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Birth Satisfaction Domains and Maternal Healthcare Service Utilization: A Facility-Based Cross-Sectional Analysis of Women in Southwest, Nigeria

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Abstract

Limited research examines how birth satisfaction influences Nigerian women's preferences for traditional or modern maternal healthcare services amid persistently high maternal. This facility-based cross-sectional re-analysis examined associations between recorded birth-experience domains and the type of maternal healthcare service used by 208 women recruited in Nigeria. The archived dataset classified service use as modern healthcare (n = 115; 55.3%) or traditional/faith-based care (n = 93; 44.7%). Three domains derived from an adapted Birth Satisfaction Scale-Revised were compared using Mann-Whitney U tests; education and residence were assessed using chi-square tests, and adjusted associations were estimated by binary logistic regression. Quality-of-care (median 16 versus 16; p = .263) and personal-attributes scores (5 versus 6; p = .203) did not show statistically significant group differences. The recorded labour-stress-domain score was higher among modern-care users (13 versus 12; p = .004); however, its meaning cannot be established because the adapted item-level scoring key was unavailable. Education was associated with service type ($\chi^2[4] = 25.58$; $p < .001$), as was residence (Yates-corrected $\chi^2[1] = 4.49$; p = .034). Higher education (adjusted odds ratio [AOR] = 1.97 per level, 95% CI 1.54–2.52) and reported income (AOR = 1.54 per doubling, 95% CI 1.14–2.09) were associated with modern-care use. These findings indicate socioeconomic gradients in observed service use, but the design does not establish temporality, causality or whether birth-experience scores related to a previous encounter. The specific recruitment locations and dates require confirmation from field records.

Keywords: Birth Satisfaction, Maternal Healthcare Utilization, Birth Satisfaction Scale-Revised, Maternity Care, Socioeconomic Determinants, Nigeria.

Introduction

Nigeria continues to carry a disproportionate burden of maternal mortality. The 2025 WHO-led inter-agency estimates placed the country's maternal mortality ratio at approximately 993 deaths per 100,000 live births in 2023, far above Sustainable Development Goal target 3.1 of fewer than 70 maternal deaths per 100,000 live births by 2030 (World Health Organization [WHO] et al., 2025). Expanding skilled maternity care requires attention to

both clinical quality and the circumstances that enable women to access and use services (Adedokun et al., 2023; Olubodun et al., 2025).

Maternal healthcare utilization in Nigeria reflects education, income, distance, provider availability, cultural practices and the perceived acceptability of care (Adedokun et al., 2023; Akinsola et al., 2025; Opara et al., 2024). A woman may attend a service because it is available or affordable, even if she would otherwise prefer another provider (Eluobaju et al., 2023).

For this analysis, modern care refers to maternal healthcare delivered through formal health facilities, whereas traditional/faith-based care denotes services recorded as delivered through traditional or religiously oriented maternity providers. Traditional and faith-based providers are conceptually distinct; they were combined only because the archived outcome variable did not separate them. This pooled category must not be interpreted as representing homogeneous practices, safety standards or motivations.

Birth satisfaction concerns the experience of labour and childbirth, rather than observed use of a healthcare service. The Birth Satisfaction Scale-Revised (BSS-R) assesses quality of care provision, women's personal attributes and stress experienced during labour (Hollins & Martin, 2014). Nigerian work supports the importance of cultural adaptation, although validated findings from one language version cannot automatically be assumed to apply to another (Anikwe et al., 2024). This analysis concerns women sampled from maternal care settings in Nigeria; the specific locations and recruitment dates were not documented in the available analytic file.

Statement of the Problem

Although improving women's birth experiences is an important objective, an observed association between birth satisfaction and the service used cannot by itself establish whether satisfaction shaped provider choice. Previous experiences may influence willingness to return, yet use is also constrained by affordability, geography, perceived clinical needs and social or religious considerations (Awotunde et al., 2023; Ope et al., 2025). Comparing formal care with a pooled traditional/faith-based category without clearly separating satisfaction, service utilization and timing risks attributing structural differences in access to birth experience alone. In addition, adapted satisfaction measures require documented scoring and appropriate temporal reference. The present analysis therefore examines the extent to which recorded birth-experience domains and selected sociodemographic factors are associated with observed service type, without assuming a temporal or causal pathway.

Literature Review

Birth Satisfaction, Measurement and Cultural Adaptation

The BSS-R was developed as a brief multidimensional post-delivery instrument; its domains address perceived care quality, individual attributes and labour-related stress (Hollins Martin & Martin, 2014). A Nigerian Igbo-language study demonstrated the need for

translation and psychometric testing, reporting a Cronbach's alpha of 0.62 for the full adapted scale and 0.70 after removing a problematic item (Anikwe et al., 2024). This does not validate other translations, different response scales or archived totals lacking a reverse-scoring key. Consequently, numerical domain comparisons in the present study describe the stored score values rather than established satisfaction levels. Nigerian mixed-method research further documents the importance of women's experiences in maternity facilities (Ihudiebube-Splendor et al., 2024).

Birth Experience and Subsequent Healthcare Choices

A systematic review of maternal care satisfaction in Nigeria identified relationships between satisfaction, intention to return and recommendations to other women; however, reported intentions are not interchangeable with verified future utilization (Ope et al., 2025). In a qualitative study from Ogbomoso, previous acceptable care and provider competence featured in women's explanations for choosing maternity services again (Awotunde et al., 2023). Such findings make the satisfaction–utilization relationship plausible, but they do not establish that a score measured at a single time point preceded a later service choice. This distinction is especially relevant when the pregnancy or birth to which a questionnaire refers is not identified. A broader review of developing-country evidence likewise highlights the influence of provider interactions, costs and care environment on reported satisfaction (Srivastava et al., 2015).

Traditional/Faith-Based Care and Structural Constraints

National survey analyses identify education, wealth, residence and access barriers as correlates of maternity-service use (Adedokun et al., 2023). Akinsola et al. (2025) found that perceived safety, provider capability, social and religious norms, cost and proximity all informed women's decisions about where to deliver. Opara et al. (2024) likewise showed that cultural and religious structures could facilitate or constrain formal maternal care in particular Nigerian communities. These findings challenge an overly simple model in which dissatisfaction automatically causes use of non-formal providers, while also cautioning against treating traditional and faith-based settings as identical.

Synthesis and Evidence Gap

The evidence suggests that childbirth experience and the resources needed to access care should be considered together. Yet most of the cited studies assess distinct constructs satisfaction, intended return or observed utilization—using different designs and populations. This study contributes a comparison of three recorded birth-experience domains across two observed care categories while adjusting for education, residence, age and reported income. Its contribution is associational; the absence of temporal and item-level documentation remains an important interpretive constraint.

Theoretical and Conceptual Framework

Andersen's Behavioral Model of Health Services Use distinguishes predisposing, enabling and need-related determinants (Andersen, 1995). The present operationalization treats education and maternal age as predisposing characteristics; residence and reported income as enabling factors; and the three birth-experience scores as experiential correlates considered separately from Andersen's principal determinants. Obstetric need factors including parity, pregnancy complications and clinical risk—could not be modelled because these were not available in the archived dataset. Andersen's framework allows previous satisfaction to influence future use through feedback, but that pathway cannot be tested here because the date of the birth experience and its relationship to recorded service type were unknown. Accordingly, no predictor is designated a verified antecedent of utilization.

Objectives

The objectives of the study are to;

i. To compare the recorded quality-of-care, personal-attributes and labour-stress domain scores between modern and traditional/faith-based care users
ii. To evaluate associations of educational status and residence with service type; and
iii. To estimate adjusted associations between the recorded domain scores and modern-service use after accounting for age, education, residence and reported income.

Research Questions

- Do recorded birth-experience domain scores differ by observed service category?
- Are educational attainment and rural/urban residence associated with service category?
- Which recorded domain scores and sociodemographic factors remain associated with modern-service utilization in a multivariable model?

Methods

Study Design, Setting and Participants

A facility-based cross-sectional study was conducted in Akure South Local Government Area (LGA), Ondo State, and Ife Central LGA, Osun State, Nigeria. Data were collected from April 10, 2026, to July 7, 2026, using an archived dataset derived from recruitment at 16 participating maternity-care settings: eight modern maternal healthcare facilities and eight traditional or faith-based maternity-care settings.The field documentation indicated that systematic selection procedures were combined with purposive recruitment within the participating settings. The analytic dataset contained 208 complete records, comprising 115 users of modern maternal healthcare services and 93 users of traditional or faith-based maternity-care services. All analyses and reported results were based on these 208 records. The cross-sectional design assessed variables during one study period and, therefore, cannot establish temporal ordering or causal relationships (Creswell & Creswell, 2018).

Facility identifiers were not retained in the analytic dataset; consequently, between-facility variation and participant clustering within facilities could not be assessed. The source field protocol referred to pregnant women and nursing mothers. The re-analysis included complete birth-experience domain records, but pregnancy/postpartum status, parity, timing of the index birth, and whether the recorded service category referred to that birth or a later encounter could not be established from the archived variables. Consequently, this analysis does not isolate postpartum respondents and cannot test subsequent care-seeking.

Recruitment and Sample-Size Basis

Records from the 16 selected maternity-care settings indicated an estimated study population of 1,346 pregnant women and nursing mothers. Participants were recruited from this population between April 10, 2026, and July 7, 2026, provided that they had used the selected facility for at least one year. The archived dataset contained 208 complete records, which constituted the final analytic sample. Of these, 115 participants used modern maternal healthcare services, while 93 used traditional or faith-based maternity-care services. The available records did not document the total number approached, screened, enrolled, or excluded before the final sample of 208; therefore, a detailed participant-flow analysis and reasons for exclusion could not be reconstructed retrospectively. The sample size was based on the available complete records in the archived dataset rather than a documented prospective sample size calculation.

Eligibility Criteria

Eligible participants were pregnant women and nursing mothers who had used the selected maternal healthcare facilities for **at least one year** before recruitment. This criterion helped ensure that participants had sufficient experience with the services to provide informed responses relevant to the study.

Measurement and Variable Definitions

The binary dependent variable was observed type of maternal healthcare used: modern/formal care = 1 and pooled traditional/faith-based care = 0. This coding describes service use, not an unrestricted preference or a verified later choice. Because the source outcome did not disaggregate traditional from faith-based facilities, the two types were grouped for analysis only; differences within this combined category could not be examined.

The sociodemographic covariates were age (years), ordered education (no formal, primary, junior secondary, senior secondary, tertiary), rural/urban residence, and income as reported in the questionnaire. The archived extract did not document the income currency, units or reference period; these must not be inferred from the numerical amounts.

Birth experience was represented by an adapted 10-item BSS-R domain structure: quality of care provision (four items), women's personal attributes (two items) and stress

experienced during labour (four items). The standard instrument uses 0–4 item scores, with items 2, 4, 7 and 8 reverse-scored, and a total possible 0–40 points (Hollins Martin & Martin, 2014). The present archive, in contrast, recorded 0–4 item coding and summed domain values with theoretical ranges 4–20, 2–10 and 4–20, respectively. The final item text, item-to-domain mappings, translated scoring key and reverse-scoring instructions were unavailable. Therefore, a larger recorded "labour-stress-domain" value cannot defensibly be labelled greater stress, less stress or higher standardized satisfaction. The stored scores are not interchangeable with published BSS-R norms. Domain-level reliability could not be assessed because respondent-level item data were not supplied for this revision.

Field documentation describes translation into Yoruba, Hausa and Igbo, expert review and a 12-participant pilot for face/content validity, but the underlying translation records, pilot report and independent documentation of psychometric equivalence were not available for verification. The 2024 Igbo validation by Anikwe et al. is a separate study and cannot substantiate these field-specific procedures.

Ethical Considerations

Ethical approval was reported as having been granted by the Ethical committee in the Department of Human Kinetics and Health education on March 26th 2026, Adekunle Ajasin University, Akungba Akoko, Nigeria (HKHE/ETH/26-004. This Research Committee is the institutional body formally authorized to review and approve human-subject research in the Department. The approval was valid from March 28th to August 26th, 2026. Participation was voluntary, participation was free to decline or withdraw from the questionnaire at any point without any penalty. Consent information was attached to the questionnaire, and participants had to actively consent before answering. All participant were 19years and above.

Statistical Analysis

Two-sided testing used $\alpha = .05$. As previously reported Shapiro–Wilk checks suggested departures from normality in at least one service group for each domain, domain scores were described by medians and interquartile ranges (IQRs) and compared using Mann–Whitney U tests; rank-biserial correlation (r_rb) was retained as the reported effect-size measure. The underlying observation-level data and Shapiro–Wilk W values are not provided in the available materials and therefore could not be independently recalculated for the current revision. Likewise, 95% confidence intervals for r_rb were not reconstructed from the aggregated tables because ties and individual ranks could affect interval estimation.

Educational status and service type were evaluated using Pearson's chi-square test (four degrees of freedom). Residence and service type were compared using the 2 × 2 Pearson chi-square with Yates' continuity correction, producing $\chi^2(1) = 4.49$, $p = .034$ and Cramér's $V = .147$; the uncorrected analysis based on the reported cell counts yielded $\chi^2(1) = 5.11$, $p =$

.024 and V = .157. These approaches led to the same significance conclusion. No ANOVA was applied to the binary outcome.

A multivariable binary logistic regression model related modern service use to quality-of-care, personal-attributes and labour-stress scores (per recorded point), education (per one-level increase), urban residence (relative to rural), age (per five years) and log2-transformed income (per doubling). Coding education as an ordinal linear term imposes equal increments in the long odds across the five levels; this assumption was not tested in the available model output. The source results reported variance inflation factors below 1.2, McFadden pseudo-R^2 = .188, area under the receiver operating characteristic curve = .786 and Hosmer–Lemeshow p = .496; these indices were not independently recalculated from participant records.

Results

Participant characteristics

The sample comprised 208 women: 115 (55.3%) used modern maternal healthcare and 93 (44.7%) used traditional/faith-based care. Median age was 31 years (IQR 27–40), 112 (53.8%) lived in urban areas and 96 (46.2%) in rural areas. Tertiary education was the most frequent educational category (27.9%). Median reported income was 38,500 (IQR 25,000–70,000) in units not documented by the archived extract.

Table 1: Participant characteristics by maternal healthcare service used

Characteristic	Overall (N = 208)	Modern (n = 115)	Traditional/faith-based (n = 93)
Maternal age, median (IQR), years	31 (27–40)	31 (27–38)	33 (27–40)
Reported income, median (IQR)	38,500 (25,000–70,000)	50,000 (30,000–77,500)	30,000 (20,000–70,000)
Rural residence, n (%)	96 (46.2)	45 (39.1)	51 (54.8)
Urban residence, n (%)	112 (53.8)	70 (60.9)	42 (45.2)
No formal education, n (%)	37 (17.8)	11 (9.6)	26 (28.0)
Primary education, n (%)	27 (13.0)	9 (7.8)	18 (19.4)
Junior secondary, n (%)	48 (23.1)	28 (24.3)	20 (21.5)
Senior secondary, n (%)	38 (18.3)	23 (20.0)	15 (16.1)
Tertiary education, n (%)	58 (27.9)	44 (38.3)	14 (15.1)

Source: Archived analytic dataset (N = 208); calculations as reported in this cross-sectional re-analysis.

Birth-Experience Domains and Service Type

Neither the recorded quality-of-care domain (U = 4870.0, p = .263, r_rb = −.089) nor women's personal attributes (U = 4807.0, p = .203, r_rb = −.101) showed a statistically significant difference between the recorded care groups. These results do not demonstrate equivalence. The recorded labour-stress-domain score was higher among modern-care

users (U = 6576.5, p = .004, r_rb = .230), but the psychological or satisfaction-related direction of the score is unknown because the adaptation's scoring key could not be checked.

Table 2: Mann–Whitney comparisons of archived birth-experience scores

Recorded domain	Modern median (IQR)	Traditional/faith-based median (IQR)	U	p	r_rb	95% CI, r_rb
Quality of care provision	16 (14–18)	16 (16–18)	4870.0	.263	−.089	NR†
Women's personal attributes	5 (3.5–7)	6 (4–7)	4807.0	.203	−.101	NR†
Stress experienced during labour	13 (11–13)	12 (9–13)	6576.5	.004	.230	NR†

Note: The 0–4-coded domain totals are not standardized BSS-R scores; their direction cannot be confirmed. †NR = not reconstructable from supplied aggregate data; estimate interval uncertainty using respondent-level observations.

Source: Archived analytic dataset (N = 208); calculations as reported in this cross-sectional re-analysis.

Education, Residence and Service Type

Educational status was associated with service category, $\chi^2(4) = 25.58$, $p < .001$, Cramér's V = .351, with modern-care use ranging from 29.7% among respondents without formal education to 75.9% among those with tertiary education. Residence also showed a bivariate association (Yates-corrected $\chi^2[1] = 4.49$, $p = .034$, V = .147), with modern use among 62.5% of urban versus 46.9% of rural respondents.

Table 3: Educational attainment and residence by service category

Characteristic	Modern n	Traditional/faith n	Total n	Modern (%)
No formal education	11	26	37	29.7
Primary education	9	18	27	33.3
Junior secondary	28	20	48	58.3
Senior secondary	23	15	38	60.5
Tertiary education	44	14	58	75.9
Rural residence	45	51	96	46.9
Urban residence	70	42	112	62.5

Note: Education: Pearson $\chi^2(4) = 25.58$, $p < .001$, V = .351. Residence: Yates-corrected $\chi^2(1) = 4.49$, $p = .034$, V = .147; uncorrected $\chi^2(1) = 5.11$, $p = .024$, V = .157.

Source: Archived analytic dataset (N = 208); calculations as reported in this cross-sectional re-analysis.

Multivariable Analysis

In the adjusted logistic regression, quality-of-care and personal-attributes domain scores were not independently associated with modern service use. Each one-point increase in the recorded labour-stress-domain score was associated with 22% higher odds of modern-care use (AOR = 1.22, 95% CI 1.06–1.39, p = .004), but the meaning of this score increment remains unclear. Higher educational category (AOR = 1.97 per category, 95% CI 1.54–2.52) and a doubling of recorded income (AOR = 1.54, 95% CI 1.14–2.09) were associated with higher odds of modern-care use. Urban residence was suggestive but fell outside the conventional adjusted p < .05 threshold (AOR = 1.95, 95% CI 1.00–3.83, p = .051).

Table 4: Logistic regression, grouped by analytical framework

Framework component	Predictor	AOR	95% CI	p
Experiential	Quality-of-care score (per point)	1.06	0.93–1.19	.388
Experiential	Personal-attributes score (per point)	0.98	0.83–1.16	.810
Experiential	Labour-stress-domain score (per point)	1.22	1.06–1.39	.004
Predisposing	Education (per one-level increase)	1.97	1.54–2.52	< .001
Predisposing	Maternal age (per five years)	0.85	0.72–1.01	.062
Enabling	Urban residence (versus rural)	1.95	1.00–3.83	.051
Enabling	Reported income (per doubling)	1.54	1.14–2.09	.005

Note: Modern care = 1; traditional/faith-based = 0. No need variables were available. Education was treated as a linear ordinal term, an assumption requiring sensitivity analysis. Model likelihood-ratio p < .001; McFadden pseudo-R^2 = .188; AUC = .786; Hosmer–Lemeshow p = .496. AOR = adjusted odds ratio; CI = confidence interval.

Source: Archived analytic dataset (N = 208); calculations as reported in this cross-sectional re-analysis.

Discussion

This study examined Birth Satisfaction Domains and Maternal Healthcare Service Utilization: A Facility-Based Cross-Sectional Analysis of Women in Nigeria. This analysis identified an education and income gradient in observed service category and an association with the recorded labour-stress-domain score. The quality-of-care and personal-attributes comparisons were not statistically significant; they neither establish the absence of a relationship nor demonstrate equivalence between the two groups. This distinction matters in a modest facility-based sample whose measurement properties and sampling frame cannot be fully assessed.

The non-significant quality-of-care finding should not be interpreted as proof that perceived service quality is unimportant. Qualitative evidence from Nigeria describes a more complicated decision process, in which perceived skill and respectful treatment coexist with the practical constraints of cost, proximity and cultural acceptability (Akinsola et al., 2025; Awotunde et al., 2023). The present scores also may refer to a birth distinct

from the recorded service encounter, preventing interpretation of the domain measure as a documented predictor of later care use.

The labour-stress-domain finding deserves particularly restrained interpretation. Although a one-point increase was associated with higher adjusted odds of modern-care use, the stored totals are based on adapted 1–5 items with an unavailable reverse-scoring key. In the standard BSS-R, appropriate reverse coding is necessary to interpret the direction of satisfaction (Hollins Martin & Martin, 2014). Accordingly, the present result is a numerical association with an archived domain variable—not evidence that women experiencing more stress chose modern care or that modern care produced less distress. The modern-care distribution also shows restricted upper-quartile variation (median and upper quartile both 13), which may limit discrimination.

Educational attainment showed a graded relationship with modern-care use, consistent with survey evidence from Nigeria (Adedokun et al., 2023; Olubodun et al., 2025). Greater knowledge, confidence in navigating formal systems or household decision-making power could plausibly contribute, but these processes were not directly measured here and remain hypotheses. Because the regression expresses education per ordered category, its odds ratio cannot validly be ranked against estimates expressed per one score point or per income doubling as a measure of predictor "strength". A categorical-education sensitivity analysis is needed to assess whether equal log-odds increments across levels are defensible.

Urban residence showed a bivariate association with modern care, but the adjusted estimate was imprecise and did not satisfy $p < .05$ (AOR = 1.95, 95% CI 1.00–3.83; $p = .051$). Thus, an independent residence effect is only suggestive in this sample. Reported income had an adjusted association, consistent with financial capacity being an enabling factor; however, the unknown units and reference period constrain its substantive interpretation. Broader Nigerian evidence suggests geographic and financial constraints may interact with provider trust and culture, but the present dataset does not test such mechanisms (Opara et al., 2024; Akinsola et al., 2025).

The current analysis is not a causal test of the proposed feedback pathway from childbirth satisfaction to later service choice. The absence of the index birth date, pregnancy status and an encounter-linked service variable permits alternative temporal interpretations. Future prospective studies should record the birth event, care setting, validated score, obstetric need and actual subsequent utilization, rather than relying solely on contemporaneous classification or intention to return (Ope et al., 2025).

Strengths and Limitations

Strengths include the direct comparison of modern and pooled traditional/faith-based care, retention of the multidimensional birth-experience framework, appropriately non-parametric group comparisons and adjustment for several sociodemographic factors. The tabled cell counts and several reported association measures are internally consistent, and the analysis avoids causal claims.

Limitations are substantial. The cross-sectional design cannot establish temporal ordering. The exact recruitment setting, dates, original sample size and exclusions were not documented in the supplied archived extract, and the mixed pregnant/postpartum recruitment frame could not be stratified. The recorded service type may not refer to the birth described by the satisfaction items. Facilities were not identified, precluding clustering adjustments, and purposive within-setting recruitment limits population representativeness. Traditional and faith-based provider categories were pooled; individual practices could not be contrasted. The translated/adapted BSS-R scoring key, individual-level reliability and measurement equivalence were unavailable, and the direction of the stress-domain score remains uncertain. No data were provided on parity, obstetric complications, clinical need, literacy, decision-making autonomy or detailed income units. Finally, education's assumed linear ordinal effect was not checked against a categorical specification, and effect-size uncertainty could not be recalculated without observation-level data.

Conclusion

Among 208 women in a facility-based Nigerian sample, higher recorded educational attainment and income were associated with modern maternal healthcare utilization. The stored labour-stress-domain score also showed an adjusted association, but its substantive direction cannot be interpreted without the adaptation's scoring key. No statistically significant differences were demonstrated for the other two recorded birth-experience domains, and adjusted evidence for residence remained inconclusive. These associations should not be interpreted as causal or as proof that birth experience preceded the reported service encounter. More fully documented, validated and longitudinal evidence is required to clarify whether and how childbirth experience influences later maternal healthcare use.

Recommendations

Maternity-service managers should sustain respectful communication, dignity and supportive care as established service-quality objectives, while avoiding the inference that non-significant domain comparisons imply these features are unimportant. Policymakers and maternal-health programmes may consider the observed education and income gradients alongside broader evidence when prioritizing affordable access and targeted communication; the present findings alone do not establish which intervention would change utilization. Researchers and data custodians should document delivery dates, specific provider category, index encounter, obstetric need, participant flow and prospective follow-up, and should use fully specified and psychometrically evaluated BSS-R adaptations. Future analyses should disaggregate traditional and faith-based settings, when possible, check ordinal model assumptions and quantify effect-size uncertainty.

Declarations

Conflict of interest: The author reported no conflicts of interest.

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Ethical approval was reported as having been granted by the Ethical committee in the Department of Human Kinetics and Health education on March 26th 2026, Adekunle Ajasin University, Akungba Akoko, Nigeria (HKHE/ETH/26-004). This Research Committee is the institutional body formally authorized to review and approve human-subject research in the Department.

Data availability: The data supporting this study are available from the author on reasonable request, subject to applicable ethical and institutional requirements.

References

Adedokun, S. T., Uthman, O. A., & Bisiriyu, L. A. (2023). Determinants of partial and adequate maternal health services utilization in Nigeria: Analysis of cross-sectional survey. *BMC Pregnancy and Childbirth*, *23*, 457. https://doi.org/10.1186/s12884-023-05712-4

Akinsola, K. O., Olasupo, O., Salako, J., Sanaka, J. Z., Samuel, R. N., Bakare, O., Quadri, R., Emmanuel, O., King, C., Falade, A., & Bakare, A. A. (2025). "I went to the primary health centre close to my workplace, but their capacity cannot deliver the baby": Exploring why women choose different providers for maternal health services in Nigeria. *BMC Pregnancy and Childbirth*, *25*, 339. https://doi.org/10.1186/s12884-025-07382-w

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter?. *Journal of Health and Social Behavior*, *36*(1), 1–10. https://doi.org/10.2307/2137284

Anikwe, C. C., Umeononihu, O. S., Anikwe, I. H., Ikeotuonye, A. C., Ikeoha, C. C., Asiegbu, O. G. K., Eze, J. N., Nnadozie, U. U., Maduba, C. C., Okeke, M. P., & Eleje, G. U. (2024). The birth satisfaction scale: Igbo adaptation, validation, and reliability study. *BMC Pregnancy and Childbirth*, *24*, 876. https://doi.org/10.1186/s12884-024-07104-8

Awotunde, T. A., Ani-Amponsah, M., Ajala, D. E., Ojo, S. A., Adeleke, T. O., Awotunde, O. T., & Olaolorun, A. D. (2023). Unveiling contextual influences of maternal satisfaction with labour care services in Nigeria: A qualitative inquiry. *African Journal of Primary Health Care & Family Medicine*, *15*(1), a4173. https://doi.org/10.4102/phcfm.v15i1.4173

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE.

Eluobaju, D., Okonofua, F., Weine, S., & Goba, G. (2023). Understanding birthing preferences of women in Benin City, Nigeria: A qualitative study. *BMJ Open*, *13*, e054603. https://doi.org/10.1136/bmjopen-2021-054603

Hollins Martin, C. J., & Martin, C. R. (2014). Development and psychometric properties of the Birth Satisfaction Scale-Revised (BSS-R). *Midwifery*, *30*(6), 610–619. https://doi.org/10.1016/j.midw.2013.10.006

Ihudiebube-Splendor, C. N., Enwereji-Emeka, V. U., Chikeme, P. C., Ubochi, N. E., & Omotola, N. J. (2024). Childbirth experiences and satisfaction with birth among women in selected Nigerian healthcare facilities during the COVID-19 pandemic: A mixed-method study. *The Pan African Medical Journal*, *47*, Article 217. https://doi.org/10.11604/pamj.2024.47.217.38478

Olubodun, T., Owolabi, O., Adejugbe, O., Iroko, O., Uwalaka, C., & Afolabi, B. (2025). Patterns of utilization and determinants of maternal health services among women residing in low-income communities in Lagos State, Nigeria. *PLOS Global Public Health*, *5*(9), e0004862. https://doi.org/10.1371/journal.pgph.0004862

Opara, U. C., Iheanacho, P. N., & Petrucka, P. (2024). Cultural and religious structures influencing the use of maternal health services in Nigeria: A focused ethnographic research. *Reproductive Health*, *21*, 188. https://doi.org/10.1186/s12978-024-01933-8

Ope, B. W., Wasan, T., Hirst, J. E., Mullins, E., Norton, R., & Peden, M. (2025). Measurement, determinants and outcomes of maternal care satisfaction in Nigeria: A systematic review. *BMJ Public Health*, *3*, e001278. https://doi.org/10.1136/bmjph-2024-001278

Srivastava, A., Avan, B. I., Rajbangshi, P., & Bhattacharyya, S. (2015). Determinants of women's satisfaction with maternal health care: A review of literature from developing countries. *BMC Pregnancy and Childbirth*, *15*, 97. https://doi.org/10.1186/s12884-015-0525-0

World Health Organization, UNICEF, UNFPA, World Bank Group, & United Nations Department of Economic and Social Affairs, Population Division (2025). Trends in maternal mortality 2000 to 2023: Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. World Health Organization. https://www.who.int/publications/i/item/9789240108462