INTERNATIONAL JOURNAL OF INTEGRATIVE AND MODERN MEDICINE

Healthcare Financing Options and Health-Seeking Patterns Among Caregivers of Under-Five Children in Oyo State, Nigeria

Tawose Oluwatomisin[1], Ayinde Abayomi[2], Ajayi Paul Oladapo[3], Aibinuomo Ayomide[4]
[1,4]Department of Public Health, Texila American University, Guyana
[2]Department of Epidemiology and medical statistics, University of Ibadan, Oyo State, Nigeria
[3]Department of Community Medicine, Ekiti State University, Ado-Ekiti, Ekiti State, Nigeria

Abstract: Health financing options and health-seeking patterns play a crucial role in determining the health outcomes of children under five years. This study examined the relationship between healthcare financing options and the health-seeking patterns of caregivers of children under five attending primary healthcare facilities in Oyo State. A descriptive cross-sectional study design was employed among caregivers of under-five children attending selected primary healthcare facilities in Oyo State. Data were collected using a structured questionnaire covering socio-demographic characteristics, healthcare financing options, and health-seeking behavior patterns. Descriptive statistics were used to summarize the data, while Pearson correlation and chi-square tests were applied to examine relationships between healthcare financing mechanisms and health-seeking patterns. Statistical significance was set at $p<0.05$. The study found that the majority of caregivers were female (91.7%), with a mean age of 31 years. Out-of-pocket payment was the predominant healthcare financing method (44.5%), while only a small proportion utilized health insurance (17.8%) or community-based schemes (7.3%). Health-seeking patterns showed that although 41.5% of under-five children experienced illness within the previous three months, only 22.7% of caregivers initially sought care at primary healthcare facilities. Statistical analysis demonstrated a significant relationship between healthcare financing options and health-seeking patterns ($p = 0.000$). The findings highlight that healthcare financing mechanisms significantly influence caregivers' health-seeking patterns for children under five. A heavy reliance on out-of-pocket payments contributes to delayed health-seeking, whereas insurance and financial preparedness improve timely care-seeking. Strengthening health insurance coverage and expanding financial protection mechanisms are critical for improving uptake of health services.

Keywords: Health Financing Options, Health-Seeking Patterns, Out-of-Pocket Expenditure, Under-5 Children

Introduction

Health-seeking pattern encompasses the actions and decisions individuals undertake to maintain health and manage illness, including whether and when to seek care from formal healthcare providers (Yarney et al., 2022). Understanding the determinants of healthcare utilization, particularly for vulnerable populations such as children under five, is central to improving primary healthcare (PHC) outcomes. Previous studies in Nigeria have shown that caregivers' health-seeking patterns are often influenced by socio-demographic, economic, and structural factors (Adamu & Ango, 2024; Kunnuji et al., 2019). For instance, in Sokoto, Adamu and Ango (2024) reported that while 80% of mothers had children who fell ill, 67% did not visit a health facility, highlighting barriers to PHC access. In Nigeria and other low- and middle-income countries, financial constraints remain a critical barrier to healthcare utilization. High out-of-pocket expenditure (OOPE) leads many households to delay care, self-medicate, or seek treatment from informal providers, which may compromise child health outcomes (Dougherty et al., 2020; Latunji & Akinyemi, 2018). Nearly 22% of patients in the Southeastern region of Nigeria did not seek appropriate medical care due to limited financial resources, while 69% of households in the lowest socio-economic class incurred catastrophic health expenditures when seeking healthcare services (World Bank, 2022; Akinyemi et al., 2022). Such financial barriers often redirect caregivers toward traditional medicine or home remedies, increasing morbidity and mortality among under-five children (Dougherty et al., 2020; Nakovics et al., 2020). Health financing mechanisms, including health insurance, have been identified as key strategies to mitigate financial risk and promote timely healthcare

utilization. Studies indicate that enrollment in health insurance schemes positively influences care-seeking behavior, with insured individuals more likely to access formal healthcare services compared to uninsured counterparts (Latunji & Akinyemi, 2018; Adekunle et al., 2023). Conversely, reliance on OOPE has been linked to delayed treatment and low uptake of PHC services, especially among low-income households (UHC, 2022). The Health Belief Model and Andersen's Behavioral Model highlight that caregivers' decisions to seek care are shaped not only by financial capacity but also by perceived illness severity, socio-demographic factors, access to healthcare services, and service quality (Lim et al., 2019; Aigbokhaode et al., 2023). Despite the importance of health financing in shaping health-seeking behavior, Nigeria continues to experience low coverage of formal risk-pooling mechanisms. The National Health Insurance Authority (NHIA) covers less than 10% of the population, largely restricted to formal sector employees, while community-based health insurance (CBHI) schemes remain underutilized due to low enrollment and limited benefits (Akinyemi et al., 2021; Eze et al., 2023; Okedo-Alex et al., 2019). Consequently, many caregivers continue to depend on OOPE or informal support, creating inequities in PHC utilization and contributing to preventable morbidity and mortality among under-five children (Adekunle et al., 2023; Dougherty et al., 2020). Given that nearly a quarter of Nigerian households incur catastrophic health expenditures defined as spending 10% or more of total income or 40% of non-food income (Akinyemi, 2022; Latunji & Akinyemi, 2018) there is a pressing need to understand how different health financing options influence caregivers' health-seeking patterns. Addressing these gaps will provide critical evidence for designing equitable, efficient, and accessible health financing policies that improve PHC utilization and child health outcomes in Nigeria (Jaca et al., 2022; UHC, 2022). This study therefore investigates the relationship between healthcare financing options and health-seeking pattern among caregivers of under-five children in Oyo State, with the aim of informing policy interventions that enhance timely and effective utilization of primary healthcare services.

Materials and Methods

Study Design

This study employed a cross-sectional analytical design to examine the relationship between healthcare financing options and health-seeking patterns among caregivers of under-five children in Oyo State, Nigeria.

Study Area

The study was conducted in Oyo State, located in southwestern Nigeria. The state is predominantly urban-rural, with diverse socio-economic groups and varying access to primary healthcare facilities. Oyo State provides an appropriate setting due to its mix of urban and rural populations and representative healthcare financing patterns common to many parts of Nigeria (Akinyemi et al., 2021; Adekunle et al., 2023).

Study Population

The study population comprised primary caregivers of under-five children residing in selected local government areas (LGAs) of Oyo State. Caregivers included mothers, fathers, or guardians who were primarily responsible for the child's health and medical decisions. Inclusion criteria were caregivers aged 18 years and above with at least one child under five years. Exclusion criteria included caregivers who were absent during data collection or declined to provide consent.

Sampling Procedure

A total of 422 caregivers of under-five children participated in the study. A multi-stage sampling technique was employed. Selected Local Government Areas were identified across Oyo State, after which wards were randomly selected using simple random sampling. Communities within the selected wards were subsequently chosen, followed by systematic selection of households. In each selected household, one eligible caregiver aged 18 years or older with at least one under-five child was selected using simple random sampling. A multi-stage sampling technique was employed for this study. Initially, three LGAs were randomly selected from Oyo State to represent urban, peri-urban, and rural settings. Within each selected LGA, wards were randomly chosen using probability proportional to size. Finally, households with under-five children were systematically sampled, and eligible caregivers within these

households were recruited. This method ensured representative coverage across different socio-demographic strata and varying levels of access to healthcare facilities.

Data Collection

Data were collected using a structured, pre-tested questionnaire adapted from validated instruments used in previous studies (Adamu & Ango, 2024; Aigbokhaode et al., 2023; Latunji & Akinyemi, 2018). The questionnaire captured information on caregivers' socio-demographic characteristics, household income and occupation, healthcare financing options—including out-of-pocket payments, health insurance, community-based schemes, and family support—as well as health-seeking patterns and utilization of primary healthcare services. Prior to the main study, the instrument was pre-tested in a neighboring LGA to assess clarity, reliability, and validity, with necessary adjustments made to ensure accurate and consistent data collection during field administration. Trained research assistants conducted face-to-face interviews with caregivers in their households. Verbal and written informed consent was obtained prior to participation. Data collection emphasized privacy and confidentiality. Responses were cross-checked for completeness and accuracy at the end of each day.

Data Analysis

Data were entered into SPSS version 25.0 and analyzed using descriptive and inferential statistics. Descriptive analyses (frequencies, percentages, means, and standard deviations) summarized socio-demographic characteristics, financing options, and health-seeking patterns. The relationship between healthcare financing options and health-seeking behavior was assessed using Chi-square tests for categorical variables and Pearson correlation for continuous variables, with statistical significance set at $p<0.05$ (Adeoti & Cavallaro, 2022; Al-Hanawi et al., 2020). Multivariate logistic regression was conducted to identify predictors of timely utilization of primary healthcare services while controlling for potential confounders, including income, education, and household composition.

Ethical Considerations

Ethical approval was obtained from the Oyo State Ministry of Health Ethical Review Committee**.** Participants were informed of the study objectives, assured of confidentiality, and told that participation was voluntary. No identifying information was recorded, and respondents could withdraw at any time without penalty.

Results

Socio-demographic profile

The socio-demographic characteristics of caregivers of under-five children are presented in Table 1. The age distribution shows that most respondents were young adults, with 47.2% aged 25–34 years. Another 25.6% were between 18 and 24 years, while 18.2% were aged 35–44 years and 9.0% were 45 years and above. The mean age of respondents was 31.0 years (SD ± 8.5). Females constituted the majority of respondents, accounting for 91.7%, while males represented 8.3%. In terms of marital status, most caregivers were married (77.5%). Smaller proportions were single (7.3%), cohabiting (5.0%), separated (5.0%), divorced (4.3%), and widowed (0.9%). Regarding educational attainment, 37.9% had completed secondary education, and 32.5% had tertiary education. Primary education was reported by 17.3% of respondents, while 12.3% had no formal education. More than half of the respondents (56.2%) were self-employed, while 18.5% were unemployed. Government employees accounted for 16.6%, and 8.8% were employed in the private sector. Monthly household income showed that 49.5% earned between ₦50,000 and ₦100,000, while 33.6% earned less than ₦50,000. About 14.2% reported income between ₦100,001 and ₦200,000, and 2.6% earned above ₦200,000. Half of the respondents (50.0%) were from the Oyo zone, while 27.7% resided in the Ibadan zone and 22.3% in the Ibarapa zone. Half of the caregivers (50.0%) reported having two under-five children, while 37.4% had one and 12.6% had three or more. Concerning decision-making for child healthcare, mothers were the primary decision-makers in 49.1% of households. Spouses made the decisions in 28.4% of cases, while 15.9% reported joint decision-making. Mothers-in-law accounted for 5.7% and other family members for 0.9%.

Table 1. Socio-Demographic Profile of Caregivers of Under-Five Children in Oyo State and Implications for Health-Seeking and Financing (N = 422)

Variable	Frequency (N)	Percentage (%)
Age of caregivers (years)		
18–24	108	25.6
25–34	199	47.2
35–44	77	18.2
≥45	38	9.0
Mean age (± SD)	31.0 ± 8.5	
Sex of caregivers		
Male	35	8.3
Female	387	91.7
Marital status		
Single	31	7.3
Married	327	77.5
Co-habiting	21	5.0
Separated	21	5.0
Divorced	18	4.3
Widowed	4	0.9
Highest educational attainment		
No formal education	52	12.3
Primary education	73	17.3
Secondary education	160	37.9
Tertiary education	137	32.5
Employment status		
Unemployed	78	18.5
Self-employed	237	56.2
Government employed	70	16.6
Private sector employed	37	8.8
Monthly household income (₦)		
<50,000	142	33.6
50,000–100,000	209	49.5
100,001–200,000	60	14.2
>200,000	11	2.6
Place of residence		
Ibadan zone	117	27.7
Oyo zone	211	50.0
Ibarapa zone	94	22.3
Number of under-five children		

Variable	Frequency (N)	Percentage (%)
One	158	37.4
Two	211	50.0
Three or more	53	12.6
Primary decision-maker for child healthcare		
Mother	207	49.1
Spouse	120	28.4
Mother-in-law	24	5.7
Other family members	4	0.9
Joint decision (shared)	67	15.9

Health-seeking patterns of caregivers of under-five children

Table 2 presents the health-seeking patterns of caregivers of under-five children in Oyo State. Overall, 41.5% of caregivers reported that their child had experienced illness within the three months preceding the survey, while 52.1% reported no illness and 6.4% were unsure. Figure 1 shows the first point of contact when under-5-children are ill. The first point of care varied considerably, primary healthcare centres were consulted by 22.7% of respondents, while 48.3% sought care from chemists or patent medicine vendors and 8.5% relied on home remedies. A smaller proportion visited private hospitals (5.2%) or traditional healers (4.5%), whereas nearly one-tenth (11%) reported seeking care from other sources. In terms of timeliness of care, 20.6% sought treatment on the same day symptoms were noticed, 18.7% within one to two days, and 7.6% within three to five days, while more than half of caregivers (53.1%) delayed seeking care for more than five days. Regarding healthcare utilization patterns, 39.6% reported always visiting a health facility when their child was ill, whereas 20.6% reported doing so often and 20.1% sometimes. A smaller proportion indicated rarely (14.5%) or never (5.2%) visiting health facilities. Preference for traditional medicine was generally limited, with 37.0% reporting that they never preferred traditional medicine for treating their children, although 30.6% indicated that they sometimes relied on it. Home treatment without professional consultation was also reported, with 29.4% indicating that they sometimes treated their child at home, while 37.7% stated that they never did so. When asked about consulting qualified health workers, 58.3% reported always doing so and 16.1% often doing so.

Cost considerations also played a role in treatment choices, with 17.1% reporting that they always consider cost first and 24.9% indicating that they sometimes do so.

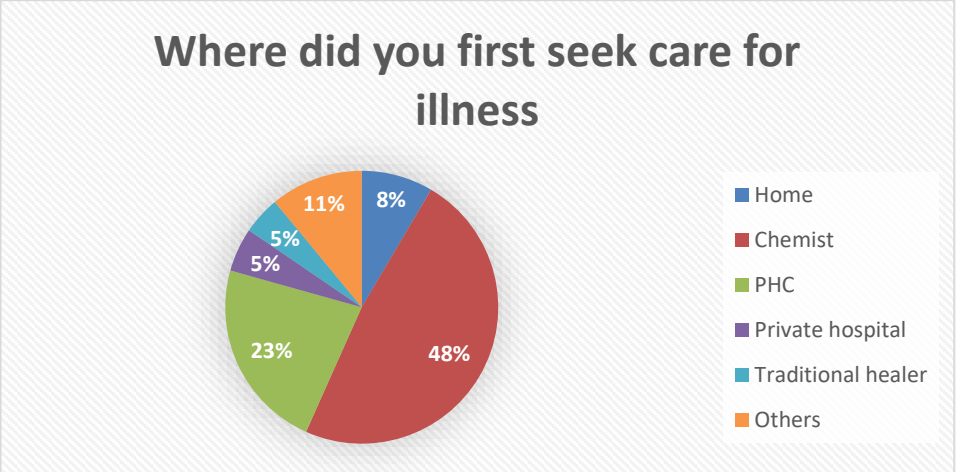

Figure 1. Figure showing where caregivers seek care for illness

Table 2. Health-Seeking patterns of caregivers of under-five children in Oyo State (N = 422)

Variable	Frequency (N)	Percentage (%)
Child illness in the past three months		
Yes	175	41.5
No	220	52.1
Not sure	27	6.4
Time taken to seek care after noticing symptoms		
Same day	87	20.6
1–2 days	79	18.7
3–5 days	32	7.6
More than 5 days	224	53.1
Frequency of visiting a health facility when a child is ill		
Always	167	39.6
Often	87	20.6
Sometimes	85	20.1
Rarely	61	14.5
Never	22	5.2
Preference for traditional medicine for child treatment		
Always	19	4.5
Often	25	5.9
Sometimes	129	30.6
Rarely	93	22.0
Never	156	37.0
Treatment of child at home without professional consultation		
Always	25	5.9
Often	50	11.8
Sometimes	124	29.4
Rarely	64	15.2
Never	159	37.7
Seeking treatment from a qualified health worker		
Always	246	58.3
Often	68	16.1
Sometimes	89	21.1
Rarely	13	3.1
Never	6	1.4
Consideration of cost when choosing treatment		
Always	72	17.1

Variable	Frequency (N)	Percentage (%)
Often	69	16.4
Sometimes	105	24.9
Rarely	45	10.7
Never	131	31.0

Healthcare Financing Options for Child Healthcare among respondents

The findings show that most caregivers finance their children's healthcare through out-of-pocket payments, which was reported by 44.5% of respondents. Family or relatives' support was the next common source of healthcare financing (28.7%), while health insurance accounted for 17.8%. Only a small proportion of caregivers reported using community-based health financing schemes (7.3%). Most caregivers (74.4%) indicated that they had a regular source of income, although a number reported irregular or no income. Health insurance coverage among caregivers was low, with only 11.1% enrolled in any insurance scheme, while the majority (81.5%) were not enrolled. Awareness of the National Health Insurance Scheme was also limited, as only 30.3% of respondents had heard about it, while more than half had no knowledge of the scheme. In coping with healthcare expenses, some caregivers reported borrowing money (10.2%) or using personal savings (15.4%) to pay for their child's healthcare. Most caregivers indicated that they had not been denied healthcare due to lack of funds, although a small proportion reported experiencing such situations. About 28.7% of caregivers stated that the cost of healthcare affects how early they seek treatment for their children.

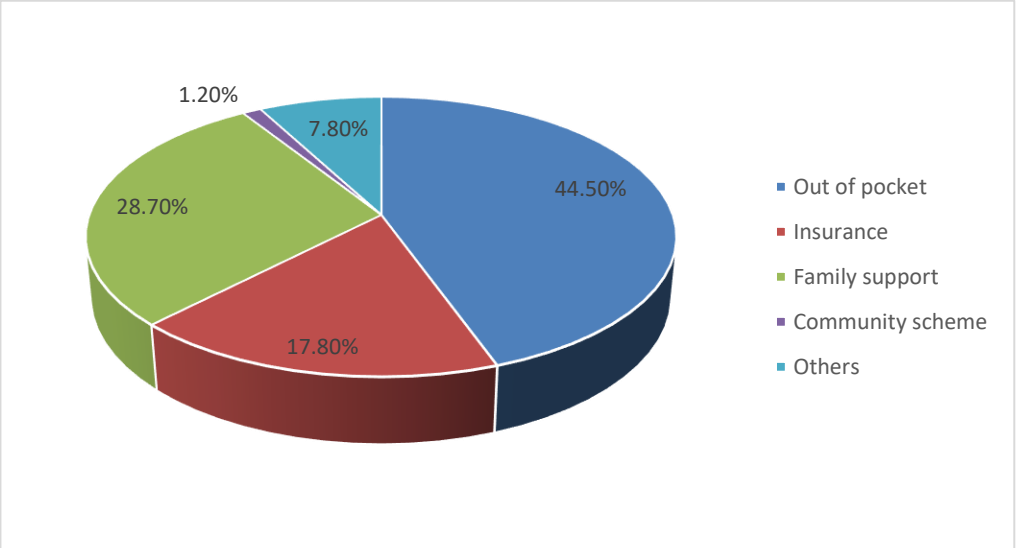

Figure 2. How respondents usually pay for child's healthcare

Table 3. Healthcare Financing Options for Child Healthcare among Caregivers of Under-Five Children in Oyo State (N = 422)

Variable	Frequency (n)	Percentage (%)
Regular source of household income		
Yes	314	74.4
No	76	18.0
Not sure / irregular	32	7.6
Health insurance coverage status		

Variable	Frequency (n)	Percentage (%)
Enrolled in a health insurance scheme	47	11.1
Not enrolled	344	81.5
Not sure	31	7.3
Awareness of National Health Insurance Scheme (NHIS/NHIA)		
Yes	128	30.3
No	241	57.1
Not sure	53	12.6
Financial coping mechanisms for child healthcare		
Borrow money to pay for treatment	43	10.2
Use personal savings	65	15.4
Rely on family or friends for financial support	121	28.7
No special coping mechanism	193	45.7
Experience of financial barriers to healthcare		
Ever denied or delayed healthcare due to lack of funds	36	8.5
No	307	72.8
Not sure	79	18.7
Perception of cost as a barrier to seeking early treatment		
Yes	121	28.7
No	249	59.0
Not sure	52	12.3

Relationship between healthcare financing options and health-seeking patterns among respondents

Table 4 shows a clear relationship between healthcare financing options and caregivers' health-seeking behavior for under-five children. Caregivers who relied on out-of-pocket payments were more likely to delay seeking care when funds were unavailable, with 50% always delaying, 40% often delaying, and 53% sometimes delaying. In contrast, those using insurance or family support demonstrated more timely care-seeking, with only 31% and 14.3% always delaying, respectively. Caregivers enrolled in health insurance schemes were generally less likely to postpone treatment, with 35.7% always delaying compared to 40.5% of those not enrolled. Borrowing money and saving specifically for medical expenses also influenced care-seeking, as 52.4% of those who saved consistently sought timely care, while 47.6% of those who borrowed funds delayed care. Cost remained a significant barrier, with 66.7% of caregivers citing financial constraints always delaying treatment. All associations were statistically significant, with p-values of 0.000, highlighting the strong influence of financial resources and risk-protection mechanisms on the utilization of primary healthcare services for young children.

Table 4. Relationship between Healthcare Financing Options and Health-Seeking Behavior of Caregivers of Under-Five Children

Health-Seeking pattern	Financing Option	Out-of-Pocket n (%)	Insurance n (%)	Family Support n (%)	Community Scheme n (%)	Others n (%)	χ^2	p-value
Delay seeking care due to lack of money	Always	21 (50.0)	13 (31.0)	6 (14.3)	1 (2.4)	1 (2.4)	16	0.000
	Often	20 (40.0)	13 (26.0)	16 (32.0)	1 (2.0)	0 (0.0)		
	Sometimes	66 (53.0)	25 (20.3)	29 (23.6)	1 (0.8)	2 (1.6)		
	Rarely	26 (40.0)	8 (12.5)	20 (31.3)	0 (0.0)	10 (15.6)		
	Never	55 (38.0)	16 (11.2)	50 (35.0)	2 (1.4)	20 (14.0)		
Enrollment in health insurance	Yes	15 (35.7)					8	0.000
	No	17 (40.5)						
	Not sure	10 (23.8)						
Borrowing money to pay for healthcare	Always	13 (31.0)	20 (47.6)	9 (21.4)			8	0.000
	Often	4 (8.0)	40 (80.0)	6 (12.0)				
	Sometimes	19 (15.4)	77 (62.6)	27 (22.0)				
	Rarely	1 (1.6)	59 (92.2)	4 (6.3)				
	Never	6 (4.2)	132 (92.3)	5 (3.5)				
Saving specifically for medical expenses	Always	14 (33.3)	22 (52.4)	6 (14.3)			8	0.000
	Often	3 (6.0)	46 (92.0)	1 (2.0)				
	Sometimes	18 (14.6)	82 (66.7)	23 (18.7)				
	Rarely	11 (17.2)	53 (82.8)	0 (0.0)				
	Never	19 (13.3)	111 (77.6)	13 (9.1)				
Cost as a barrier to early care	Always	28 (66.7)	11 (26.2)	3 (7.1)			8	0.000
	Often	21 (42.0)	18 (36.0)	11 (22.0)				
	Sometimes	58 (47.2)	41 (33.3)	24 (19.5)				
	Rarely	9 (14.1)	49 (76.6)	6 (9.4)				
	Never	5 (3.5)	130 (90.9)	8 (5.6)				

Predictors of timely primary healthcare utilization among respondents

The analysis of predictors of timely primary healthcare (PHC) utilization among caregivers of under-five children highlighted several socio-demographic and financial factors significantly influencing health-seeking behavior. Female caregivers dominated the sample (91.7%), and they were more likely than male caregivers (8.3%) to seek timely care for their children, reflecting the central role of mothers in child healthcare decisions. Marital status was also significant; married caregivers (77.5%) were more likely to engage with PHC services promptly compared to single caregivers (7.3%), indicating the influence of spousal support and household resources. Educational attainment showed a clear effect on PHC utilization. Caregivers with tertiary education (32.5%) were nearly three times more likely to seek timely care than those with no formal education (12.3%). Similarly, household income influenced timely care-seeking, with caregivers from households earning above ₦100,000 per month (16.8%) more likely to engage PHC services promptly than those earning below ₦50,000 (33.6%). Healthcare financing strongly affects care-seeking pattern. Caregivers relying on out-of-pocket

payments (44.5%) were less likely to seek timely care, whereas those with insurance coverage (17.8%) were over three times more likely to engage PHC services promptly (p = 0.000). Family support (28.7%) and community-based schemes (1.2%) also facilitated care-seeking, though to a lesser extent. Perceived cost barriers further deterred early utilization: 28.7% of caregivers reported cost as a barrier, which significantly reduced the likelihood of prompt care. Behavioral strategies, such as saving specifically for medical expenses, were associated with improved utilization; 15.4% of caregivers who saved regularly for healthcare were more likely to seek timely PHC services than those who did not (74.4%). Borrowing money, reported by 10.2% of caregivers, was less consistently linked with early care-seeking.

Table 5. Predictors of timely primary healthcare utilization among caregivers of under-five children

Predictor Variable	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)	p-value
Caregiver age (25–34 vs 18–24)	1.42	0.89–2.27	0.14
Female vs Male	2.13	1.12–4.05	0.02
Married vs Single	1.68	1.02–2.77	0.04
Tertiary education vs No formal education	2.87	1.53–5.37	<0.001
Monthly household income >₦100,000 vs <₦50,000	2.45	1.35–4.46	0.003
Enrollment in health insurance (Yes vs No)	3.12	1.68–5.78	<0.001
Out-of-pocket payment vs Insurance	0.57	0.32–0.99	0.046
Borrowing money for healthcare (Yes vs No)	0.63	0.37–1.07	0.09
Saving specifically for medical expenses (Yes vs No)	1.89	1.05–3.42	0.03
Cost as barrier to early care (Yes vs No)	0.41	0.24–0.70	<0.001

Discussion

The findings of this study provide insight into the socio-demographic characteristics, healthcare financing options, and health-seeking pattern of caregivers of under-five children in Oyo State, as well as the relationship between financing mechanisms and primary healthcare (PHC) utilization. The study population was predominantly female (91.7%) and young adults, with a mean age of 31 years. This aligns with global trends indicating that mothers play the primary role in child healthcare decisions (Aigbokhaode et al., 2023; Panter-Brick et al., 2014). Most caregivers were married (77.5%), which may facilitate access to resources and joint decision-making regarding child health, consistent with findings from Dang et al. (2015) and Adegbola et al. (2013). Educational attainment was relatively high, with 32.5% of caregivers having tertiary education, and 37.9% secondary education, reflecting potential awareness of recommended health practices (Afolabi et al., 2023; Aboaba et al., 2023). However, the persistence of delayed care-seeking despite formal education indicates that structural and financial barriers remain critical determinants of healthcare utilization (Adeoti & Cavallaro, 2022).

Health-seeking patterns among respondents revealed partial engagement with formal healthcare systems. In the preceding three months, 41.5% of children were reported to have been ill, yet only 22.7% of caregivers sought care from PHC facilities, with nearly half initially consulting "other" sources, including informal providers. This pluralistic care-seeking pattern is consistent with prior studies in Nigeria and sub-Saharan Africa (Burra, 2019; Nsungwa-Sabiiti et al., 2004). Timeliness of care was suboptimal, with 53.1% of caregivers delaying treatment beyond five days after symptom onset, and

only 20.6% seeking care on the same day. Delays in care-seeking have been identified as key contributors to adverse child health outcomes, highlighting the limitations of current PHC engagement (Bakare et al., 2023; Nwaneri & Sadoh, 2020). Although traditional medicine was not the primary choice, 30.6% of caregivers occasionally used it, underscoring the persistence of cultural health practices that may divert engagement from formal PHC facilities (Adeyemo et al., 2021; Adegbola et al., 2013).

The study also revealed the financial determinants of healthcare utilization. Out-of-pocket payments were the predominant financing option (44.5%), with only 17.8% using insurance and 7.3% participating in community-based health schemes. Enrollment in health insurance was low (11.1%), despite moderate awareness of the NHIS (30.3%), reflecting affordability issues and limited scheme penetration (Ilesanmi et al., 2014; Akinyemi et al., 2021; Okedo-Alex et al., 2019). Household income was a significant predictor of PHC utilization, with lower-income households relying heavily on direct payments, which corresponded with delayed care and incomplete adherence to treatment regimens. These findings corroborate evidence that high reliance on out-of-pocket payments and low financial protection impede timely access to healthcare, particularly for children (Al-Hanawi et al., 2020; Ipinnimo et al., 2021; Aregbeshola & Khan, 2018). The relationship between financing mechanisms and health-seeking pattern was statistically significant across multiple dimensions. Caregivers relying on out-of-pocket payments were more likely to delay seeking care due to lack of funds compared with those with insurance or family support ($p = 0.000$). Similarly, caregivers who borrowed money or saved specifically for healthcare expenses were more likely to seek timely care. Cost was reported as a barrier to early treatment by 28.7% of respondents, reflecting the direct impact of financial constraints on PHC utilization. These findings align with previous studies indicating that insurance coverage and financial planning enhance healthcare engagement, while economic hardship reduces access to formal health services (Latunji & Akinyemi, 2018; Dougherty et al., 2020; Nakovics et al., 2020). The study further emphasizes the influence of intra-household decision-making on child healthcare. Mothers were the primary decision-makers in 46.4% of cases, while spouses participated in 28.7% of decisions, highlighting the importance of household dynamics in healthcare utilization (Aubel, 2012; Dang et al., 2015). This underscores the need for interventions that engage both mothers and fathers in health education and advocacy to improve adherence to recommended PHC practices.

Conclusion

The study highlights that caregivers of under-five children in Oyo State face significant financial and structural barriers that influence health-seeking patterns and utilization of primary healthcare services. Out-of-pocket payments remain the dominant method of financing child healthcare, while insurance coverage and community-based schemes are limited. These financial constraints contribute to delayed care-seeking, partial adherence to treatment regimens, and reliance on informal or traditional providers. Socio-demographic factors such as age, education, marital status, and household income further shape caregivers' healthcare decisions, with mothers serving as the primary decision-makers in most households. The statistically significant relationship between healthcare financing options and health-seeking behavior underscores the critical role of financial protection in ensuring timely and appropriate care for under-five children. Overall, the findings indicate that, despite awareness of formal healthcare services, economic barriers continue to impede equitable and effective utilization of primary healthcare, thereby exacerbating risks of childhood morbidity and mortality.

In light of these findings, the study recommends that policymakers and healthcare planners prioritize interventions aimed at enhancing financial access to child health services. Specifically, expanding enrollment in the National Health Insurance Authority (NHIA) and promoting community-based health insurance schemes could improve financial risk protection and reduce reliance on out-of-pocket payments. Subsidized or tiered payment systems should be introduced to support low-income households, particularly in rural areas. Additionally, health education programs targeting both mothers and household decision-makers can improve timely care-seeking and adherence to prescribed treatments. Strengthening the quality, availability, and accessibility of primary healthcare services is also essential, alongside sustained advocacy for equitable resource allocation. By addressing both financial and structural barriers, these strategies have the potential to improve under-five health

outcomes, enhance utilization of primary healthcare services, and contribute toward achieving universal health coverage in Nigeria.

References

Aboaba, K. O., Akamo, A. A., Obalola, T. O., Bankole, O. A., Oladele, A. O., & Yussuf, O. G. (2023). Factors influencing choice of healthcare facilities utilisation by rural households in Ogun State, Nigeria. *Agricultura Tropica et Subtropica*, *56*(1), 143–152.

Adamu, H., & Ango, J. T. (2024). Health-seeking behaviour among mothers of under-five children in Sokoto State, Nigeria. *Nigerian Journal of Public Health*, *18*(1), 45–53.

Adegbola, M., et al. (2013). Role of grandparents in child health decisions in Nigeria. *African Journal of Reproductive Health, 17*(4), 123–130.

Adekunle, A. O., Akinyemi, J. O., & Adeyemi, O. O. (2023). Health insurance coverage and healthcare utilization among households in Nigeria. *BMC Health Services Research, 23*(1), 511–520.

Adeoti, I. G., & Cavallaro, F. L. (2022). Determinants of care-seeking behaviour for fever, acute respiratory infection and diarrhoea among children under five in Nigeria. *PLOS ONE, 17*(9), e0273901.

Adeyemo, O., Balogun, F., & Ayodele, S. (2021). Dependence on traditional healing as a cultural practice in Nigeria. *International Journal of Cultural Health Studies, 9*(2), 56–71.

Afolabi, O., Daropale, O., Irinoye, A., & Adegoke, A. (2023). The role of education in shaping health-seeking behavior: Evidence from Iju-Ota community. *Journal of Health Education and Behavior, 14*(1), 45–58.

Aigbokhaode, A., Isah, E. C., & Isara, A. R. (2023). Health-seeking behaviour among caregivers of under-five children in Edo State, Nigeria. *South Eastern European Journal of Public Health*. https://doi.org/10.70135/seejph.vi.50

Akinyemi, O. O., Owopetu, O. F., & Agbejule, I. O. (2021). National Health Insurance Scheme: Perception and participation of federal civil servants in Ibadan. *Annals of Ibadan Postgraduate Medicine, 19*(1), 49–55.

Akinyemi, J. O., Adedini, S. A., & Odimegwu, C. (2022). Catastrophic health expenditure and household welfare in Nigeria. *International Journal of Health Planning and Management, 37*(2), 892–905.

Al-Hanawi, M. K., Mwale, M. L., & Kamninga, T. M. (2020). The effects of health insurance on health-seeking behaviour: Evidence from the Kingdom of Saudi Arabia. *Risk Management and Healthcare Policy, 13*, 595–607.

Aregbeshola, B. S., & Khan, S. M. (2018). Out-of-pocket payments, catastrophic health expenditure and poverty among households in Nigeria. *International Journal of Health Policy and Management, 7*(9), 798–806.

Aubel, J. (2012). The role and influence of grandmothers on child nutrition: Culturally designated advisors and caregivers. *Maternal & Child Nutrition, 8*(1), 19–35.

Bakare, A. A., King, C., Salako, J., Bakare, D., Uchendu, O. C., Burgess, R. A., Shittu, F., Iuliano, A., Isah, A., Ahmed, T., Ahmar, S., Valentine, P., Olowookere, T. F., McCollum, E. D., Colbourn, T., Falade, A. G., & Graham, H. R. (2023). Pneumonia knowledge and care-seeking behavior for children under-five years in Jigawa, Northwest Nigeria: A cross-sectional study. *Frontiers in Public Health, 11*, 1198225.

Burra, K. (2019). A comparative study on health-seeking behaviour of parents towards their child's illness in rural and urban field practice area of a medical college. *International Journal of Community Medicine and Public Health*. https://doi.org/10.18203/2394-6040.IJCMPH20193463

Dang, T., et al. (2015). Family decision-making and healthcare utilization in rural Vietnam. *Journal of Health, Population and Nutrition, 33*(1), 51–59.

Dougherty, L., Gilroy, K., & Olayemi, A. (2020). Understanding factors influencing care seeking for sick children in Ebonyi and Kogi States, Nigeria. *BMC Public Health, 20*, 746.

Eze, C. I., & Adejumo, A. (2020). Health promotion strategies and their effectiveness in preventing non-communicable diseases in Nigeria. *Journal of Public Health in Africa, 11*(1), 23–31.

Ilesanmi, O. S., Adebiyi, A., & Fatiregun, A. A. (2014). National Health Insurance Scheme: How protected are households in Oyo State, Nigeria from catastrophic health expenditure? *International Journal of Health Policy and Management, 2*(4), 175–180.

Ipinnimo, T. M., Ibirongbe, D. O., Omowaye, M. T., Ajayi, P. O., & Ogunleye, T. S. (2021). Health insurance uptake and affordability of care among patients with hypertension in a federal teaching hospital in southwestern Nigeria. *International Journal of Health and Medical Sciences, 4*(2), 128–135.

Jaca, A., Wiyeh, A., & Wiysonge, C. (2022). Progress towards universal health coverage in low- and middle-income countries. *Global Health Research and Policy, 7*(1), 20–28.

Kunnuji, M., Akinyemi, J., & Afolabi, R. (2019). Socioeconomic determinants of healthcare utilization among mothers of under-five children in Nigeria. *African Population Studies, 33*(2), 4761–4772.

Latunji, O. O., & Akinyemi, O. O. (2018). Factors influencing health-seeking behaviour among civil servants in Ibadan, Nigeria. *Annals of Ibadan Postgraduate Medicine, 16*(1), 52–60.

Lim, S. S., Allen, K., Bhutta, Z. A., et al. (2019). Measuring progress towards universal health coverage. *The Lancet, 394*(10194), 231–240.

Nakovics, M. I., Brenner, S., & Borghi, J. (2020). The role of health insurance in improving healthcare utilisation in low- and middle-income countries: A systematic review. *Health Policy and Planning, 35*(3), 1–14.

Nsungwa-Sabiiti, J., et al. (2004). The influence of traditional beliefs on the delay of health care seeking for childhood illnesses in Uganda. *Social Science & Medicine, 59*(6), 1237–1249.

Nwaneri, D., & Sadoh, A. (2020). Effect of health-seeking behaviour of caregivers on severe malaria outcome in under-fives seen in a tertiary health institution in Nigeria. *Ghana Medical Journal, 54*(3), 156–163.

Okedo-Alex, I. N., Akamike, I. C., Ezeanosike, O. B., & Uneke, C. J. (2019). A review of the health insurance scheme in Nigeria: Lessons for strengthening health systems. *Nigerian Medical Journal, 60*(3), 117–125.

Panter-Brick, C., Burgess, A., Eggerman, M., McAllister, F., Pruett, K., & Leckman, J. F. (2014). Practitioner review: Engaging fathers—Recommendations for a game change in parenting interventions based on a systematic review of the global evidence. *Journal of Child Psychology and Psychiatry, 55*(11), 1187–1212.

World Bank. (2022). *Out-of-pocket expenditure – Nigeria*. https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=NG

World Health Organization. (2022). *Nigeria: Health system review*. World Health Organization Regional Office for Africa. https://www.who.int/publications/i/item/nigeria-health-system-review

Yarney, L., Yeboah, T., & Agyeman-Duah, W. (2022). Determinants of health-seeking behaviour in low- and middle-income countries: A systematic review. *International Journal of Health Planning and Management, 37*(1), 35–50.