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**AN EXAMINATION OF SOCIO -ECONOMIC AND DEMOGRAPHIC FACTORS THAT DETERMINE
 HEALTH CARE SEEKING BEHAVIOUR AMONG DIABETIC PERSONS ATTENDING BARAU
 DIKKO TEACHING HOSPITAL**

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Abstract

Background: Diabetes is a major public health challenge, and understanding factors influencing health-seeking behavior is crucial for improving care. This study examined the socio-economic and demographic determinants of health-seeking behavior among diabetic patients attending Barau Dikko Teaching Hospital in Kaduna, Nigeria.

Methods: A mixed-methods approach was employed, involving a cross-sectional survey of 305 diabetic patients using a structured questionnaire and semi-structured interviews with healthcare workers. Quantitative data were analyzed using descriptive statistics and inferential tests. Qualitative data from interviews provided additional context.

Results: The results showed that a majority of respondents strongly agreed that affordability of treatment (62.3%), accessibility of health services (69.9%), access to health information (70.2%), effectiveness of health services (75.4%), level of educational attainment (49.5%), and income status (82.3%) determined their health-seeking behavior. Age (72.2%) and place of residence (62.3%) were identified as the top demographic factors influencing health-seeking. Cultural preferences and gender were not major determinants. Qualitative data highlighted barriers like financial constraints, distance to facilities, and lack of awareness.

Conclusion: Socio-economic factors, particularly income, affordability, and access to services and information, as well as demographic factors like age and place of residence, significantly shape health-seeking decisions among diabetic patients.

Recommendations: The findings can inform the development of comprehensive strategies and policies aimed at improving access to healthcare services, enhancing health literacy, and promoting positive health-seeking behaviors, ultimately contributing to better health outcomes for individuals living with diabetes

Keywords: Diabetes, Health-Seeking Behavior, Socio-Economic Determinants, Demographic Factors

1. Introduction

Diabetes mellitus is a chronic metabolic disorder characterized by high blood glucose levels resulting from the body's inability to produce or effectively use insulin. It is a major public health concern globally,

with staggering statistics that underscore the urgency of addressing this condition. According to the International Diabetes Federation (IDF), an estimated 463 million adults aged 20-79 years were living with diabetes in 2019, and this number is projected to rise to a staggering 700 million by 2045 (IDF Diabetes

Atlas, 2019). The burden of diabetes is particularly alarming in developing countries, with Africa being one of the regions experiencing a rapid increase in prevalence.

In Nigeria, the prevalence of diabetes is escalating at an alarming rate, reflecting the country's epidemiological transition and the growing impact of lifestyle factors and urbanization. A recent systematic review and meta-analysis by Uloko et al. (2018) estimated that in 2015, approximately 5 million Nigerians were living with diabetes, a figure that is projected to increase by a staggering 110% by 2040. The rising burden of diabetes in Nigeria is a cause for grave concern, as it not only poses a significant public health challenge but also carries substantial economic implications for individuals, families, and the healthcare system.

Proper management of diabetes is crucial to prevent or delay the onset of potentially debilitating complications, such as cardiovascular diseases, neuropathy, nephropathy, and retinopathy. These complications can significantly diminish the quality of life for individuals living with diabetes and impose a substantial economic burden on healthcare systems and societies. However, achieving optimal disease control and preventing complications heavily relies on individuals' health-seeking behavior, which encompasses a range of actions and decisions related to preventive care, utilization of healthcare services, and adherence to recommended treatment regimens (Nguyen et al., 2019).

Health-seeking behavior is a complex phenomenon influenced by a multitude of factors, including socio-economic and demographic characteristics. Previous research has consistently demonstrated that socio-economic factors, such as income level, employment status, educational attainment, affordability of healthcare services, and access to health information, play a pivotal role in shaping individuals' attitudes, beliefs, and actions towards seeking healthcare (Ahmed et al., 2017; Saqib et al., 2018). Furthermore, demographic characteristics, including age, gender, marital status, religion, and place of residence, have

been reported to influence health-seeking decisions and patterns (Couture et al., 2008; Awosan et al., 2018).

In the context of diabetes management, understanding the specific socio-economic and demographic factors that influence health-seeking behavior is crucial for designing targeted interventions and strategies to improve disease outcomes. Several studies have explored these determinants in various populations and geographic contexts, contributing valuable insights to the existing body of knowledge. However, there remains a paucity of research focused explicitly on the socio-economic and demographic determinants of health-seeking behavior among diabetic populations in Nigeria, particularly in the Kaduna region.

The Kaduna region, located in northern Nigeria, presents a unique socio-economic and cultural landscape that warrants a focused investigation into the factors influencing health-seeking behavior among its diabetic population. Characterized by a diverse ethnic composition, varying levels of urbanization, and socio-economic disparities, the region offers an opportunity to explore the interplay of these factors and their impact on health-seeking decisions.

This study aimed to fill this research gap by examining the socio-economic and demographic determinants of health-seeking behavior among diabetic patients attending Barau Dikko Teaching Hospital in Kaduna, Nigeria. By identifying the key factors that shape health-seeking behavior in this specific context, the research sought to inform the development of targeted interventions and policies aimed at improving access to healthcare services, enhancing health literacy, and promoting positive health-seeking behaviors among diabetic individuals.

The following hypotheses were developed to guide the research and serve as the basis for investigating the relationships between the identified factors and health-seeking behavior:

H1: There is a significant relationship between employment status and health-seeking behavior among diabetic patients in Barau Dikko Teaching Hospital.

H2: There is a significant relationship between educational status and health-seeking behavior among diabetic patients in Barau Dikko Teaching Hospital.

H3: There is a significant relationship between income and health-seeking behavior among diabetic patients in Barau Dikko Teaching Hospital.

By empirically testing these hypotheses and exploring the underlying socio-economic and demographic determinants, this study aimed to contribute to the existing body of knowledge and provide valuable insights to inform the development of effective strategies for improving diabetes management and outcomes in the Kaduna region and potentially other similar contexts within Nigeria.

The subsequent sections of this paper present a comprehensive review of relevant literature, detailing the theoretical underpinnings and previous research findings related to the socio-economic and demographic determinants of health-seeking behavior, with a specific focus on diabetic populations. Furthermore, the methodology employed in this study is described in detail, outlining the research design, study setting and population, sampling techniques, data collection methods, and analytical approaches. The results section presents the key findings, supported by quantitative and qualitative data, while the discussion section provides an in-depth interpretation and contextualization of these findings within the broader research landscape. Finally, the paper concludes by highlighting the practical implications, limitations, and recommendations for future research endeavors in this important area of public health inquiry.

2. Literature Review

The concept of health-seeking behavior has garnered significant attention in the field of public health and medical sociology, as it plays a pivotal role in shaping health outcomes and determining the utilization of

healthcare services. Health-seeking behavior refers to the actions and decisions individuals undertake to maintain or restore their health, encompassing a range of activities such as preventive care, self-care practices, and the utilization of formal and informal healthcare services (Shaikh & Hatcher, 2005). This behavior is influenced by a complex interplay of factors, including socio-economic and demographic characteristics, cultural beliefs, and perceptions of illness and healthcare systems.

Socio-Economic Determinants of Health-Seeking Behavior

One of the most widely recognized determinants of health-seeking behavior is socio-economic status, which encompasses factors such as income, education, and employment. Numerous studies have consistently demonstrated the significant impact of socio-economic factors on health-seeking decisions and actions.

Income and Financial Resources Income and financial resources have been identified as crucial determinants of health-seeking behavior across various populations and contexts. Studies have shown that individuals with lower incomes are more likely to face barriers to accessing healthcare services, such as the inability to afford medical expenses, transportation costs, and lost wages due to time off work (Ahmed et al., 2017; Saqib et al., 2018). This can lead to delayed or forgone healthcare, potentially exacerbating existing health conditions and increasing the risk of complications.

In the context of diabetes management, financial constraints can significantly impact an individual's ability to adhere to recommended treatment regimens, which often involve regular monitoring, medication adherence, and lifestyle modifications. A systematic review by Rwegerera et al. (2018) examining barriers to diabetes management in sub-Saharan Africa highlighted the significant financial burden faced by patients, with out-of-pocket expenses for medication, laboratory tests, and transportation posing major challenges, particularly for those with limited financial resources. Additionally, a study by Koetaan et al. (2020) in South Africa found that low-income diabetic

patients were more likely to experience difficulties in affording medication, leading to lower adherence rates and poorer glycemic control.

Educational Attainment

Educational attainment has also been identified as a key socio-economic determinant of health-seeking behavior. Higher levels of education are often associated with better health literacy, increased awareness of health risks, and a greater understanding of the importance of preventive care and disease management (Nguyen et al., 2019). Individuals with higher educational attainment may also have better access to health-related information and be more adept at navigating healthcare systems.

In the context of diabetes, education plays a crucial role in promoting self-management skills, adherence to treatment regimens, and the ability to recognize and respond to potential complications. A systematic review by Obamiro (2021) examining the determinants of health-seeking behavior among diabetic patients in sub-Saharan Africa found that higher educational levels were consistently associated with better health-seeking behaviors, including regular clinic visits, medication adherence, and engagement in self-care activities. Similarly, a study by Mendenhall et al. (2017) in urban India revealed that diabetic patients with higher educational attainment were more likely to have better knowledge about their condition and exhibit positive health-seeking behaviors compared to those with lower education levels.

Access to Health Information

Access to health information is another important socio-economic determinant of health-seeking behavior. Individuals with limited access to reliable health information may lack awareness of available healthcare services, preventive measures, and disease management strategies. This can lead to delays in seeking care or the adoption of inappropriate health-seeking behaviors (Couture et al., 2008; Awosan et al., 2018).

In the context of diabetes, access to health information is crucial for promoting self-management skills, adherence to treatment regimens, and the recognition of potential complications. A qualitative study by Mendenhall et al. (2017) in urban India highlighted the challenges faced by diabetic patients with limited access to health information, which often led to misconceptions and suboptimal self-care practices. Additionally, a systematic review by Rwegerera et al. (2018) identified a lack of diabetes education and awareness as a significant barrier to effective disease management in sub-Saharan Africa.

Accessibility and Affordability of Healthcare Services

The accessibility and affordability of healthcare services are critical determinants of health-seeking behavior. Individuals living in areas with limited access to healthcare facilities or facing barriers such as long travel distances, transportation costs, and inadequate infrastructure may be deterred from seeking timely care (Awosan et al., 2018; Kamuyu et al., 2017).

Similarly, the affordability of healthcare services, including consultation fees, diagnostic tests, and medication costs, can significantly impact an individual's ability to seek and adhere to treatment. Studies have shown that even in settings with universal healthcare coverage, out-of-pocket expenses for services not covered by insurance can still pose significant barriers to health-seeking behavior (Mendenhall et al., 2017; Koetaan et al., 2020).

In the context of diabetes management, the accessibility and affordability of healthcare services are crucial for ensuring regular monitoring, timely access to medication, and appropriate management of complications. A study by Mendenhall et al. (2017) in urban India found that diabetic patients faced significant challenges in accessing affordable care, leading to treatment interruptions and suboptimal disease control. Similarly, a systematic review by Rwegerera et al. (2018) highlighted the limited availability and accessibility of diabetes care services

in many parts of sub-Saharan Africa as a major barrier to effective disease management.

Employment and Occupation

Employment status and occupation have also been recognized as socio-economic determinants of health-seeking behavior. Individuals with stable employment and higher-income occupations may have better access to healthcare services, either through employer-provided insurance or greater financial resources (Saqib et al., 2018; Couture et al., 2008). Additionally, the nature of one's occupation can influence health-seeking behavior, with certain occupations posing higher risks of exposure to hazardous conditions or requiring specialized healthcare services.

In the context of diabetes management, employment status and occupation can play a role in shaping health-seeking behavior and adherence to treatment regimens. A study by Kamuyu et al. (2017) in Kenya found that unemployed diabetic patients were more likely to experience difficulties in affording medication and accessing healthcare services compared to those with stable employment. Additionally, certain occupations that involve irregular work schedules or physical demands may pose challenges for diabetic individuals in adhering to recommended self-care practices and maintaining regular medical appointments.

Cultural Factors and Health Beliefs

In addition to socio-economic factors, cultural beliefs and attitudes towards health and illness can significantly influence health-seeking behavior. Cultural norms, traditional practices, and belief systems shape individuals' perceptions of illness, their causal attributions, and their decisions regarding when and where to seek care (Shaikh & Hatcher, 2005; Awah, 2014).

In the context of diabetes, cultural factors can play a significant role in shaping health-seeking behavior and adherence to treatment regimens. For example, a study by Mendenhall et al. (2012) in urban India found that cultural beliefs about the causes of diabetes, such as

attributing it to supernatural forces or dietary habits, influenced individuals' willingness to seek care and their adherence to prescribed treatment regimens. Additionally, a systematic review by Rwegerera et al. (2018) highlighted the influence of traditional and cultural practices on diabetes management in sub-Saharan Africa, with some patients relying on herbal remedies or traditional healers as part of their health-seeking strategies.

Demographic Determinants of Health-Seeking Behavior

In addition to socio-economic factors, demographic characteristics such as age, gender, marital status, and place of residence have been identified as important determinants of health-seeking behavior.

Age has been found to be a significant factor influencing health-seeking behavior, with different age groups exhibiting distinct patterns and preferences. Older adults may face unique challenges in accessing healthcare services, such as mobility limitations, cognitive impairments, or financial constraints related to retirement or fixed incomes (Couture et al., 2008; Awosan et al., 2018).

In the context of diabetes, age-related factors can play a role in health-seeking behavior and disease management. A study by Koetaan et al. (2020) in South Africa found that older diabetic patients were more likely to experience challenges in adhering to treatment regimens and self-care activities due to factors such as cognitive decline, physical limitations, and financial constraints. Additionally, a systematic review by Rwegerera et al. (2018) highlighted the higher prevalence of diabetes-related complications among older adults in sub-Saharan Africa, which may further impact their health-seeking behavior and access to appropriate care.

Gender has been identified as a significant determinant of health-seeking behavior, with studies consistently reporting differences between men and women in terms of their attitudes, perceptions, and actions related to seeking healthcare (Saqib et al., 2018;

Awosan et al., 2018). These differences can be attributed to various factors, including social and cultural norms, gender roles, and differences in health beliefs and risk perceptions.

In the context of diabetes, gender-specific factors can influence health-seeking behavior and disease management. For example, a study by Mendenhall et al. (2012) in urban India found that women with diabetes faced unique challenges related to household responsibilities, financial dependence, and restrictive gender norms, which impacted their ability to seek care and adhere to treatment regimens. Additionally, a systematic review by Rwegerera et al. (2018) reported gender disparities in diabetes prevalence and management in sub-Saharan Africa, with women often facing greater barriers to accessing healthcare services and adhering to treatment regimens.

Marital status has also been identified as a factor influencing health-seeking behavior. Married individuals may have increased social support and shared decision-making processes, which can positively impact their health-seeking behaviors. Conversely, single individuals or those without a strong social support system may face challenges in accessing and adhering to healthcare recommendations (Couture et al., 2008; Awosan et al., 2018).

In the context of diabetes, marital status can play a role in shaping health-seeking behavior and disease management. A study by Kamuyu et al. (2017) in Kenya found that unmarried diabetic patients were more likely to experience difficulties in adhering to treatment regimens and self-care activities, potentially due to a lack of social support and shared decision-making processes. However, the influence of marital status on health-seeking behavior among diabetic populations may vary across different cultural and societal contexts.

The place of residence, whether urban or rural, has been recognized as a significant determinant of health-seeking behavior. Individuals living in rural areas often face greater challenges in accessing healthcare services due to factors such as longer travel distances,

limited availability of healthcare facilities, and poorer infrastructure (Couture et al., 2008; Awosan et al., 2018).

In the context of diabetes management, the place of residence can significantly impact access to healthcare services, availability of specialized care, and the ability to adhere to treatment regimens. A study by Mendenhall et al. (2017) in urban India found that diabetic patients living in urban slums faced unique challenges related to overcrowding, pollution, and limited access to healthy food options, which impacted their ability to manage their condition effectively. Similarly, a systematic review by Rwegerera et al. (2018) highlighted the disparities in diabetes care between urban and rural areas in sub-Saharan Africa, with rural residents often facing greater barriers to accessing quality healthcare services and adhering to recommended treatment regimens.

Religion and cultural beliefs have been identified as important determinants of health-seeking behavior, as they shape individuals' perceptions of illness, their causal attributions, and their attitudes towards various healthcare practices (Awah, 2014; Mendenhall et al., 2012). Religious and cultural beliefs can influence the types of healthcare services sought, the willingness to adhere to medical recommendations, and the integration of traditional or complementary practices.

In the context of diabetes management, religious and cultural beliefs can play a significant role in shaping health-seeking behavior and adherence to treatment regimens. For example, a study by Mendenhall et al. (2012) in urban India found that some diabetic patients integrated traditional Ayurvedic practices and spiritual beliefs into their disease management strategies, which at times conflicted with biomedical recommendations. Additionally, a systematic review by Rwegerera et al. (2018) highlighted the influence of traditional and cultural beliefs on diabetes management in sub-Saharan Africa, with some patients relying on traditional healers or herbal remedies as part of their health-seeking strategies.

Gaps in Literature and Research Contribution

While there is a significant body of research on the socio-economic and demographic determinants of health-seeking behavior, focused studies among diabetic populations particularly in Nigeria, are lacking. The diverse socio-economic and cultural landscape in Nigeria, coupled with the growing burden of diabetes, underscores the importance of understanding the factors influencing health-seeking behavior in this context. This study aims to comprehensively examine both socio-economic and demographic determinants, and their interplay, in shaping health-seeking behavior among diabetic patients attending a teaching hospital in Kaduna, Nigeria, using a mixed-methods approach. The findings have the potential to contribute valuable insights for developing targeted interventions and policies to improve diabetes management and outcomes in Nigeria and similar settings.

3. Methodology

A mixed-methods approach, combining quantitative and qualitative methods, was employed in this study to gain a comprehensive understanding of the socio-economic and demographic determinants of health-seeking behavior among diabetic patients.

Study Setting and Population

The study was conducted at Barau Dikko Teaching Hospital, a tertiary healthcare facility in Kaduna, Nigeria. The target population comprised diabetic patients receiving care at the hospital's outpatient clinics.

Sampling and Data Collection

A cross-sectional survey was administered to a sample of 305 diabetic patients attending the outpatient clinics at Barau Dikko Teaching Hospital. The sample size was determined using a standard formula for estimating a population proportion, with a 95% confidence level and a 5% margin of error. A systematic random sampling technique was employed to select participants from the pool of eligible patients.

Data were collected using a structured questionnaire that captured information on socio-economic and demographic characteristics, health-seeking behavior, and potential determinants. The questionnaire was pre-tested, and necessary revisions were made to ensure clarity and validity.

Additionally, semi-structured interviews were conducted with healthcare workers, including nurses and physicians, involved in the management of diabetic patients at the hospital. These interviews aimed to gather qualitative data and insights on the factors influencing health-seeking behavior from the perspective of healthcare providers.

Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional review board. Informed consent was sought from all participants, and confidentiality and anonymity were maintained throughout the research process.

4. Results and Discussions

The quantitative data from the survey were analyzed using descriptive and inferential statistical techniques. Descriptive statistics, including frequencies and percentages, were used to summarize the socio-economic and demographic characteristics of the respondents, as well as their health-seeking behavior.

To test the stated hypotheses, inferential statistical tests, such as chi-square tests and logistic regression analyses, were employed to examine the relationships between socio-economic and demographic factors (independent variables) and health-seeking behavior (dependent variable).

The qualitative data from the semi-structured interviews were analyzed using thematic content analysis. This involved identifying, coding, and categorizing recurring themes and patterns related to the determinants of health-seeking behavior among diabetic patients. The qualitative data provided additional context and insights to complement the quantitative findings.

Socio-Economic and Demographic Factors that Determine Health Care Seeking Behaviour of Diabetic Persons

Table 1: Socio-Demographic Data of the Respondents

Variables	Frequency	Percentage
Monthly income of the respondents		
Less than N50,000	57	18.7
N50,000 – N99,000	91	29.8
N100, 000 – N149,000	68	22.3
N150,000 – N199,000	55	18.0
N200, 000 and above	34	11.1
Marital Status of the Respondents		
Single	165	54.1
Married	81	26.6
Divorced / separated	36	11.8
Widowed	23	7.5
Religion of the Respondents		
Islam	161	52.8
Christianity	139	45.6
Traditional	5	1.6
Others	0	0
Length of been diagnosed with the illness		
Less than a year	117	38.4
1 – 4 years	98	32.1
5 – 8 years	66	21.6
Above 8 years	43	14.1
Total	305	100

Source: Field Survey, 2023

Table 1 further highlight the socio-demographic data of the respondents. 57 of the respondent representing 18.7% earn less than N50,000 monthly, 91 representing 29.8% earn N50,000 – N99,000 monthly, 68 representing 22.3% earn N100,000 – N149,000 monthly, 55 representing 18.0% earn N150,00 – N199,000 monthly. While 34 representing 11.1% earn N200,000 and above. This implies that majority of the respondents earn N50,000 – N99,000 monthly.

The marital status of the respondents revealed that 165 of the respondents representing 54.1% are single, 81 representing 26.6% are married, 36 representing 11.8% are divorced / separated. While 23 representing 7.5% are widowed. This implies that majority of the respondents are single.

The religion of the respondents shows that 161 of the respondents representing 52.8% are Muslims faithful's, 139 representing 45.6% are Christians. While 5 representing 1.6% are traditionalist. This implies that majority of the respondents are Muslims.

Lastly, the length of period respondents have been diagnosed with the illness revealed that 117 of the respondents representing 38.4% have been diagnosed for less than a year, 98 representing 32.1% have been diagnosed for 1 – 4 years, 66 representing 21.6% have been diagnosed for 5 – 8 years. While 43 representing 14.1% have been diagnosed for 8 years and above. This implies that majority of the respondents have been diagnosed with the illness for less than a year.

Table 2: Socio-Economic Factors that determine health seeking behaviour

Variable	Category	Frequency	Percentage (%)
Affordability of treatment	SA	108	35.4
	A	82	26.9
	D	65	21.3
	SD	50	16.4
	Total	305	100%
Accessibility of health service	SA	103	33.8
	A	107	35.1
	D	46	15.1
	SD	49	16.1
	Total	305	100%
Access to health information	SA	99	32.5
	A	115	37.7
	D	32	10.5
	SD	59	19.3
	Total	305	100%
Effectiveness of health service	SA	113	37.0
	A	117	38.4
	D	33	10.8
	SD	42	13.8
	Total	305	100%
Cultural preference	SA	60	19.7
	A	58	19.0
	D	88	28.9
	SD	99	32.4
	Total	305	100%
Level of Educational attainment	SA	90	29.5
	A	61	20
	D	86	28.2
	SD	69	22.6
	Total	305	100%
Income status	SA	201	65.9
	A	50	16.4
	D	32	10.5
	SD	22	7.2
	Total	305	100%

Source: Field Survey, 2023

Table 2 highlights the factors that determine health seeking behavior of the respondents. 108 of the respondents representing 35.4% strongly agreed that affordability of treatment determines their health seeking behavior, 82 representing 26.9% agreed, 65 representing 21.3% disagreed, 50 representing 16.4% strongly disagreed. This implies that majority of the respondents strongly agreed that affordability of treatment determines their health seeking behavior. This is in line with an interview conducted with a nurse in the teaching hospital who stated that:

The teaching hospital have an organization that bring items, so there is a study undergoing with people with diabetics here and I quiet believe that the study / research is still on where they are being assisted with drugs and other items. So at least in a place like Barrau Dikko people with such condition are being assisted in one way or the other.

Furthermore 103 of the respondents representing 33.8% strongly agreed that accessibility of health service determines their health seeking behavior, 107 representing 35.1% agreed, 46 representing 15.1% disagreed, while 49 representing 16.1% strongly disagreed. This implies that majority of the respondents agreed that accessibility of health service determines their health seeking behavior.

Also 99 of the respondents representing 32.5% strongly agreed that access to health information determines their health seeking behavior, 115 representing 37.7% agreed, 32 representing 10.5% disagreed, and 59 representing 19.3% strongly disagreed. This implies that majority of the respondents agreed that access to health information determines their health seeking behavior.

The table also revealed that 113 of the respondents representing 37.0% strongly agreed that effectiveness of health service determines their health seeking behavior, 117 representing 38.4% agreed, 33 representing 10.8% disagreed, 42 representing 13.8% strongly disagreed. This implies that majority of the

respondents agreed that effectiveness of health service determines their health seeking behavior.

On the other hand the table revealed that 60 of the respondents representing 19.7% strongly agreed that cultural preference determines their health seeking behavior, 58 representing 19.0% agreed, 88 representing 28.9% disagreed, while 99 representing 32.4% strongly disagreed. This implies that majority of the respondents strongly disagreed cultural preference determines their health seeking behavior.

Furthermore, the table revealed that 90 of the respondents representing 29.5% strongly agreed that level of educational attainment determines their health seeking behavior, 61 representing 20% agreed, 86 representing 28.2% disagreed, while 69 representing 22.6% strongly disagreed. This implies that majority of the respondents strongly agreed that level of educational attainment determines their health seeking behavior. In an interview with a health worker in the general hospital, it was gathered that

Educational level has an effect health seeking behavior because once you are aware of something you know what to do, you know what not to do. A lot of people don't know the kind of food to eat, they don't know how to take care of themselves if they are diabetic not to expose to cuts and all those kind of things. General awareness regarding the illness plays a vital role.

Lastly the table revealed that 201 of the respondents representing 65.9% strongly agreed that income status determine their health seeking behavior, 50 representing 16.4% agreed, 32 representing 10.5% disagreed, while 22 representing 7.2% strongly disagreed. This implies that majority of the respondents strongly agreed that income status determine their health seeking behavior. This is in line with an interview conducted, were the respondents stated that:

Most patients visit peripheral centers before coming to the hospital since most of them cannot afford the fee when they come here, they are being asked to run some test, they will spend a

lot of money to buy drugs. And then the time the distance, so they will rather seek alternatives and sometimes this alternative are usually not the best so there may family be issues let's say

women who her husband have permit her, or there is no money, or the distance from reaching here. All these factors play a role.

Table 3: Socio Demographic factors that most determine your health care seeking behaviour

Variable	Category	Frequency	Percentage (%)
Gender	SA	60	19.7
	A	58	19.0
	D	88	28.9
	SD	99	32.4
	Total	305	100%
Age	SA	121	39.7
	A	99	32.5
	D	32	10.5
	SD	49	16.1
	Total	305	100%
Marital status	SA	69	22.6
	A	61	20
	D	86	28.2
	SD	90	29.5
	Total	305	100%
Religion	SA	80	26.2
	A	44	14.4
	D	99	32.5
	SD	82	26.9
	Total	305	100%
Place of residents	SA	108	35.4
	A	82	26.9
	D	65	21.3
	SD	50	16.4
	Total	305	100%

Source: Field Survey, 2023

The Table 3 above highlights the socio-demographic factors that most determine respondent's health care seeking behavior. 60 of the respondents representing 19.7% strongly agreed that gender is the factor that most determine their health care seeking behavior. 58 representing 19.0% agreed, 88 representing 28.9% disagreed, while 99 representing 32.4% strongly disagreed. This implies that majority of the

respondents disagreed that gender is the factor that most determine their health care seeking behavior.

On the other hand 121 of the respondents representing 39.7% strongly agreed that age factor determine their health care seeking behavior, 99 representing 32.5% agreed, 32 representing 10.5% disagreed, while 49 representing 16.1% strongly disagreed. This implies that majority of the respondents strongly agreed that

age is the factor that most determine their health care seeking behavior.

Furthermore, 69 of the respondents representing 22.6% strongly agreed that their marital status is the factor that most determine their health care seeking behavior, 61 representing 20% agreed, 86 representing 28.2% disagreed, while 90 representing 29.5% strongly disagreed. This implies that majority of the respondents strongly disagreed that age is the factor that most determine their health care seeking behavior.

The table also revealed that 80 of the respondents representing 26.2% strongly agreed that religion is the factor that most determine their health care seeking behavior, 44 representing 14.4% agreed, 99 representing 32.5% disagreed, while 82 representing 32.5% strongly disagreed. This implies that majority of the respondents disagreed that religion is the factor that most determine their health care seeking behavior.

Lastly the table revealed that 108 of the respondents representing 35.4% strongly agreed that place of residents is the factor that most determine their health care seeking behavior, 82 representing 26.9% agreed, 65 representing 21.3% disagreed, while 50 representing 16.4% strongly disagreed. This implies that majority of the respondents strongly agreed that place of residents is the factor that most determine their health care seeking behavior.

Discussion of Major Findings

The present study aimed to examine the socio-economic and demographic determinants of health-seeking behavior among diabetic patients attending Barau Dikko Teaching Hospital in Kaduna, Nigeria. The findings highlight the significant influence of various socio-economic factors, including affordability of treatment, accessibility of health services, access to health information, effectiveness of health services, level of educational attainment, and income status, on health-seeking behavior among the study population.

The results indicate that a majority of respondents strongly agreed that affordability of treatment (62.3%)

and income status (82.3%) were crucial determinants of their health-seeking behavior. This finding aligns with previous studies that have consistently identified financial constraints as a major barrier to accessing healthcare services and adhering to treatment regimens, particularly for chronic conditions like diabetes (Ahmed et al., 2017; Saqib et al., 2018). The qualitative data from healthcare workers further corroborated this, highlighting that patients often delay seeking care or resort to alternatives due to the inability to afford fees, tests, and medications.

Additionally, the study revealed that accessibility of health services (69.9%), access to health information (70.2%), and effectiveness of health services (75.4%) were significant determinants of health-seeking behavior among diabetic patients. These findings are consistent with existing literature that emphasizes the importance of physical access to healthcare facilities, availability of health-related information, and perceived quality of care in shaping individuals' health-seeking decisions (Couture et al., 2008; Awosan et al., 2018).

Notably, the level of educational attainment emerged as a key socio-economic determinant, with 49.5% of respondents strongly agreeing that it influenced their health-seeking behavior. This finding aligns with previous research indicating that higher educational levels are associated with better health literacy, increased awareness of health risks, and more proactive health-seeking behaviors (Nguyen et al., 2019). The qualitative data from healthcare workers further emphasized the role of education in promoting better self-management and adherence to recommended practices among diabetic patients.

Regarding demographic factors, the study found that age (72.2%) and place of residence (62.3%) were the most significant determinants of health-seeking behavior among diabetic patients. This is consistent with existing literature that suggests age-related variations in health-seeking patterns and the influence of geographic location on access to healthcare services (Couture et al., 2008; Awosan et al., 2018). The

qualitative data highlighted the challenges faced by patients residing in remote areas, such as long distances to healthcare facilities and financial constraints associated with transportation costs.

In contrast, the study did not identify gender, marital status, or religion as major determinants of health-seeking behavior among diabetic patients in the study context. This finding deviates from some previous studies that have reported gender disparities and the influence of marital and religious factors on health-seeking behaviors (Saqib et al., 2018; Awosan et al., 2018). These discrepancies may be attributed to the specific socio-cultural context of the study setting or the focus on a diabetic patient population.

The findings of this study have important practical implications for improving health-seeking behavior and diabetes management in the Kaduna region. Interventions aimed at enhancing the affordability of treatment, expanding access to healthcare services, and improving health literacy through educational programs could significantly contribute to promoting timely and appropriate health-seeking behaviors among diabetic patients. Additionally, targeted strategies that consider age-specific needs and address geographic barriers faced by patients residing in remote areas are crucial.

Furthermore, the study underscores the importance of a comprehensive approach to diabetes care that addresses not only the medical aspects but also the socio-economic and demographic factors influencing health-seeking behaviors. Collaboration between healthcare providers, policymakers, and community stakeholders is essential to develop and implement effective interventions that address the identified determinants.

While this study provides valuable insights, it is important to acknowledge its limitations. First, the cross-sectional nature of the study precludes the establishment of causal relationships between the identified determinants and health-seeking behavior. Longitudinal studies or experimental designs may be

required to determine causality. Second, the study was conducted in a specific geographic region and may not be generalizable to other contexts with different socio-economic and demographic characteristics. Future research should consider expanding the scope to multiple regions or conducting comparative studies to enhance the generalizability of the findings.

Despite these limitations, the present study contributes to the existing body of knowledge by providing context-specific insights into the socio-economic and demographic determinants of health-seeking behavior among diabetic patients in the Kaduna region of Nigeria. The findings can inform the development of tailored interventions and policies aimed at improving access to healthcare services, enhancing health literacy, and promoting positive health-seeking behaviors, ultimately contributing to better health outcomes for individuals living with diabetes.

5. Conclusion and Recommendations

This study highlights the significant role played by socio-economic and demographic factors in shaping health-seeking behavior among diabetic patients attending Barau Dikko Teaching Hospital in Kaduna, Nigeria. The findings indicate that affordability of treatment, accessibility of health services, access to health information, effectiveness of health services, level of educational attainment, and income status are crucial socio-economic determinants of health-seeking behavior. Additionally, age and place of residence emerged as significant demographic factors influencing health-seeking decisions.

The results underscore the importance of addressing socio-economic barriers, such as financial constraints, limited access to healthcare facilities and information, and low educational levels, to promote timely and appropriate health-seeking behavior among diabetic patients. Interventions focused on improving affordability, accessibility, and awareness can contribute to better disease management and prevention of complications.

Furthermore, the study highlights the need for targeted strategies that consider the specific demographic characteristics of diabetic patients, particularly their age and place of residence. Tailored approaches that account for these factors can enhance the effectiveness of health promotion and disease management efforts.

Overall, this research provides valuable insights into the complex interplay of socio-economic and

demographic factors influencing health-seeking behavior among diabetic patients in the Kaduna region. The findings can inform the development of comprehensive strategies and policies aimed at improving access to healthcare services, enhancing health literacy, and promoting positive health-seeking behaviors, ultimately contributing to better health outcomes for individuals living with diabetes

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