. It is equally important to note that number of children and age are not statistically significant ($P > 0.05$) and therefore, do not have any effect or influence on the utilization of healthcare services in Sabon Gari.

Table 7: Likelihood ratio tests for Sabon Gari ward

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	4.699	.000	0	.
Age	4.557	27.228.	12	.107
Number of Children	33.926	29.228	21	.109
Educational attainment	55.144	50.445	12	.000
Occupation	351.757	347.058	15	.000
Monthly Income	878.407	873.708	30	.000
Deciders & Payers of Treatment	25.704	21.006	3	.000

Source: Field Work (2021)

For Maito ward, the results of the multinomial logistic regression in Table 8 show that occupation, age, income, number of children and deciders and payers of treatment are all statistically significant with ($P < 0.05$). These factors influence the choice and utilization of healthcare services across the four healthcare service providers of traditional, religious, modern public, and modern private to varying degrees. However, occupation and age were identified as the major factors influencing the utilization of healthcare services in Maito. It is equally important to note that educational attainment is not statistically significant ($P > 0.05$) and therefore does not have any effect or influence on the utilization of healthcare services in the Maito ward.

These findings align with prior studies, such as those conducted by Katung (2001) and Chukwuani et al. (2006) in Nigeria, Krumkamp et al. (2013) and Danso et al. (2010) in Ghana, Okwaraji et al. (2012) in Ethiopia, Mwaniki et al. (2002) in Kenya, Dalal and Dawad (2009) in India, and Galanis et al. (2013) in Greece. These studies collectively reveal that factors such as inadequate education on when to seek care, poverty, perceived high service costs, service availability inadequacy, insufficient healthcare workforce, subpar care quality, and proximity to healthcare facilities, among other factors, influence healthcare service utilization among various people.

Table 8: Likelihood ratio tests for Maito ward

	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	Df	Sig.
Intercept	8.108	.000	0	.
Age	309.853	301.745	20	.000
Number of Children	107.550	99.441	28	.000
Educational attainment	21.293	13.184	20	.869
Occupation	650.204	642.096	16	.000
Monthly Income	225.576	217.468	40	.000
Who Decide & Pays for Treatment	68.369	60.261	4	.000

Source: Field Work (2021)

Conclusion and Recommendation

Multiple factors influence the choice and utilization of healthcare services in the Wushishi Local Government Area of Niger State. Additionally, variations in healthcare service utilization exist among individuals with different socioeconomic characteristics. This study reveals significant disparities in the educational attainment, income, and age of the respondents in relation to the utilization of healthcare services between the different healthcare service providers and between the two study areas. Moreover, the predominant factors that significantly influence the utilization of healthcare services in Sabon Gari are income, occupation, educational attainment, and deciders and payers of treatment. In the case of Maito, the study reveals that occupation, age, income, number of children, and deciders and payers of treatment are the major factors influencing the utilization of healthcare services. The study therefore recommends that the government should provide health education to its citizens, reduce the cost of treatment, empower the girl-child to be able to pay for the cost of treatment, and make healthcare services available to the people.

Reference

Adamu, Y., M. and Sani M. (2017). Healthcare Services Provision, Challenges and Prospects for Sustainable Development in Nigeria: A Case Study of Sokoto State. *European Journal of Obstetrics & Gynecology and Reproductive Biology,* 109(2), 153-159.

Adam, V. Y., and Awunor, N. S. (2014). Perceptions and factors affecting utilization of health services in a rural community in Southern Nigeria. *Journal of Medicine and Biomedical Research*, *13*(2), 117-124.

Ahmed B., Y. (2012). Geographical Analysis of Maternal Healthcare Services in Gombe State, North Eastern Nigeria. An unpublished PH.D Thesis Submitted to the Department of Geography, Bayero University Kano.

Anderson, I., and Aboriginal, W. J. (2004). Torres Strait Islander primary healthcare issues for general practice. *General practice in Australia. Canberra: Commonwealth of Australia*, 303-35.

Awoyemi, T. T., Obayelu, O. A., and Opaluwa, H. I. (2011). Effect of distance on utilization of healthcare services in rural Kogi State, Nigeria. *Journal of human Ecology*, *35*(1), 1-9.

Baum, F. (1999). Social capital: is it good for your health? Issues for a public health agenda. *Journal of Epidemiology and Community Health, 53*(4), 195-196.

Baum, F., and Ziersch, A. (2003). Social capital. *Journal of Epidemiology and Community Health, 57*(5), 320-323.

Bertakis, K. D., Azari, R., Helms, L. J., Callahan, E. J., and Robbins, J. A. (2000). Gender differences in the utilization of healthcare services. *Journal of family practice*, *49*(2), 147-147.

Chukwuani, C. M., Olugboji, A., Akuto, E. E., Odebunmi, A., Ezeilo, E., and Ugbene, E. (2006). A baseline survey of the primary healthcare system in south eastern Nigeria. *Health Policy*, *77*(2), 182-201.

Dalal, K., and Dawad, S. (2009). Non-utilization of public healthcare facilities: examining the reasons through a national study of women in India. *Rural and remote health*, *9*(3), 1-10.

Danso-Appiah, A., Stolk, W. A., Bosompem, K. M., Otchere, J., Looman, C. W., Habbema, J. D. F., and de Vlas, S. J. (2010). Health seeking behavior and utilization of health facilities for schistosomiasis-related symptoms in Ghana. *PLoS neglected tropical diseases*, *4*(11), e867.

Federal Ministry of Health (2010). Nigeria Health Profile. Federal Republic of Nigeria.

Galanis, P., Sourtzi, P., Bellali, T., Theodorou, M., Karamitri, I., Siskou, O., and Kaitelidou, D. (2013). Public health services knowledge and utilization among immigrants in Greece: a cross-sectional study. *BMC Health Services Research*, *13*, 1-8.

Harpham, T., & Grant, E. (2002). Measuring social capital within health surveys: Key issues. *Health Policy and Planning, 17*(1), 106-111.

Katung, P. Y. (2001). Socioeconomic factors responsible for poor utilization of the primary healthcare services in a rural community in Nigeria. *Nigerian journal of medicine: journal of the National Association of Resident Doctors of Nigeria*, 10(1), 28-29.

Krumkamp, R., Sarpong, N., Kreuels, B., Ehlkes, L., Loag, W., Schwarz, N. G., and May, J.

(2013). Healthcare utilization and symptom severity in Ghanaian children–a cross-sectional study. *PLoS One*, *8*(11), e80598.

Kroeger, A. (1983). Anthropological and socio-medical health care research in developing countries. *Social Science & Medicine, 17*(3), 147-161.

Mackian, S., Bedri, N., and Lovel, H. (2004). Up the garden path and over the edge: where might health-seeking behaviour take us? *Health Policy & Planning, 19*(3), 137-146.

Melinda S.M., and Michael E. (2010). Medical Geography, Third Edition. *A Division of Guilford Publications, Inc. 72 Spring Street, New York, NY 10012.*

Musgrove, P., Zeramdini, R., and Carrin, G. (2002). Basic patterns in national health expenditure. *Bulletin of the World Health Organization*, *80*, 134-146.

Mwaniki, P. K., Kabiru, E. W., and Mbugua, G. G. (2002). Utilization of antenatal and maternity services by mothers seeking child welfare services in Mbeere District, Eastern Province, Kenya. *East African medical journal*, *79*(4), 184-187.

National Population Commission (2008). Nigeria Demographic and Health Survey. Abuja, Nigeria. *National Population Commission and ICF Macro.*

Niger State Government (2015). Niger State, Facts and Figures 2015.

Oberlander, L., and Elverdan, B. (2000). Malaria in the United Republic of Tanzania: Cultural considerations and health-seeking behaviour. *Bulletin of the World Health Organization, 78*(11), 1352-1357.

Olenja, J. (2003). Editorial: Health seeking behaviour in context. *East African Medical Journal, 75*(12), 61-62.

Okwaraji, Y. B., Cousens, S., Berhane, Y., Mulholland, K., and Edmond, K. (2012). Effect of geographical access to health facilities on child mortality in rural Ethiopia: a community based cross sectional study. *Plos one*, *7*(3), e33564.

Pokhrel, S., and Sauerborn, R. (2004). Household decision-making on child health care in developing countries: the case of Nepal. *Health Policy & Planning, 19*(4), 218- 233.

Pillai, R. K., Williams, S. V., Glick, H. A., Polsky, D., Berlin, J. A., and Lowe, R. A. (2003). Factors affecting decisions to seek treatment for sick children in Kerala, India. *Social Science & Medicine, 57*(5), 783-790.

Phillips, K. A., Morrison, K. R., Andersen, R., and Aday, L. A. (1998). Understanding the context of healthcare utilization: assessing environmental and provider-related variables in the behavioral model of utilization. *Health Services Research, 33*(3 Pt 1), 571-596.

Shamaki, M. A., and Buang, A. (2014). Sociocultural practices in maternal health among women in a less developed economy: An overview of Sokoto State, Nigeria. *Geografia, 10(6).*

Sule, S. S., Ijadunola, K. T., Onayade, A. A., Fatusi, A. O., Soetan, R. O., and Connell, F. A. (2008). Utilization of primary healthcare facilities: lessons from a rural community in southwest Nigeria. *Nigerian journal of medicine*, *17*(1), 98-106.

Solomon, N. M. (2005). Health information generation and utilization for informed decision-making in equitable health service management: the case of Kenya Partnership for Health program. *International Journal of Equity in Health, 4*, 8.

Health Organization (2023). Health and Well-Being. *Global Health Observatory*. https://www.who.int/data/gho/data/major-theme/health-and-well-being

World Health Organization (2010). Global Health Observatory country views: Nigeria statistics summary (2002–present). Geneva. http://apps.who.int/gho/data/node.country.country-NGA.

Yamane, T. (1961). Statistics: An Introductory Analysis, 2nd Edition, New York: Harper and Row.