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Awareness and Utilization of Birth Registration Services among Caregivers of Under-Five Children at a Tertiary Hospital in Southern Nigeria

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ABSTRACT

Background: Birth registration provides legal identity, safeguards child rights, and supports population planning, yet utilization remains suboptimal in Nigeria, including within health facility settings. This study assessed awareness and utilization of birth registration services among caregivers of children aged 0–59 months attending the University of Port Harcourt Teaching Hospital, Rivers State, Nigeria.

Methods: A facility-based cross-sectional study was conducted between October 2024 and July 2025. Using systematic sampling, 338 caregivers were recruited for the study. Data were collected using a pre-tested questionnaire and analysed with IBM SPSS version 23. Sociodemographic variables were summarized using frequencies and proportions, while associations were assessed using chi-square tests and binary logistic regression at $p < 0.05$.

Results: Among the 338 respondents, 330 (97.6%) were aware of birth registration, with health facilities as the main source of information (218, 66.1%). 271 (80.2%) had registered at least one child, while 196 (58.0%) had registered their current child. Registration occurred in health facilities (185, 94.4%), often within the first week of life (80, 40.8%). Marital status ($p = 0.015$) and number of children ($p < 0.001$) were associated with registration. After adjustment for potential confounders, caregivers with one child had lower odds of registration compared with those with three or more children (aOR = 0.17; 95% CI: 0.08–0.37; $p < 0.001$).

Conclusion: Awareness was high, but timely registration of the current child remained suboptimal. Strengthening integration into maternal and child health services and addressing informal practices may improve uptake in similar facility settings.

Keywords: Birth registration, awareness, utilization, caregivers, Nigeria



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INTRODUCTION

Birth registration is the process by which a state registers a child's birth.¹ This permanent process formally recognizes the child's existence², and records key details such as place of birth and parental identity.³ Registration enables the issuance of a birth certificate, which serves as proof of age and identity and may reduce vulnerability to risks such as early marriage, child labour, and forms of exploitation, including trafficking and illegal adoption.² Without a birth certificate, a child lacks proof of age and may be vulnerable to early marriage, child labour, or exploitation.²

Birth registration is widely recognized as a fundamental child right and is important for access to essential services such as education, healthcare, and social protection.⁴ It also facilitates access to legal and civic documentation, including passports, marriage registration, and financial services.⁵

In addition to its individual benefits, birth registration plays a critical role in population-level planning and governance. It supports data systems used for resource allocation, programme evaluation, and monitoring of development targets, including Sustainable Development Goal 16.9, which aims to provide legal identity for all.⁵⁻⁷

Despite recognition of birth registration as a fundamental child right, global coverage remains uneven, with only about 65% of children under five registered.⁸ Coverage is nearly universal in high-income countries. Still, it remains low in many low- and middle-income countries, where about 166 million children remain unregistered, reflecting disparities in civil registration infrastructure and service accessibility. Nearly half of these children live in five countries: India, Pakistan, the Democratic Republic of the Congo, Nigeria, and Ethiopia.⁹ Even after registration, some children may lack physical proof of registration, with an estimated 237 million children worldwide without a birth certificate, mostly in Sub-Saharan Africa. In South Nigeria, about 43% of children under five, approximately 15 million, remained unregistered as of 2021, with notable regional and age-related disparities.¹⁰ Children from poorer households and rural communities are disproportionately unregistered, reflecting structural barriers such as distance to registration centres, lower parental education, limited awareness of its benefits, and weak civil registration systems.² Limited awareness among caregivers about the importance and procedures of birth registration also contributes to low utilization.² Financial constraints may

also limit caregivers' ability to afford transportation or other associated costs.² Some religious or ethnic minorities also experience lower birth registration rates than the national average. These disparities often reflect social and institutional exclusion, including traditional practices such as naming ceremonies, marginalization, and a lack of government recognition, which limit engagement with official registration systems.¹¹ Gender norms also influence birth registration in some settings, where legal or cultural restrictions limit women's ability to independently register their children, sometimes requiring the presence or consent of the father.²

In this study, awareness of birth registration refers to caregivers' knowledge of its existence. In contrast, utilization refers to the actual registration of a child and the acquisition of a birth certificate. Examining both helps identify facilitators and barriers to child registration.

In Nigeria, weak civil registration data systems, coupled with the absence of a national census since 2006, make it difficult to determine the true number of unregistered children, limiting effective planning for child health and social protection and leaving many children invisible in national data and vulnerable to exploitation.² Programmes such as the Maternal, Newborn and Child Health Programme have been implemented to improve birth registration and are often used as indicators of programme performance.⁵ Even though national birth registration coverage was estimated at 53.2%, only 18.8% was attributable to programme activities, suggesting that existing interventions have had a limited impact on improving registration uptake.⁵

The growing population of internally displaced persons, particularly in northern Nigeria, further complicates birth registration and underscores the need for empirical studies examining factors influencing birth registration utilization, to inform policies and programmes aimed at protecting children's rights.¹²

Birth registration utilization can also be explained using behavioural and health service utilization theories. The Health Belief Model suggests that caregivers are more likely to use services when they perceive the benefits and consequences of non-utilization¹³. At the same time, the Theory of Planned Behaviour highlights the role of attitudes, social norms, and perceived control in influencing behaviour.¹⁴ This study is primarily guided by Andersen's Behavioural Model of Health Service Utilization, which explains service use through predisposing, enabling, and need factors. Predisposing factors include socio-demographic characteristics such

as caregiver education, marital status, cultural beliefs, and the child's birth order. Enabling factors are conditions that facilitate or hinder access to services, including income, awareness, and the availability of registration services.¹⁷ Need factors reflect caregivers perceived importance of birth registration and its role in securing legal identity and access to services.¹⁵⁻¹⁷ Within this framework, utilization of birth registration services may therefore be influenced by the interaction of these factors.

Existing studies on birth registration in Nigeria have largely focused on community-based settings, with limited evidence from tertiary health facilities, particularly in Rivers State, where such facilities may serve as key points for both information and service delivery. In addition, although some facilities have co-located National Population Commission (NPC) services, the extent to which these services influence awareness and utilization remain underexplored.

To our knowledge, there is limited evidence examining birth registration awareness and utilization within tertiary health facilities in this context, including how co-location of services may shape uptake.

Thus, this study assessed awareness and utilization of birth registration services among caregivers with children under five attending the University of Port Harcourt Teaching Hospital (UPTH), a tertiary health facility.

METHODS

Study Design and Area: This facility-based study employed a descriptive, cross-sectional design with a quantitative approach. It was conducted at the Family Health Unit (FHU) and children's outpatient (CHOP) unit of the University of Port Harcourt Teaching Hospital in Rivers State, Nigeria. The FHU operates within the Community Medicine department of the UPTH. It offers outpatient consultation services for mothers and their children who present for immunization, health education on prevailing childhood diseases, nutritional counselling, adult/childhood immunization services, and birth registration services. The CHOP, on the other hand, is run by the Paediatrics department and offers general and specialist paediatric care for all children under 18 years of age. Both clinics are open to clients and patients Mondays through Fridays.

Study Population: All eligible caregivers with children aged 0 to 59 months who presented at the FHU and CHOP of the University of Port Harcourt Teaching Hospital during the study period were included. In this study, a caregiver was defined as any individual primarily responsible for the care of a child aged 0–59 months, including mothers, fathers, or other guardians. Caregivers whose children were acutely ill at presentation, as well as caregivers who were themselves too ill to participate, were excluded.

The sample size was determined using the formula for descriptive studies.¹:

$$n = Z^2 pq / d^2$$

Where:

- n = minimum sample size
- Z = standard normal deviate at 95% confidence level (1.96)
- p = proportion of caregivers who had registered their child's birth from a previous study (68%)¹⁸
- q = 1 – p (0.32)
- d = acceptable margin of error (0.05)

$$\text{Therefore, the minimum sample size: 'n' = } 1.96^2 \times 0.68 \times 0.32 = 3.8416 \times 0.68 \times 0.32 = 0.0025 = 334.4$$

$$0.0025$$

$$= 334.4$$

Adjusting for 10% non-response:

$$= 334.4 + (334.4 \times 0.1) = 334.4 + 33.4 = 367.8, \text{ approximated to } 368 \text{ participants.}$$

The calculated minimum sample size was 368 participants, adjusted for a 10% non-response rate.

Sampling technique: A systematic sampling technique was used. Based on clinic records, the average daily attendance of eligible children was approximately 58 at the FHU and 50 at the CHOP, giving a combined average of 108 patients per day. Over the intended two-month data collection period (approximately 40 clinic days), the estimated study population was calculated as: 108 patients/day × 40 days = 4,320.

The sampling interval (k) was calculated as:

$$k = \frac{N}{n} = \frac{4320}{368} \approx 12$$

Thus, every 12th eligible caregiver was selected from the daily clinic register, which served as the sampling frame.

The first participant each day was selected by simple random sampling.

Proportionate allocation was used to distribute the sample between the two clinics based on average attendance. The proportion of participants from each clinic was determined as follows:

- FHU proportion = $\frac{58}{108} \times 368 \approx 197.7 \approx 198$
- CHOP proportion = $\frac{50}{108} \times 368 \approx 170.3 \approx 170$

Accordingly, 198 participants were allocated to the FHU and 170 to the CHOP.

Only caregivers who met the eligibility criteria were recruited. Data were collected between October 2024 and July 2025. Recruitment was extended beyond the planned period, mainly at CHOP, due to service disruptions and reduced patient eligibility (e.g., severe illness), which limited enrolment at certain times. A total of 338 participants were ultimately recruited.

Study Tool: A pretested, semi-structured, interviewer-administered questionnaire adapted from previous studies on birth registration awareness and practices in Plateau State, Nigeria,⁵ was used to collect data on respondents' sociodemographic characteristics, awareness of birth registration, and utilization of birth registration services. Awareness was defined as having ever heard of birth registration and assessed using a screening question. Utilization was defined as having ever registered a child's birth, capturing lifetime engagement with registration services. Registration of the current child was assessed separately as an indicator of recent utilization. Additional questions explored its meaning, benefits, responsible authorities, and registration locations.

Data were entered into Microsoft Excel, cleaned, and analysed using IBM SPSS version 23. Bivariate analysis using chi-square tests was conducted to examine associations between independent variables and birth registration practice (the dependent variable). Variables with p-values < 0.20 in the bivariate analysis were entered into a binary logistic regression model to identify factors independently associated with birth registration practice. Multicollinearity among predictor variables was assessed using Variance Inflation Factors (VIFs); all VIFs ranged from 1.02 to 1.38, indicating no evidence of multicollinearity. The Hosmer–Lemeshow goodness-of-fit test indicated adequate model fit ($\chi^2 = 0.516$, df = 3, p = 0.915). Adjusted odds ratios (aOR) with 95%

confidence intervals were reported, and statistical significance was set at $p < 0.05$.

Ethical Considerations: Ethical approval for this study was obtained from the University of Port Harcourt Teaching Hospital Research Ethics Committee (Approval

No: UPTH/ADM/2024/90/S.11/VOL.XI/1730; Approved October 2024). Written informed consent was obtained from all participants after a detailed explanation of the study objectives and procedures. Participation was voluntary, and participants could withdraw at any time without consequence. All information collected was treated with strict confidentiality. All data were anonymized and securely stored, with access restricted to the research team.

RESULT

Data were collected between October 2024 and July 2025. A total of 343 eligible caregivers were approached, 338 consented and completed the questionnaire, giving a response rate of 98.5%.

The median age of caregivers was 32 years (IQR 28–35). Most respondents were aged 28–37 years (63.3%). Females constituted 94.1% (318) of participants. The majority were married (328, 97.0%), and most marriages were monogamous (321, 95.0%). Christianity was the predominant religion (335, 99.1%). A large proportion had tertiary education (281, 83.1%), and 87.6% (296) were employed. The most common ethnic group was Igbo (154, 45.6%). Regarding household characteristics, 37.3% (126) had one child, 32.5% (110) had two children, and 30.2% (102) had three or more children. The median age of children was 6 months (IQR 3–12). Most children (309, 91.4%) were delivered in health facilities (Table 1).

Table 1: Sociodemographic Characteristics of Caregivers and Their Children Aged 0–59 Months at UPTH

Variables (N=338)	Frequency - n (%)
Age of Caregivers (Years)	
18-27	66 (19.5)
28-37	214 (63.3)
38-47	54 (16.0)
48-58	4 (1.2)
Child's Age group (Months)	
0-12	267 (79.0)
13-24	47 (13.9)
25-36	9 (2.7)
37-48	8 (2.4)



Variables (N=338)	Frequency - n (%)
49-59	7 (2.1)
Relationship to Child	
Mother	321 (95.0)
Father	14 (4.1)
Others	3 (0.9)
Gender	
Female	318 (94.1)
Male	20 (5.9)
Marital Status	
Married	328 (97.0)
Single	10 (3.0)
Family setting	
Monogamous	321 (95.0)
Polygamous	17 (5.0)
Education Level	
No formal education	2 (0.6)
Secondary	55 (16.3)
Tertiary	281 (83.1)
Employment Status	
Employed	296 (87.6)
Unemployed	42 (12.4)
Religion	
Catholic	67 (19.8)
Other Christians*	268 (79.3)
Other Religion*	3 (0.9)
Ethnic Group	
Igbo	154 (45.6)
Ijaw	37 (10.9)
Ikwerre	40 (11.8)
Others	107 (31.7)
Number of Children in the Family	
One	126 (37.3)
Two	110 (32.5)
Others (≥ 3)	102 (30.2)
Place of Delivery	
Hospital	309 (91.4)
Others*	29 (8.6)

*Other Christians: (orthodox, Pentecostal), *Other Religion: (Islam, Traditional), *Other places of delivery: (Home, place of worship)

Overall, 97.6% (330) of respondents had heard of birth registration. Subsequent analyses were restricted to these respondents.

Health facilities were the main source of information (218, 66.1%), followed by family and friends (98, 29.7%). Understanding of birth registration varied, as 33.3% (110) described it as obtaining a certificate, 19.4% (64) as a form of registration, and 18.8% (62) as documentation of a child's information. A small proportion either associated it with census activities (22,

6.7%) or did not know its meaning (2, 0.6%). Most respondents (324, 98.2%) believed birth registration has benefits. Identification (98, 30.2%) and confirmation of age (81, 25.0%) were the most commonly cited benefits. Responsibility for registration was most often attributed to government officials (136, 41.2%), followed by National Population Commission (NPC) officials (72, 21.8%). Nearly all respondents (307, 93.0%) identified healthcare facilities as the main place for registration (Table 2).

Table 2: Awareness of Birth Registration Among Caregivers of Children Aged 0–59 Months at UPTH

Variables	Freq - n (%)
Ever Heard of Birth Registration (n - 338)	
Yes	330 (97.6)
No	8 (2.4)
Main source of information (n = 330)	
Family and friends	98 (29.7)
Health facility	218 (66.1)
Others	14 (4.2)
Meaning of Birth Registration (n = 330)	
A certificate	110 (33.3)
Census	22 (6.7)
Child's information	62 (18.8)
Delivery record	36 (10.9)
Don't know	2 (0.6)
Form of registration	64 (19.4)
Identification card	34 (10.3)
Benefit of Registration (n = 330)	
Yes	324 (98.2)
No	6 (1.8)
Benefits of Registration (n = 324)	
Applications	8 (2.5)
Citizenship	28 (8.6)
Confirmation of age	81 (25.0)
Health care	24 (7.4)
I don't know	3 (0.9)
Identification	98 (30.2)
No Benefit of BR	6 (1.8)
Population purposes	67 (20.7)
School admission	15 (4.6)
Responsible for Registration (n = 330)	
Doctor	37 (11.2)
Government official	136 (41.2)
I don't know	33 (10.0)
NPC official	72 (21.8)
Nurse	52 (15.8)
Place of Birth Registration (n = 330)	
Community head	1 (0.3)
Government office	20 (6.1)
Healthcare facility	307 (93.0)
I don't know	2 (0.6)

Most caregivers (271, 80.2%) had registered at least one child. Registration decisions were most commonly made jointly by both parents (232, 68.6%). Evidence of birth registration was reported by 71.3% (241) of respondents. However, only 58.0% (196) had registered their current child.

Among those who registered their current child (196), registration most commonly occurred within the first week of life (80, 40.8%) or within the first six months (56, 28.6%). Most registrations took place in health facilities (185, 94.4%). Travel time to registration centres was most commonly 10-30 minutes for 44.9% (88) of respondents. The majority of the respondents (127, 64.8%) reported paying for registration. Reported costs varied, with the largest proportion paying between ₦500 and ₦1000 (71, 36.2%), followed by amounts above ₦1000 (48, 24.5%). Only 16.3% (32) reported no payment. Among caregivers who had not registered a child (67), the main reasons were lack of awareness (31, 46.3%) and forgetfulness (16, 23.9%). Financial and service-related barriers were less commonly reported (Table 3)

Table 3: Birth Registration Practices Among Caregivers of Children Aged 0–59 Months at UPTH

Variables	Freq - n(%)
Ever Registered a Child (n = 338)	
Yes	271 (80.2)
No	67 (19.8)
Decision Maker for Registration (n = 338)	
Both	232 (68.6)
Father	14 (4.1)
Mother	38 (11.2)
None	54 (16.0)
Evidence of Birth Registration (n = 338)	
Yes	241 (71.3)
No	97 (28.7)
Current Child Registered (n = 338)	
Yes	196 (58.0)
No	142 (42.0)
Timing of Registration After Birth (n = 196)	
< 1 month	49 (25.0)
Within the first week	80 (40.8)
Within the first 6 months	56 (28.6)
Within the first year	6 (3.1)
> 1 year	3 (1.5)
Cannot remember	2 (1.0)
Registration Location (n = 196)	
Health facility	185 (94.4)

Variables	Freq - n(%)
LG office	1 (0.5)
NPC office	10 (5.1)
Distance to Registration Centre (n = 196)	
< 10 minutes	20 (10.2)
10–30 minutes	88 (44.9)
30–60 minutes	57 (29.1)
> 1 hour	31 (15.8)
Birth Registration Free (n = 196)	
Yes	69 (35.2)
No	127 (64.8)
Payment for Registration (n = 196)	
No payment	32 (16.3)
< ₦100	1 (0.5)
₦100–₦500	44 (22.4)
₦500–₦1000	71 (36.2)
> ₦1000	48 (24.5)
Reason for Payment (n = 196)	
Age-related payment	3 (1.5)
Hospital/administrative reason	3 (1.5)
Cannot recall	9 (4.6)
No payment made	30 (15.3)
No reason	105 (53.6)
Processing/documentation fee	46 (23.5)
Reason for non-registration (n = 67)	
Plan to register later	7 (10.4)
No clear reason	2 (3.0)
Lack of awareness	31 (46.3)
Health-related circumstances	5 (7.5)
Forgot	16 (23.9)
Financial constraint	2 (3.0)
Aware but do not know the location	4 (6.0)

In bivariate analysis, marital status ($\chi^2 = 5.905$, $p = 0.015$) and number of children in the household ($\chi^2 = 42.206$, $p < 0.001$) were significantly associated with birth registration (Table 4).

Variables with $p < 0.20$ in bivariate analysis were included in the binary logistic regression model. In crude analysis, married caregivers had 4.29 times higher odds of registering a child compared to single respondents (cOR = 4.29, 95% CI: 1.21–15.28, $p = 0.025$). This association was not statistically significant after adjustment (aOR = 1.85, 95% CI: 0.34–10.13, $p = 0.476$).

The number of children remained independently associated with registration. Caregivers with one child had significantly lower odds of registering a child compared to those with three or more children in both crude (cOR 0.16, 95% CI 0.07–0.34, $p < 0.001$) and



adjusted analyses (aOR 0.17, 95% CI 0.08–0.37, $p < 0.001$) (Table 5)

Table 4: Factors Associated with the Practice of Birth Registration Among Caregivers of Children Aged 0–59 Months at UPTH

* Statistically significant ($p < 0.05$).

Socio-demographic characteristic	Ever registered a child		Total n (%)	χ^2	p-value
	Yes n (%)	No n (%)			
Respondent age group (years)				4.030	0.258
18–27	48 (72.7)	18 (27.3)	66 (100.0)		
28–37	173 (80.8)	41 (19.2)	214 (100.0)		
38–47	47 (87.0)	7 (13.0)	54 (100.0)		
48–58 (Ref)	3 (75.0)	1 (25.0)	4 (100.0)		
Child age group (months)				3.134	0.536
0–12	211 (79.0)	56 (21.0)	267 (100.0)		
13–24	41 (87.2)	6 (12.8)	47 (100.0)		
25–36	6 (66.7)	3 (33.3)	9 (100.0)		
37–48	7 (87.5)	1 (12.5)	8 (100.0)		
49–59 (Ref)	6 (85.7)	1 (14.3)	7 (100.0)		
Relationship with the child				0.375	0.829
Mother	258 (80.4)	63 (19.6)	321 (100.0)		
Others	2 (66.7)	1 (33.3)	3 (100.0)		
Father (Ref)	11 (78.6)	3 (21.4)	14 (100.0)		
Respondent gender				Fisher's	1.000
Female	255 (80.2)	63 (19.8)	318 (100.0)		
Male (Ref)	16 (80.0)	4 (20.0)	20 (100.0)		
Marital status				5.905	0.015*
Married	266 (81.1)	62 (18.9)	328 (100.0)		
Single (Ref)	5 (50.0)	5 (50.0)	10 (100.0)		
Family setting				2.696	0.101
Monogamous	260 (81.0)	61 (19.0)	321 (100.0)		
Polygamous (Ref)	11 (64.7)	6 (35.3)	17 (100.0)		
Education level				1.158	0.560
No formal education	1 (50.0)	1 (50.0)	2 (100.0)		
Secondary	44 (80.0)	11 (20.0)	55 (100.0)		
Tertiary (Ref)	226 (80.4)	55 (19.6)	281 (100.0)		
Occupation				3.738	0.053
Employed	242 (81.8)	54 (18.2)	296 (100.0)		
Unemployed (Ref)	29 (69.0)	13 (31.0)	42 (100.0)		
Religion				5.236	0.073
Catholic	51 (76.1)	16 (23.9)	67 (100.0)		
Other Christians	219 (81.7)	49 (18.3)	268 (100.0)		
Other religion (Ref)	1 (33.3)	2 (66.7)	3 (100.0)		
Ethnic group				2.324	0.508
Igbo	121 (78.6)	33 (21.4)	154 (100.0)		
Ijaw	33 (89.2)	4 (10.8)	37 (100.0)		
Ikwerre	31 (77.5)	9 (22.5)	40 (100.0)		
Others (Ref)	86 (80.4)	21 (19.6)	107 (100.0)		
Number of children in the family				42.206	<0.001*
One	78 (61.9)	48 (38.1)	126 (100.0)		
Two	100 (90.9)	10 (9.1)	110 (100.0)		
Others (≥ 3)	93 (91.2)	9 (8.8)	102 (100.0)		
(Ref)					

Table 5: Logistic Regression Analysis of Socio-demographic Factors Associated with Birth Registration Among Caregivers of Children Aged 0–59 Months at UPTH

Socio-demographic characteristic	cOR (95% CI)	cOR p-value	aOR (95% CI)	aOR p-value
Marital status				
Married	4.29 (1.21–15.28)	0.025*	1.85 (0.34–10.13)	0.476
Single (Ref)	Ref	–	Ref	–
Family setting				
Monogamous	0.43 (0.15–1.21)	0.109	0.54 (0.13–2.30)	0.407
Polygamous (Ref)	Ref	–	Ref	–
Occupation				
Employed	0.50 (0.24–1.02)	0.057	0.74 (0.34–1.62)	0.450
Unemployed (Ref)	Ref	–	Ref	–
Number of children in family				
One	0.16 (0.07–0.34)	<0.001*	0.17 (0.08–0.37)	<0.001*
Two	0.97 (0.38–2.49)	0.946	0.98 (0.38–2.52)	0.963
Others (≥3) (Ref)	Ref	–	Ref	–

* Statistically significant ($p < 0.05$)

Ref = reference category; cOR: crude odds ratio; aOR: adjusted odds ratio; CI: confidence interval

DISCUSSION

This study assessed awareness and utilization of birth registration services among caregivers of children aged 0–59 months attending the University of Port Harcourt Teaching Hospital (UPTH) and found that almost all caregivers had heard of birth registration. This is consistent with several studies done in different parts of Nigeria.^{5,18–20} Although awareness was high in this study, gaps remained in caregivers' understanding of key aspects of birth registration, including its meaning, responsible authorities, and where services can be obtained. Similar patterns have been reported in studies conducted in Southern Nigeria, where general awareness was high. Still, many respondents were unable to correctly identify the institution responsible for birth registration or the appropriate registration points.^{18,21} This aligns with findings from Bauchi, Cross River, and Niger States, where many mothers had heard of birth registration but lacked clarity about birth certificates or where to obtain them.^{21,22} On the other hand, the findings are not in keeping with those from communities in Northern Nigeria, which have better knowledge of where to access birth registration services.²¹ Studies across other parts of Africa show variable levels of awareness ranging from low to moderate, with Kenya reporting high awareness similar to that observed in this study.^{21–24} Globally, the figures are uneven, with awareness being least in low- and middle-income countries and generally higher in high-income countries²⁵

The differences between the awareness observed in this study and those reported in other low- and middle-income countries likely reflect contextual and methodological variations. This study was conducted in an urban setting, with users of the health facility having higher levels of education. Urban residents generally have greater access to media, education, and government services, which can lead to higher awareness of civic requirements such as birth registration. Consequently, the findings may not be generalizable to populations with lower educational attainment, limited access to health services, or different sociodemographic profiles. The high level of awareness observed in this study may also reflect the health facility-based context of the respondents, where exposure to health information is generally higher. Routine health education delivered during antenatal, delivery, postnatal, and immunization services provides opportunities for disseminating information on birth registration. Frequent contact with health facilities and healthcare workers enables repeated interactions, thereby increasing the likelihood of awareness. However, the persistence of misconceptions despite the co-location of birth registration services may indicate that communication within health facilities may often be superficial or largely transactional, rather than comprehensive and educative. Programmatic approaches should therefore move beyond one-off mentions toward standardized, repeated, and interactive counselling that clearly articulates the meaning of birth registration, delineates responsibilities, identifies

registration points, and emphasizes the importance of timely registration. These findings underscore the effectiveness of health facilities as platforms for disseminating birth registration information and highlight the need for the National Population Commission to leverage this setting to strategically strengthen awareness and understanding.

Despite the high level of awareness observed, actual utilization of birth registration services remained suboptimal, falling short of the United Nations–agreed target of universal birth registration under Sustainable Development Goals (SDGs) 16.9 and 16.26. In this study, although many caregivers had registered at least one child and most reported possessing documentary evidence, only slightly more than half had registered their current child. This suggests a clear gap between awareness and timely registration of newborns, even within a tertiary health facility setting. The finding of low utilization in this study aligns with what was observed in Akure, Jos, and Southern Nigeria 17,18,20, and with even lower registration rates documented in the North-East region, indicating substantial subnational disparities.^{3,12,28}

Evidence from sub-Saharan Africa as a whole presents a more concerning picture. Utilization is particularly low in parts of East and West Africa, although some countries, such as Sierra Leone, have achieved comparatively higher coverage.^{9,23}

Globally, pronounced disparities persist across World Health Organization regions, with the European Region reporting the highest coverage, followed by the Americas, Western Pacific, South-East Asia, and Eastern Mediterranean regions, while the African Region consistently records the lowest levels of birth registration.^{11,18,29,30} When viewed alongside previous studies, the findings on birth registration utilisation at UPTH reflect a broader global pattern in which awareness is necessary but insufficient for effective utilisation.

The high proportion of facility deliveries and short travel times suggests that physical access to registration services was relatively favourable in this setting. This finding mirrors evidence from Jos⁵ but diverges from national DHS analyses that identify distance as a major barrier.¹² This discrepancy likely reflects methodological differences, as DHS data may mask facility-level and urban–rural variations. The key implication of these findings is that the persistence of low birth registration despite favourable access conditions among most

caregivers suggests that physical proximity alone may be insufficient to ensure utilization. Instead, the results underscore the central role of system-level integration and provider-driven facilitation, beyond access alone, in achieving timely birth registration.

Approximately two in five registrations for the current child occurred in the first week of life, with most occurring in health facilities. This may suggest that facility delivery and early postnatal contact represent important opportunities for promoting timely birth registration.⁵

A notable finding was that, even though birth registration is free in Nigeria, more than one-third of caregivers who registered their current child reported that birth registration services were not free. More than half reported paying unofficial fees. This aligns with evidence documenting informal payments and gatekeeping practices in several Nigerian states and Kenya.^{5,9,18,24,25} The persistence of such practices, even within a tertiary health facility setting, may reflect broader systemic challenges in implementation rather than isolated deviations. Informal fees not only undermine equity by disproportionately discouraging poorer households or families with multiple children but also contradict the legal guarantee of free birth registration, potentially eroding trust in public institutions.

This study provides insight into birth registration practices and intra-household decision-making. Roughly two-thirds of caregivers reported that both parents jointly decided to register a child. This suggests that birth registration in this setting is framed as a shared parental responsibility, facilitated through accessible health-sector channels. The prominence of joint decision-making diverges from the qualitative evidence from Plateau State, where fathers were often described as the primary decision-makers.⁵ It also contrasts with studies from other parts of Nigeria and some sub-Saharan African countries that highlighted gender dynamics without quantifying decision authority.^{9,22,23} International and DHS-based studies frequently focus exclusively on maternal characteristics, implicitly assigning decision-making agency to mothers.¹¹ By examining who participates in birth registration decisions, this study addresses a gap in both Nigerian and global literature on intra-household agency, with implications for gender equity in decision-making about children.

Among caregivers who had not registered their current child, financial and service-related barriers were reported infrequently, contrary to earlier studies' findings.^{5,17,24,25} Instead, non-registration was more commonly attributed to lack of information, forgetfulness, or intentions to register later. In an urban teaching hospital setting, where physical access to registration services is relatively assured, this pattern suggests that cognitive and motivational barriers may be more salient than structural constraints. The persistence of delayed or incomplete registration under these conditions highlights the limitations of awareness-focused approaches when registration depends primarily on caregiver initiative. Integrating birth registration into routine health system processes, including standardized discharge procedures, immunization visits, and consistent messaging on the legally cost-free status of registration, may reduce discretionary delays and informal practices. In the absence of system-level integration and clear accountability mechanisms, increased awareness alone is unlikely to lead to universal or timely registration.

These findings are consistent with studies from southern Nigeria and national analyses reporting higher birth registration among children born to married women and those of higher birth order.^{5,12,18,31} Although these studies identified additional predictors not observed here, the recurring associations with marital status and birth order suggest that household structure and prior engagement with the health system facilitate registration. However, marital status did not remain an independent predictor after adjustment, indicating potential mediation by correlated factors.

In contrast to the present findings, national and sub-Saharan African studies consistently report strong associations between birth registration and maternal education, healthcare-seeking practices, household wealth, place of delivery, sociocultural norms, and perceptions related to maternal and child health.^{5,9,12,18,23,31,32} The absence of these associations in this study is likely related to its facility-based design within a tertiary hospital, where women are more socioeconomically homogeneous, and facility delivery is near-universal, limiting the ability to detect socioeconomic gradients observed in population-based studies.

High awareness provides a strong foundation, but utilization gaps reveal missed opportunities within health facilities. Strengthening integration of birth registration into routine postnatal care, standardising

procedures, clarifying roles between health workers and NPC staff, and eliminating informal fees could substantially improve utilisation.

Despite high awareness, timely birth registration remained suboptimal, indicating that awareness alone is insufficient. This highlights the need to move beyond awareness campaigns toward system-level interventions that facilitate access and completion of registration.

Health facilities represent a key platform for improving coverage. Integrating birth registration into routine maternal and child health services, including delivery, postnatal care, and immunization visits, could reduce missed opportunities.

Policymakers and National Population Commission staff should strengthen collaboration with health facilities, expand access to registration services at the primary care level, and enforce free registration to minimize financial barriers to registration. Hospital administrators should support linkage with registration services to enable early registration.

The predominance of joint parental decision-making suggests that birth registration is often viewed as a shared responsibility. Engaging both parents during health facility contacts may therefore support timely registration. These measures are important for strengthening civil registration systems and advancing universal legal identity, in line with Sustainable Development Goal 16.9.^{33,34}

Strengths and Limitations of the Study

This study provides empirical evidence on awareness and utilization of birth registration within a tertiary health facility where registration services are co-located, allowing assessment of the awareness–utilization gap in a setting with favourable physical access. The high response rate and inclusion of caregivers from two major service points improved data completeness. Multivariable logistic regression enabled adjustment for potential confounders.

However, the facility-based design limits representativeness and generalizability, as caregivers attending a tertiary hospital may differ from the general population in education and access to services. The cross-sectional design precludes causal inference, and reliance on self-report may introduce recall or social desirability bias. In addition, small sample sizes in some categories led to wide confidence intervals and less stable estimates; variables with sparse data were therefore excluded from the multivariable analysis.

CONCLUSION

This study assessed awareness and utilization of birth registration services among caregivers of children aged 0–59 months attending UPTH and found a high level of awareness but suboptimal utilization. While many caregivers had registered at least one child, only about half had registered their current child, suggesting an awareness–utilization gap. Health facilities were the main sources of information and registration points, and joint parental decision-making was common. Informal payments, misconceptions about costs, forgetfulness, and delayed intentions were reported despite relatively good physical access. Given the facility-based design, the findings primarily represent caregivers attending this tertiary health facility and should therefore be interpreted within this context. Although marital status and the number of children in the family were associated with registration, only the number of children remained significant after adjustment, suggesting that the observed patterns may reflect underlying contextual factors. Strengthening linkages between birth registration services and routine maternal and child health contacts, improving communication that registration is free, and addressing informal practices may help support more timely registration.

Declarations

Authors' contribution: Conceptualization: CBN, NO. Data collection: KN. Data analysis: IEA. Manuscript writing: CBN, NO, IEA, OMN, CUO. Critical review and editing: CBN, NO. All authors read and approved the final version of the manuscript.

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