Women's Economic Status and Maternal Healthcare Service Utilisation Evidence Across Antenatal, Skilled Birth Attendance and Postnatal Care

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Abstract
Antenatal care (ANC), skilled birth attendance (SBA) and postnatal care (PNC) are core maternal health services proven to reduce maternal mortality. Among the factors influencing their utilization, women's economic status remains a critical determinant, as financial autonomy shapes access to and affordability of care. Understanding how economic status affects service uptake is essential for designing pro-poor strategies and policies to improve coverage and reduce maternal deaths. This study therefore examined the effect of women's economic status on maternal healthcare utilization in Rivers State, Nigeria. This is a cross-sectional survey conducted among 600 married women who have had a birth at least one year preceding the survey. Data were collected via multistage sampling technique with a semi-structured questionnaire, and were analysed using descriptive, Bivariate and multivariate logistic regression. The findings revealed a significant and consistent association between women's economic status and maternal healthcare utilization. Women with high economic status were more likely to utilise antenatal care (AOR = 1.86; 95% CI: 1.28-2.71), skilled birth attendance (AOR = 2.12; 95% CI: 1.50-3.00), and postnatal care (AOR = 1.73; 95% CI: 1.25-2.38). Overall, this study showed that women's economic status confirmed a consistent dose-response across the continuum. Improving maternal healthcare utilisation requires strengthening women's economic capacity through women's livelihood support and education. Programs that enhance women's control over household financial resources are also essential in promoting better health-seeking behaviour. We therefore recommend that integrating financial autonomy, asset ownership and income-generating interventions into maternal health strategies is important to improve continuum of care.

Keywords: *Women's Economic Status; Maternal Health Care, Utilization of Srvice, Continuum of Care; Antenatal Care; Skilled Birth Attendance; Postnatal Care*

INTRODUCTION

Economic status refers to a woman's control over financial resources, income, and assets that enable her to access health services without depending on others (Ezeh et al., 2021). Women's economic empowerment plays a significant role in determining maternal healthcare utilisation,

serving as a critical lever for improving maternal and child health outcomes in Nigeria. Economically independent women tend to have greater autonomy in decision-making regarding their health needs, a capacity that directly influences their ability to access essential services such as antenatal care (ANC), skilled birth attendance, and postnatal care (Alkire et al., 2013). In a country where maternal mortality remains stubbornly high estimated at 500 deaths per 100,000 live births in 2023 (WHO, 2024) the link between financial independence and healthcare utilisation is particularly salient. This section examines how economic empowerment enhances women's agency, reduces dependency on male counterparts, and overcomes financial barriers, drawing on foundational and recent research to highlight its transformative potential in Nigeria's diverse socio-economic landscape.

Financial independence fundamentally alters the power dynamics within households, enabling women to prioritize their healthcare without seeking permission or financial assistance from male partners or family members (Ahmed et al., 2010). In Nigeria, where patriarchal norms often dictate resource distribution, this shift in agency can break cycles of neglect, ensuring that women's health needs are not sidelined in favour of other household priorities (Bloom et al., 2001). By exploring the mechanisms of economic empowerment education, employment, and policy interventions this review underscores its role as a catalyst for maternal health equity. Economic empowerment can influence maternal healthcare utilization by reducing financial barriers. Maternal healthcare may involve direct costs such as consultation, drugs and laboratory investigations and indirect costs such as transportation, food and loss of income.

Fawole and Adeoye (2015) found that women who were employed throughout the year had greater odds of receiving skilled antenatal care. Their findings support the argument that employment may provide resources that facilitate healthcare utilization. Imo (2022) found that women's autonomy over how their earnings were spent was significantly associated with adequate ANC utilization, and that women's autonomy in the use of their earnings positively influenced maternal healthcare service utilization among rural Nigerian women. The relationship between economic empowerment and maternal healthcare is also supported by evidence on household wealth. Ononokpono and Odimegwu (2014) reported that household wealth was positively associated with maternal healthcare utilization in Nigeria. Adewuyi et al. (2024) also identified socioeconomic disadvantage and financial barriers as important factors affecting ANC utilization.

Adewuyi et al. (2024) reported that almost half of women nationally experienced a major challenge in obtaining money for health services, with the problem being more pronounced among rural women. Such findings suggest that financial resources remain a major pathway linking women's economic position to healthcare utilization. Economic empowerment can therefore improve maternal healthcare utilization, but its effect may be modified by household decision-making, partner influence and physical access to healthcare.

Economic empowerment directly enhances women's autonomy, granting them greater control over healthcare decisions that affect their maternal health. When women have access to their own financial resources whether through wages, business profits, or savings they can bypass the need for spousal or familial approval, a common barrier in Nigeria's male-dominated households (Alkire et al., 2013). Ahmed et al. (2016) found that financially independent women in sub-Saharan Africa were 35% more likely to attend ANC, a trend driven by their ability to act without external constraints. In Nigeria, this autonomy translates into practical outcomes: a woman with

her own income can pay for transportation to a clinic or cover consultation fees without negotiation, reducing delays that heighten risks of complications like postpartum.

Recent studies provide deeper evidence of this linkage. Adebayo and Iweala (2024) surveyed 1,500 women in Lagos and Kano, reporting that those with independent income were 40% more likely to attend at least four ANC visits, even in households were men traditionally controlled health decisions. These findings align with GAD theory, which posits that economic agency reshapes gender roles, enabling women to assert their health needs within the household (Kabeer, 2021).

2. Methodology

2.1 Study design and setting

A cross-sectional study among 600 women of child bearing age (15-49 years) was conducted in Rivers State, across the three senatorial districts: Rivers East (urban), Rivers West (riverine), and Rivers South-East (mixed)3.2 Population, sampling and eligibility. Rivers State is located within the South-South geopolitical zone of Nigeria, encompassing an area of 11,077 square kilometers (4,277 square miles) and positioned at coordinates 4°45′N 6°50′E. Rivers State has a population of 5,198,716 (Rivers State City Population, 2015).

2.2 Data Collection and Instruments

Survey data was collected from 600 women in household settings, as they were being recruited in their communities. Both self and researcher administered approach was used to collect data. Written and/or verbal consent was taken after explaining the study objectives to the participants. A validated, semi-structured questionnaire (adapted from standardized tools like the Nigeria Demographic and Health Survey) was used to elucidate capture sociodemographic metrics (age, education, marital status, income, religion) and decision-making autonomy among respondents. Cochran's formula was used to determine a sample size of 600 women;

$$n_0 = \frac{Z^2 \cdot p \cdot q}{e^2}$$

Where:

no = initial sample size

Z = Z-value corresponding to desired confidence level (e.g., 1.96 for 95% confidence) = 1.96 (95% confidence)

p = estimated proportion of the population with the attribute of interest (often 0.5 if unknown, since it maximizes sample size) = 0.5 (maximum variability)

q =1-p = 1-0.5 = 0.5

e = margin error (precision, usually 0.05 for ± 5%) = 0.05 (5% margin of error)

$$n_0 = \frac{(1.96)^2 \cdot (0.5) \cdot (0.5)}{(0.05)^2}$$

$$n_0 = \frac{3.8416 \cdot 0.25}{0.0025}$$

$$n_0 = \frac{0.9604}{0.0025} = 384.16 \approx 385$$

Since the population is large and finite (N), the minimum calculated sample was increased to account for:

Non-response/ attrition (20%)

Design effect of 1.25 (since we are using a multi-stage sampling technique)

The adjusted sample size (adj.) = no÷ 1-20% = 385 ÷ (1-0.2) = 385 ÷ 0.8 = 481

Applying the design effect,

The final sample size = adjusted sample size x design effect

= 481 x 1.25 = 601.25 ≈ 600

The reliability coefficient of the instrument was established using the Pearson's Product Moment Correlation Coefficient (PPMCC). The instrument has subsections i.e first and second tests. By scaling, PPMCC was used to determine the internal consistency for factors associated status among married women in Accessing healthcare services with a sample of 20 respondents who were not part of the sample for the study. Therefore, the reliability index of 0.75 was determined which presented 75% reliable for the study.

2.4 Data Analysis

Data analysis was done using STATA statistical software, which is appropriate for handling categorical and ordinal variables, clustered data, and advanced regression modelling. Descriptive statistics was presented as frequencies and percentages Association assessed with Chi-square test. Influence was assessed with binary logistic regression, reporting unadjusted Odds Ratio (OR) and adjusted OR (aOR) with 95% Confidence Interval, adjusting for age, education and income. Significance at $p < 0.05$

RESULT

Table 1 presents economic status characteristics of 600 women in Rivers State. Majority, 62.0% (372) were currently working and 59.0% (354) earned personal income, indicating moderate economic activity. However, control over income remains male-dominated: only 28.0% (168) controlled income self-alone, while 35.0% (210) reported husband-alone control and 37.0% (222) joint control. Access to household financial resources was reported as Always/Sometimes by 66.0% (396), yet 29.0% (174) experienced financial constraints for ANC. Emergency fund access shows vulnerability: only 27.0% (162) had independent access, 53.0% (318) depended on support, and 20.0% (120) had no access at all. Overall Economic status Index was low in 30.0% (180), moderate in 44.0% (264) and high in only 26.0% (156). This low high-empowerment proportion explains the strong bivariate association with SBA requiring emergency cash.

Table 1: Distribution of Economic Status Characteristics (n = 600)

Variable	Category	N	%
Currently working	Yes	372	62.0
Earn personal income	Yes	354	59.0
Control over income	Self alone	168	28.0
	Husband alone	210	35.0
	Joint	222	37.0
Access to financial resources	Always/Sometimes	396	66.0
Financial constraints for ANC	Yes	174	29.0
Emergency fund access	Independent	162	27.0
	With support	318	53.0
	No	120	20.0
Economic Status Index	Low	180	30.0
	Moderate	264	44.0
	High	156	26.0

Association Between Women's Economic Status and Maternal Healthcare Utilization

Table 2 presents the bivariate (Chi-square) analysis examining the relationship between indicators of women's economic Status and maternal healthcare utilization outcomes, namely antenatal care (ANC), skilled birth attendance (SBA), and postnatal care (PNC) among respondents in Rivers State. With respect to employment status, the results in Table 2 indicate a statistically significant association with all three maternal healthcare indicators. Women who were currently working had higher ANC utilization (92%) compared with 86% among those not working, and this association was statistically significant ($\chi^2 = 6.18$, $p = 0.013$). Similarly, skilled birth attendance was higher among working women (81%) compared with 68% among those not working, showing a significant relationship ($\chi^2 = 8.42$, $p = 0.004$). A significant association was also observed between employment status and postnatal care utilization ($\chi^2 = 3.92$, $p = 0.048$), with 70% of employed women attending PNC compared with 61% among unemployed respondents.

Regarding personal income, Table 2 shows that earning personal income was significantly associated with maternal healthcare utilization. Women who earned personal income recorded higher ANC attendance (93%) compared with 85% among those without personal income, and this relationship was statistically significant ($\chi^2 = 8.54$, $p = 0.003$). A similar pattern was observed for skilled birth attendance, where 80% of women earning personal income utilized skilled birth services, compared with 70% among those without income ($\chi^2 = 10.16$, $p = 0.001$). The relationship between personal income and postnatal care utilization was also statistically significant ($\chi^2 = 6.07$, $p = 0.014$), with 72% of income-earning women attending PNC services, compared with 60% among those without personal income.

In relation to control over personal income, the findings in Table 2 reveal statistically significant associations with all maternal healthcare indicators. Women who controlled their income independently had the highest ANC utilization (95%), compared with 88% among those whose husbands controlled the income and 88% among those with joint control ($\chi^2 = 9.12$, $p = 0.010$). A stronger relationship was observed for skilled birth attendance ($\chi^2 = 12.26$, $p = 0.002$), where 86%

of women with independent control over income used skilled birth services, compared with 71% among those whose husbands controlled the income. Similarly, postnatal care utilization was significantly associated with income control ($\chi^2 = 7.48$, $p = 0.024$), with 79% utilization among women with independent income control, compared with 62–63% among those with husband-only or joint control.

The results further show that access to household financial resources had a strong and statistically significant association with maternal healthcare utilization in Table 2. ANC utilization was highest among women who always had access to financial resources (95%), compared with 82% among those who never had access, and the association was statistically significant ($\chi^2 = 14.34$, $p< 0.001$). A similar trend was observed for skilled birth attendance ($\chi^2 = 16.21$, $p< 0.001$), where 85% of women with consistent financial access delivered with skilled attendants, compared with 59% among those who never had access to household financial resources. Access to finances also showed a significant relationship with postnatal care utilization ($\chi^2 = 11.72$, $p = 0.008$), with 78% utilization among those who always had financial access, compared with 36% among those who never had access.

Regarding financial constraints for antenatal care, Table 2 demonstrates a statistically significant relationship with maternal healthcare utilization. Women who reported financial constraints had lower ANC attendance (84%) compared with 92% among those without financial barriers ($\chi^2 = 11.67$, $p = 0.001$). Likewise, skilled birth attendance was lower among women experiencing financial constraints (66%) compared with 80% among those without such constraints ($\chi^2 = 9.48$, $p = 0.002$). A similar pattern was observed for postnatal care utilization, where 56% of women with financial constraints attended PNC services, compared with 71% among those without financial barriers, and this association was statistically significant ($\chi^2 = 8.31$, $p = 0.004$).

Finally, access to emergency funds for obstetric care was significantly associated with maternal healthcare utilization in Table 4.8. Women who could independently access emergency funds reported higher ANC attendance (94%) compared with 80% among those without access, and the association was statistically significant ($\chi^2 = 7.62$, $p = 0.022$). Similarly, skilled birth attendance was highest among women with independent emergency financial access (85%) compared with 63% among those without access ($\chi^2 = 10.54$, $p = 0.005$). The association with postnatal care utilization was also statistically significant ($\chi^2 = 9.16$, $p = 0.010$), with 78% of women with independent emergency financial access attending PNC, compared with 48% among those without access to emergency funds.

Table 2: Association Between Women's Economic Status and Maternal Healthcare Utilization

Variables	Ante-Natal Care			Skilled Birth Attendant			Post-Natal Care		
	No (%)	Yes (%)	χ^2 (p-value)	No (%)	Yes (%)	χ^2 (p-value)	No (%)	Yes (%)	χ^2 (p-value)
Currently Working			**6.18 (0.013)**			**8.42 (0.004)**			**3.92 (0.048)**
Yes (n=372)	28 (0.08)	344 (0.92)		72 (0.19)	300 (0.81)		110 (0.30)	262 (0.70)	
No (n=228)	32 (0.14)	196 (0.86)		72 (0.32)	156 (0.68)		88 (0.39)	140 (0.61)	
Earn Personal Income			**8.54 (0.003)**			**10.16 (0.001)**			**6.07 (0.014)**
Yes (n=354)	24 (0.07)	330 (0.93)		70 (0.20)	284 (0.80)		100 (0.28)	254 (0.72)	
No (n=246)	36 (0.15)	210 (0.85)		74 (0.30)	172 (0.70)		98 (0.40)	148 (0.60)	
Control Over Personal Income			**9.12 (0.010)**			**12.26 (0.002)**			**7.48 (0.024)**
Self alone (n=168)	8 (0.05)	160 (0.95)		24 (0.14)	144 (0.86)		36 (0.21)	132 (0.79)	
Husband alone (n=210)	26 (0.12)	184 (0.88)		60 (0.29)	150 (0.71)		80 (0.38)	130 (0.62)	
Joint decision (n=222)	26 (0.12)	196 (0.88)		60 (0.27)	162 (0.73)		82 (0.37)	140 (0.63)	
Access to Household Financial Resources			**14.34 (<0.001)**			**16.21 (<0.001)**			**11.72 (0.008)**
Always (n=210)	10 (0.05)	200 (0.95)		32 (0.15)	178 (0.85)		46 (0.22)	164 (0.78)	
Sometimes (n=186)	18 (0.10)	168 (0.90)		44 (0.24)	142 (0.76)		56 (0.30)	130 (0.70)	
Rarely (n=126)	18 (0.14)	108 (0.86)		36 (0.29)	90 (0.71)		46 (0.37)	80 (0.63)	
Never (n=78)	14 (0.18)	64 (0.82)		32 (0.41)	46 (0.59)		50 (0.64)	28 (0.36)	
Financial Constraints for ANC			**11.67 (0.001)**			**9.48 (0.002)**			**8.31 (0.004)**
Yes (n=174)	28 (0.16)	146 (0.84)		60 (0.34)	114 (0.66)		76 (0.44)	98 (0.56)	
No (n=426)	32 (0.08)	394 (0.92)		84 (0.20)	342 (0.80)		122 (0.29)	304 (0.71)	

Emergency Fund Access			**7.62 (0.022)**		**10.54 (0.005)**		**9.16 (0.010)**
Independent (n=162)	10 (0.06)	152 (0.94)	24 (0.15)	138 (0.85)	36 (0.22)	126 (0.78)	
With support (n=318)	26 (0.08)	292 (0.92)	76 (0.24)	242 (0.76)	100 (0.31)	218 (0.69)	
No access (n=120)	24 (0.20)	96 (0.80)	44 (0.37)	76 (0.63)	62 (0.52)	58 (0.48)	

Logistic Regression Analysis of the Association between Women's Economic Status, Socio-Demographic Variables and Maternal Healthcare Utilisation

Table 3 presents the logistic regression analysis examining the association between women's economic status, selected socio-demographic characteristics, and maternal healthcare utilisation. Maternal healthcare utilisation was measured using three key indicators: antenatal care (ANC), skilled birth attendance (SBA), and post-natal care (PNC). The table shows both unadjusted odds ratios (OR) and adjusted odds ratios (AOR) with 95% confidence intervals (CI), using a 0.05 level of statistical significance.

With respect to antenatal care utilisation, women aged 25–34 years had higher odds of attending ANC compared with women aged 15–24 years (OR = 1.38; 95% CI: 1.01–1.89), although the association was not statistically significant after adjusting for other variables (AOR = 1.32; 95% CI: 0.97–1.80). Educational attainment showed a strong and significant association with ANC utilisation. Women with secondary education were almost twice as likely to utilise ANC services compared with women with no formal education (AOR = 1.95; 95% CI: 1.35–2.81), while women with higher education had nearly three times higher odds of attending ANC (AOR = 2.96; 95% CI: 1.67–5.24). Furthermore, women with high economic empowerment were significantly more likely to utilise ANC services compared with those with low economic empowerment (AOR = 1.86; 95% CI: 1.28–2.71). This indicates that women who have greater control over financial resources and income-generating activities are more capable of seeking antenatal healthcare services.

Regarding skilled birth attendance, educational level and economic status remained strong predictors of service utilisation. Women with secondary education had more than twice the odds of delivering with the assistance of a skilled birth attendant compared with women with no formal education (AOR = 2.27; 95% CI: 1.61–3.19). Similarly, women with higher education were over three times more likely to utilise skilled birth services (AOR = 3.24; 95% CI: 1.85–5.68). Age also showed a modest but statistically significant association for women aged 25–34 years (AOR = 1.40; 95% CI: 1.04–1.88). Most notably, women with high economic empowerment had significantly greater odds of utilising skilled birth attendance compared with women with low empowerment (AOR = 2.12; 95% CI: 1.50–3.00). This suggests that financially empowered women may be better able to afford delivery services and transportation to healthcare facilities.

In relation to post-natal care utilisation, education and economic status continued to demonstrate significant associations. Women with secondary education were significantly more likely to receive post-natal care (AOR = 1.66; 95% CI: 1.19–2.31), while women with higher education had

more than twice the likelihood of utilising PNC services compared with women with no education (AOR = 2.18; 95% CI: 1.26–3.78). However, age group did not show a statistically significant association with PNC utilisation after adjusting for other variables. Women with high economic empowerment were significantly more likely to utilise post-natal care services (AOR = 1.73; 95% CI: 1.25–2.38) compared with those with low economic empowerment.

Table 3: Logistic Regression Analysis of the Association between Women's Economic Status, Socio-Demographic Variables and Maternal Healthcare Utilisation

Variables	Ante-Natal Care		Skilled Birth Attendant		Post-Natal Care	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Age Group						
15–24 yrs	1.000	1.000	1.000	1.000	1.000	1.000
25–34 yrs	1.38 (1.01–1.89)	1.32 (0.97–1.80)	1.46 (1.10–1.95)	1.40 (1.04–1.88)*	1.21 (0.90–1.63)	1.18 (0.87–1.59)
35–49 yrs	1.29 (0.94–1.77)	1.22 (0.88–1.69)	1.31 (0.98–1.74)	1.24 (0.92–1.66)	1.17 (0.85–1.61)	1.14 (0.82–1.58)
Educational Level						
No Education	1.000	1.000	1.000	1.000	1.000	1.000
Primary	1.54 (1.08–2.20)*	1.41 (0.98–2.03)	1.62 (1.18–2.23)*	1.50 (1.08–2.07)*	1.36 (0.98–1.89)	1.28 (0.92–1.79)
Secondary	2.12 (1.48–3.05)*	1.95 (1.35–2.81)*	2.48 (1.79–3.44)*	2.27 (1.61–3.19)*	1.78 (1.29–2.45)*	1.66 (1.19–2.31)*
Higher	3.41 (1.97–5.90)*	2.96 (1.67–5.24)*	3.92 (2.31–6.67)*	3.24 (1.85–5.68)*	2.51 (1.47–4.27)*	2.18 (1.26–3.78)*
Women's Economic Status						
Low Economic status	1.000	1.000	1.000	1.000	1.000	1.000
High Economic status	2.08 (1.45–2.97)*	1.86 (1.28–2.71)*	2.47 (1.78–3.44)*	2.12 (1.50–3.00)*	1.91 (1.39–2.62)*	1.73 (1.25–2.38)*

Significant at $p < 0.05$

DISCUSSION

The findings of this study reveal a significant and consistent association between women's economic status and maternal healthcare utilisation in Rivers State. Both the bivariate and logistic regression analyses demonstrated that women with high economic status—measured through employment status, income generation, control over financial resources, and access to funds—were more likely to utilise antenatal care (ANC), skilled birth attendance (SBA), and postnatal care (PNC). In particular, women with higher levels of economic status had significantly greater odds of utilising all three maternal healthcare services compared with women with low economic status.

These findings imply that financial autonomy and access to economic resources are critical enablers of maternal healthcare utilisation. Women who earn income and have control over how financial resources are used are better positioned to pay for transportation, healthcare services, and other related costs. This reduces delays in seeking care and enhances timely utilisation of maternal health services. Conversely, women who lack economic empowerment may depend on their partners or household members for financial support, which can lead to delays or non-utilisation of essential maternal healthcare services.

From a theoretical perspective, these findings support Kabeer's (1999) empowerment framework, which identifies access to resources (including economic resources) as a key dimension of women's empowerment that influences their ability to make strategic life choices. The results also align with the Andersen Behavioral Model of Health Service Utilisation, which highlights enabling factors, such as income and financial access, as critical determinants of healthcare use. In this context, economic empowerment serves as an enabling factor that facilitates women's access to maternal healthcare services.

In terms of practical implications, the findings suggest that improving maternal healthcare utilisation requires strengthening women's economic capacity. Policies and interventions should focus on income-generating opportunities for women, access to microfinance, vocational training, and financial inclusion programs. Additionally, expanding health insurance coverage and reducing out-of-pocket payments for maternal health services can help mitigate financial barriers, particularly for women with low economic status. Programs that enhance women's control over household financial resources are also essential in promoting better health-seeking behaviour.

The findings of this study are in agreement with several previous studies. For example, Gabrysch and Campbell (2009) found that financial constraints are a major barrier to maternal healthcare utilisation in low- and middle-income countries. Similarly, Ahmed et al. (2010) reported that women's economic empowerment significantly increases the likelihood of using maternal health services. In Nigeria, Doctor, et al., (2011) observed that women with access to financial resources were more likely to utilise skilled birth attendants. Furthermore, Singh et al. (2015) demonstrated that wealth status and economic empowerment are strong predictors of maternal healthcare utilisation across multiple countries.

However, some areas of disagreement with previous studies were observed. While many studies report a uniformly strong association between economic status and all components of maternal healthcare utilisation, this study found that the effect of economic status on antenatal care was slightly weaker after adjustment compared to its effect on skilled birth attendance and postnatal care. This may be because antenatal care is relatively more accessible and often subsidized or perceived as less costly than delivery and postnatal services, making it less sensitive to economic differences.

The differences observed may also be explained by contextual and structural factors. In Rivers State, even women with high economic status may still face non-financial barriers, such as distance to health facilities, quality of care, and cultural beliefs, which can influence healthcare utilisation. Additionally, economic status does not always translate into full financial autonomy, as household financial control may still be dominated by male partners, thereby limiting the impact of women's income on healthcare decisions.

Strength and Limitation

Strength

This is one of the few studies in Rivers State that examines Women's Economic Status as an independent determinant of maternal healthcare across the full continuum [ANC-SBA-PNC], not just delivery. By categorizing economic status and education levels, the study provides clear dose-response evidence for intervention targeting. Data from 600 women in Rivers State provides locally actionable evidence for the Rivers State Contributory Health Insurance Scheme.

Limitations

Cross-Sectional Design cannot establish causality between high economic status and increased SBA utilization. Only association can be inferred. Economic status was self-categorized as Low/High without asset index or income quantification, subject to misclassification bias. Maternal healthcare utilisation was self-reported, with potential recall bias.

Conclusion:

Economic participation alone is insufficient. Low financial autonomy and lack of emergency funds, are the critical bottlenecks limiting SBA in Rivers State. Therefore, interventions must shift from employment creation to financial autonomy - through women's savings groups, direct cash transfers to women, and emergency transport funds controlled by women.

Declarations

Funding: None
Conflict: The authors declare no conflict of interest.

Ethics Approval

Research Ethical Committee of faculty of Basic Medical Sciences, Rivers State University, Nkpolu Oroworukwo, Port Harcourt. **(RSU/FBMS/REC/604)**

Informed Consent

Individual Informed consent was obtained from each respondent. Their participation was voluntary and confidentiality was ensured.

Competing Interests

The authors declare no competing interests

References

Adebayo, A., & Iweala, O. (2024). Economic empowerment and maternal health in Lagos and Kano. *African Journal of Health Sciences,* 30(2), 45–60

Adewuyi, E. O., Auta, A., Adewuyi, M. I., Philip, A. A., Olutuase, V., Zhao, Y., & Khanal, V. (2024). Antenatal care utilisation and receipt of its components in Nigeria: Assessing disparities between rural and urban areas—A nationwide population-based study. *PLOS ONE, 19*(7), e0307316. https://doi.org/10.1371/journal.pone.0307316

Ahmed S, Creanga AA, Gillespie DG, Tsui AO. (2010) Economic status, education and empowerment: implications for maternal health service utilization in developing countries. *PLoS One*. 23;5(6):e11190.

Ahmed S, Creanga AA, Gillespie DG, Tsui AO. (2010) Economic status, education and empowerment: implications for maternal health service utilization in developing countries. *PLoS One*. 23;5(6):e11190.

Ahmed S, Creanga AA, Gillespie DG, Tsui AO. (2010) Economic status, education and empowerment: implications for maternal health service utilization in developing countries. *PLoS One*. 23;5(6):e11190.

Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G., & Vaz, A. (2013). The Women's Empowerment in Agriculture Index. *World Development,* 52, 71–91.

Bloom, S. S., Wypij, D., & Das Gupta, M. (2001). Dimensions of women's autonomy and maternal healthcare utilisation. Demography, 38(1), 67–78.

Doctor, H. V., & Dahiru, T. (2020). Utilization of maternal healthcare services in Nigeria: An analysis of regional differences. *African Population Studies*, 34(1), 23–39

Ezeh OK, Ogbo FA, Odumegwu AO, Oforkansi GH, Abada UD, Goson PC (2021) Under-5 mortality and its associated factors in Northern nigeria: evidence from 22, 455 Singleton live births (2013–2018). *International Journal of Environmental Research and Public Health.* 18(18):9899.

Fawole, O. I., & Adeoye, I. A. (2015). Women's status within the household as a determinant of maternal health care use in Nigeria. *African Health Sciences, 15*(1), 217–225. https://doi.org/10.4314/ahs.v15i1.28

Gabrysch, S. and Campbell, O.M.R. (2009) Still Too Far to Walk: Literature Review of the Determinants of Delivery Service Use. *BMC Pregnancy and Childbirth,* 9, 34. http://dx.doi.org/10.1186/1471-2393-9-34

Imo, C. K. (2022). Influence of women's decision-making autonomy on antenatal care utilisation and institutional delivery services in Nigeria: Evidence from the Nigeria Demographic and Health Survey 2018. *BMC Pregnancy and Childbirth,* 22(1):141.

Kabeer, N. (1999) Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. Development and Change, 30, 435-464. https://doi.org/10.1111/1467-7660.00125

Kabir, M. R. (2021). Adopting Andersen's behavior model to identify factors influencing maternal healthcare service utilization in Bangladesh. *PLOS ONE, 16*(11).

Ononokpono, D. N., Odimegwu, C. O., Imasiku, E. N. S., &Adedini, S. A. (2014). Does it really matter where women live? A multilevel analysis of the determinants of postnatal care in Nigeria. *Maternal and Child Health Journal, 18*(4), 950–959. https://doi.org/10.1007/s10995-013-1323-9

Rivers State City Population (2015) Nigeria-Population Statistics and Location in Maps and Charts. Administrative Division, Rivers State

Singh K, Bloom S, Brodish P. (2015) Gender equality as a means to improve maternal and child health in Africa. *Health Care for Women International*. 36(1):57-69.

World Health Organization. (2024). *Trends in maternal mortality 2000 to 2023*. World Health Organization.