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Association between women status and use of maternal health care services of primary health centres in Nando, Anambra east L.G.A, Anambra state, Nigeria

[1]Nnamdi Nneka J, [2]Okoronkwo Ijeoma L, [3]Okorocha Nnenaya A, [4]Udoinyang Florence O, [5]Nwachukwu Norah N, [6]Eluwa Chidinma N

[1,3,4,5,6] Department of Nursing Sciences, Rhema University, Aba, Nigeria
[2]Department of Nursing Sciences, Faculty of Health Sciences and Technology, University of Nigeria, Enugu Campus, Nigeria

Corresponding Author: Nnamdi Nneka J

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Abstract

The study explored the association between women's status and their utilization of maternal health care services provided at primary health care centers in Nando, a town in Anambra East Local Government Area of Anambra State. This study was anchored on three core objectives. The first was to assess the extent to which women utilize maternal health care services provided by primary health care centers. The second objective explored the association between women's autonomy in decision-making and their utilization of these services. The third aimed to examine how women's economic status—specifically their wealth index—affects their use of maternal health services in Nando. A descriptive cross-sectional survey design was employed. The target population comprised women aged 15 to 49 years who had given birth within the preceding five years. Using a finite population sampling formula, a total of 500 women were selected for the study. Of these, 482 respondents completed and returned the structured questionnaire, resulting in a response rate of 96.4%. The instrument was developed by the researcher following an extensive review of relevant literature. Data analysis was conducted using SPSS version 18. The findings showed that 71.5% of respondents accessed antenatal care (ANC), while 44.4% utilized health facility services during childbirth. In relation to decision-making on ANC utilization, 40.2% of women reported making joint decisions with their spouses, whereas 32.4% made such decisions independently. For delivery care, 39% made decisions independently, and 36.5% made them jointly with their partners. The analysis revealed a statistically significant relationship between women's decision-making autonomy and their utilization of maternal health services. A similarly significant association was found between economic status and maternal health service use, with higher utilization observed among women with greater economic means. The study concluded that both women's autonomy and socio-economic status are key determinants of maternal health service utilization. It recommended concerted efforts to promote women's empowerment, as enhancing their decision-making capacity is likely to improve the uptake of maternal health services.

Keywords: Women status, utilisation of MCH. Decision making autonomy, socioeconomic status

Introduction

Childbirth is often perceived as a joyful and fulfilling milestone; however, it also presents considerable health risks (WHO, 2020). Reproductive health issues affect nearly all women of childbearing age at various stages of their lives (WHO, 2008). Maternal health encompasses the physical and mental well-being of women during pregnancy, childbirth, and the postpartum period. Ideally, these phases should be positive and health-enhancing experiences that safeguard the lives and welfare of both mother and child (Adejoorin *et al*., 2024 [2]; Fawole & Adeoye, 2015) [12].

Despite notable progress over the past two decades, maternal mortality remains a pressing global public health concern. In 2023 alone, an estimated 260,000 women died due to complications arising from pregnancy and childbirth (WHO, 2024). Alarmingly, 92% of these deaths occurred in low- and lower-middle-income countries and were predominantly preventable (WHO, 2024).

In response, global health initiatives embedded in the Sustainable Development Goals (SDGs) aim to reduce maternal mortality by 2030. Specifically, SDG 3 targets a global maternal mortality ratio (MMR) of fewer than 70 deaths per 100,000 live births, with no country exceeding twice this threshold. However, as of 2023, this target remained unmet, with the global MMR recorded at 197 per 100,000 live births. Realizing the 2030 objective would require an average annual reduction of nearly 15%, a rate that few countries have been able to consistently sustain (Awoleye, Chima & Oluwatobi, 2018 [7]; Bain *et al*., 2022 [8]; Shudura, Yoseph & Janiso, 2022) [11].

Globally, available statistics reveal that 66% of pregnant women receive antenatal care (ANC), 80% deliver in healthcare facilities, and 61% access postnatal care services (WHO, 2022; UNICEF, 2023) [24]. However, these averages mask significant regional disparities. For instance, ANC coverage is 55% in South Asia, 88% in East Asia and the Pacific, and 91% in Latin America and the Caribbean. Similarly, institutional delivery rates are 82% in South Asia, 91% in East Asia and the Pacific, and 94% in Latin America

and the Caribbean. In contrast, sub-Saharan Africa continues to experience lower service uptake: only 55% of women attend a minimum of four ANC visits, 66% give birth in health institutions, and just 53% receive postnatal care (Adedokun, Uthman & Bisiriyu, 2023 [1]; Yun-Jung Eom *et al*., 2025) [20].

Several behavioral, structural, and systemic factors influence the decision to seek maternal health care. Key determinants include physical access, cost, quality of services, service continuity, and sociocultural beliefs (Anderson, 1995; Rajesh, Prashant, Chandan & Singh, 2013). A woman's social standing is commonly measured by her education level, income, employment, fertility status, health, and societal role (WHO, 2008). Concepts such as "female autonomy," "women's empowerment," "gender parity," and "control over resources" are frequently used in academic discourse to describe women's status (Babalola & Fatusi, 2009; Mukesh & Kaushlendra, 2010; Awoleye *et al*., 2018) [27, 29, 7].

Empirical studies have consistently demonstrated that women's autonomy significantly influences the utilization of maternal health services (Mukesh & Kaushlendra, 2010; Simona, 2022 [29, 18]; Shanto *et al*., 2023) [17]. Autonomy is often shaped by factors such as education, income, occupation, and place of residence. Women residing in urban areas—who are generally more educated and gainfully employed tend to possess greater social capital and decision-making power compared to their rural counterparts, who frequently face limited educational and economic opportunities (Babalola & Fatusi, 2009; Mukesh & Kaushlendra, 2010; Aigbe, 2011) [27, 29, 28].

In Nigeria, various policy initiatives have been introduced to enhance maternal health service utilization, notably the 2010 launch of the Maternal and Child Health Program. This program sought to increase the uptake of routine services, strengthen healthcare delivery systems, improve antenatal care (ANC) attendance, build healthcare worker capacity, and enhance data management systems (Nwosu & Atagua, 2019) [14]. Despite these efforts, utilization of maternal health services remains suboptimal: only 52% of women attend the recommended four ANC visits, 38% deliver in health facilities, and just 37% receive postnatal care (Nwosu & Atagua, 2019 [14]; Adeokun & Uthman, 2019; Adedokun *et al*., 2023 [1]; Adejoorin *et al*., 2024) [2].

Numerous barriers hinder maternal health service utilization, including age, educational background, poverty, distance to facilities, household economic status, media exposure, residential location, birth order, transportation issues, and financial limitations (Anderson & Newman, 2005; Simona Simona, 2022 [18]; Bain *et al*., 2022 [8]; Adejoorin *et al*., 2024) [2].

Maternal health challenges are particularly acute in developing regions, where many women experience economic marginalization and lack the financial independence necessary for prompt health-seeking behavior (Hasibu *et al*., 2024; WHO, 2024). Conversely, women in developed countries—who are generally more educated and economically empowered—tend to have greater access to, and control over, their maternal health care needs (WHO, 2008). In light of this disparity, the present study was undertaken to examine the association between women's status and the utilization of maternal health care services.

Materials and methods.

The study adopted a descriptive cross-sectional design and was conducted in Nando, a community situated in Anambra East Local Government Area of Anambra State, Nigeria. Anambra State is located in the South-East geopolitical zone of the country. Nando is equipped with four primary health care centers, which are situated in the villages of Ikem, Abube Agu, Amajana, and Isinyi, in addition to a health outpost in Akamanato village. The community also hosts several traditional maternity homes managed by traditional birth attendants, as well as various spiritual healing centers.

Study Population and Sample Size Determination

The research targeted women within the reproductive age bracket as its primary population. According to the World Health Organization (2000), this demographic typically represents around 22% of any given population. Based on the 2020 population data, Nando has a total population of 36,000, which implies that approximately 7,920 women fall within the reproductive age range. This subgroup was considered the study's target population. From this group, 500 women were selected to participate in the study. The minimum sample size required was calculated to be 450 using the single finite population formula as recommended by Polit and Beck (2008) [22]:

$N=\left(\frac{z}{e}\right)2\ P(1\text{-}P)$

Z=confidence interval at 95%=1.96
P=proportion of people 0.12.
e=margin of error.

To account for potential non-responses, the sample size was adjusted accordingly. The researcher anticipated a non-response rate of 10%, which was intended to cover issues such as incomplete responses, improperly filled questionnaires, or those not returned at all. After factoring in this estimated non-response margin, the final sample size was increased to 500 participants (Chinweuba, Iheanacho & Agbapuonwu, 2013) [21].

Sampling technique

This study employed a stratified random sampling method. Women were categorized based on their individual communities, with each community forming a separate stratum. Data from the women's meeting register were used to determine the number of eligible women in each stratum, which in turn guided the distribution of the sample. The total sample size was then proportionally allocated to each community using a proportional allocation formula:

$$Ns = \frac{Ns}{N} n.$$

Where ns=sample size of the village.
Ns=population size of the village.
N= total target population.
n=total sample size. (Polit & Tetanobeck 2008 [22], Chinweuba, Iheanacho & Agbapuonwu 2013) [21].

Participants were selected using a table of random numbers, with the selection drawn from names listed in the women's meeting registers.

Table 1: The Population and Sample Size of each Village in Nando.

S/N	Name of village	Population of registered women in each village.	Sample size for each village.	Percentage of the sample size for each village.
1	Ikem	1340	85	16.92%
2	Isinyi	752	48	9.49%
3	Amajana	850	54	10.73%
4.	Abube Agu	750	47	9.47%
5.	Akamanato	1410	89	17.80%
6.	Ubarunisioye	1176	74	14.85%
7.	Agbudu	764	48	9.65%
8.	Abube Uno.	878	55	11.09%
	Total	7920	500	100%

Instrument for data collect

Data for this research were gathered using a structured questionnaire, which also functioned as an interview guide. The instrument was divided into four distinct sections. The first section comprised eight items that collected demographic details about the participants. The second section, containing nine items, focused on determining whether the respondents utilized antenatal care (ANC) services and the locations where they accessed them. It also explored the decision-making processes related to ANC usage. The third section included six items addressing delivery care, specifically the place of childbirth and who was involved in making related decisions. The fourth and final section featured nine items designed to evaluate the participants' economic status. This part gathered information on household features such as electricity supply, water source, toilet type, flooring material, and ownership of assets like radios, televisions, and bicycles.

Validity of the instrument

The validity of the questionnaire was ensured through both face and content validation, conducted by two professionals specializing in Maternal and Child Health Nursing. These experts critically reviewed the instrument and provided insightful recommendations. As a result of their evaluation, questions considered unnecessary were eliminated, while more relevant and meaningful items were incorporated. Their feedback was instrumental in shaping the final version of the questionnaire.

Reliability of the Instrument

To ensure the reliability of the instrument, a pilot test was conducted using a sample of fifty women from Achalla, a neighbouring community that met the study's inclusion criteria but was excluded from the main research population. The internal consistency of the questionnaire was assessed using the split-half method. Cronbach's alpha coefficients for the two sections were 0.802 and 0.835, indicating high reliability. Additionally, the correlation coefficient between the two halves was 0.854, demonstrating a strong internal consistency. Based on these results, the instrument was deemed reliable and suitable for use in the main study.

Method of data collection

Data were collected through direct, face-to-face interviews, guided by a structured questionnaire administered to women who met the study's inclusion criteria. Five research assistants were trained on the study objectives, ethical considerations, effective interviewing techniques, and how to clearly explain the questionnaire items to respondents. Together with the principal researcher, the team systematically visited every third household and interviewed eligible women. This process continued until the target sample size was achieved in each community. Data collection in each location spanned five days, with interviews conducted in the mornings and evenings to accommodate participants' daily routines. Overall, the data collection phase lasted a total of 50 days.

Method of Data Analysis

The collected data were coded and analyzed using both descriptive and inferential statistical methods. Descriptive statistics, including frequencies and percentages, were used to summarize individual questionnaire items. Demographic variables were analyzed using measures of central tendency and dispersion—specifically means and standard deviations. All analyses were conducted using the Statistical Package for the Social Sciences (SPSS), version 18. To examine the relationships between women's socio-economic status, decision-making autonomy, and utilization of maternal health services at primary health care centers, cross-tabulations were conducted. The Chi-square test was employed to determine the statistical significance of these associations, with significance evaluated at the 95% confidence level.

Ethical Considerations

Ethical approval for the study was obtained from the Health Research Ethics Committee of Anambra State Teaching Hospital, Awka. Additional permission was secured from the traditional ruler of Nando to facilitate the implementation of the study within the community. Informed consent was obtained from all participants prior to data collection. The study's objectives were clearly communicated to the respondents, who were assured of the confidentiality of their responses. Participants were also informed of their right to withdraw from the study at any point without any adverse consequences.

Results

Table 1: Socio demographic variables of the respondent (n=482)

Socio-demographic	Frequency	Percent (%)
Age group		
≤21	46	9.5
21-25	64	13.3
26-30	114	23.7
31-35	116	24.1
36-40	108	22.4
≥40	34	7.1
Mean (SD)	31.17 (67.66)	—
Marital status		
Married	358	74.3
Divorced/Separated	48	10.0
Single	22	4.6
Widowed	54	11.2
Religion		
Traditionalist	52	10.8
Christianity	426	88.4
Islam	2	0.4
Atheist	2	0.4
Occupation		
Housewife	126	26.1
Civil servant	48	9.9
Business women	142	29.5
Privately employed	62	12.9
Farmer	104	21.6
Educational level		
No formal	48	10.0
Primary	154	32.0
Secondary	202	41.9
Tertiary	78	16.2
Tertiary specified		
OND	24	30.8*
HND	22	28.2*
BSc	30	38.5*
MA/MSc	2	2.6*
Husband's education		
No formal	112	23.2
Primary	252	52.3
Secondary	102	21.2
Tertiary	16	3.3
Husband's occupation		
Artisan	130	27.0
Civil servant	42	8.7
Businessman	192	39.8
Employed in private sector	18	3.7
Farmer	100	20.7
Number of children		
1-3	180	37.4
4-6	260	53.9
7-9	42	8.7

Table 1 presents the demographic characteristics of the respondents. The average age was 31.17 years with a standard deviation of ±7.66, ranging from 17 to 55 years. A significant proportion of the participants were aged between 21-25 years (23.7%), 26-30 years (24.1%), and 36-40 years (22.4%). The majority were married, accounting for 74.7% of the total sample, and most identified as Christians (88.4%). In terms of occupation, 26.1% were housewives, 9.9% worked as civil servants, 29.5% were businesswomen, 12.9% were privately employed, and 21.6% engaged in farming.

Educationally, 10% of respondents had no formal schooling, while 32% completed primary education, 41.9% attained secondary education, and 16.2% had tertiary qualifications. Among the 78 respondents with tertiary education, 30.8% held Ordinary National Diplomas (OND), 28.2% had Higher National Diplomas (HND), 38.5% earned Bachelor's degrees (B.Sc), and 2.5% had postgraduate degrees (MA/M.Sc). Regarding their husbands' education, a majority (52.3%) had primary education, 21.2% had completed secondary school, and 3.3% attained tertiary-level education. Concerning their spouses' occupations,

39.8% were businessmen, 7% were artisans, and 20.7% were farmers. In terms of family size, 37.4% of respondents had between 1 and 3 children, 53.9% had 4 to 6 children, and 8.7% had 7 to 9 children.

Table 2: Socioeconomic status of the respondent (n=482)

Socio-demographic	Frequency	Percent (%)
Number of rooms		
1-3	396	82.2
4-6	82	17.0
7-9	4	0.8
Number of people living in the house (including self)		
1-5	248	51.5
6-10	218	45.2
>11	16	3.3
Main source of water supply		
Private pipe water	8	1.7
Public pipe water	42	8.7
Well water	164	34.0
Borehole	25	5.2
Rain water	14	2.9
Stream water	229	47.5
Kind of toilet facility		
Pit latrine	238	49.4
Water system (flush)	164	34.0
No facility (bush)	80	16.6
Share toilet with other households		
Yes	180	44.8
No	222	55.2
Ownership of residence		
Owned by you	120	24.9
Rented	242	50.2
Owned by a relative	116	24.1
Others	4	0.8
Material of house wall		
Mud	86	17.6
Wood	24	5.0
Concrete blocks	308	63.9
Corrugated zinc	8	1.7
Brick	56	11.6
Household assets		
Motorcycle	92	19.1
Electricity	198	41.1
Motor car	156	32.4
Radio	334	69.3
Television	212	44.0
Telephone	390	80.9
Refrigerator	150	31.1
Kerosene stove	368	76.3
Kerosene lamp	416	86.3
Generating set	184	38.2
Electric iron	124	25.7
Fan	164	34.0

As presented in Table 2, the majority of respondents (82.2%) reside in houses with one to three bedrooms, and over half (51.5%) reported having between one and five individuals living in their households. A significant portion (34%) indicated well water as their primary water source, while 47.5% rely on streams. Sanitation facilities varied, with 49.4% using pit latrines, 34% having access to water system toilets, and 16.6% using the bush. Additionally, 44.8% of respondents stated that their household sanitation facilities (pit latrine or water system) were shared with other families.

Regarding home ownership, 24.9% of the women lived in houses they personally owned, 50.2% were tenants, and 24.1% resided in homes owned by relatives. Most participants (63.9%) lived in houses constructed with concrete blocks. As for household items in working condition, the majority owned radios (69.3%), mobile phones (80.9%), kerosene stoves (76.3%), and kerosene lamps (86.3%). Fewer respondents reported owning other items such as televisions, electricity connections, cars, motorcycles, refrigerators, generators, electric irons, and electric fans.

To evaluate the socio-economic standing of participants, an asset-based index was constructed using Principal

Component Analysis (PCA), in line with the methodology proposed by Filmer and Pritchett (1998; 2001). This analytical approach facilitated the grouping of participants into socio-economic tiers using 18 asset-related variables. These variables included the number of rooms in the dwelling, access to piped water, home ownership status, availability of electricity, and ownership of various household assets such as motorcycles, cars, radios, televisions, mobile phones, refrigerators, kerosene lamps, kerosene stoves, power generators, electric irons, fans, wall construction type, and the presence of flush toilet facilities.

The initial principal component, which captured household asset ownership patterns, explained 25% of the total variation in the data. Each household's asset score was computed by summing the standardized values of these asset variables, each multiplied by its respective factor loading. Using the composite scores, households were segmented into quartiles.

From the classification, 122 respondents (25.3%) were in the lowest economic quartile, designated as the "poorest," while 120 respondents (24.9%) were grouped under the "very poor" category. The remaining participants were classified as "poor" and "least poor" based on the quartile rankings, as presented in the table below.

Table 3: Socio Economic Status (n=484)

Socio-economic Status	Frequency	Percentage (%)
The least poor (Q4)	122	25.3
The poor (Q3)	120	24.9
The very poor (Q2)	120	24.9
The poorest (Q1)	120	24.9

Rate of utilization of maternal health care services of women of child bearing age in primary health care centre.

Table 4a: Utilization of material health services. (n=482)

Antenatal Care Services	Frequency	Percent (%)
Facility used for ANC during pregnancy		
Health centre	362	75.1
Traditional birth attendant	98	20.3
Church/home	22	4.6
Month of registration (n = 362)		
1-3 months	182	50.3
4-6 months	124	34.3
7-9 months	40	11.0
Don't know	16	4.4
Number of ANC attendances (n = 362)		
Once	68	18.8
Two times	112	30.9
Three times	46	12.7
Four times	18	5.0
More than four times	118	32.6
Antenatal services received during pregnancy (n = 362)		
Malaria drugs	352	97.2
Health talk	194	53.6
Tetanus immunization	326	90.1
Prescribed haematinics drugs	208	57.5
Urine & blood sample taken for test	230	63.5
Saw health workers for physical examination	286	79.0
Who takes decision on when and where to attend ANC? (n = 482)		
Myself	156	32.4
My husband	118	24.5
Jointly with my husband	194	40.2
My mother-in-law/sister-in-law	14	2.9

Table 4a indicates that a significant proportion of the women (75.1%) received antenatal care (ANC) services at a health centre. Among them, half (50.3%) registered for ANC within the first three months of pregnancy, while 34.3% registered between the fourth and sixth months. A smaller proportion, 11%, enrolled between the seventh and ninth months, and 4.4% were uncertain about the timing of their registration.

Out of the 362 women who accessed ANC at a health facility, 118 (30.9%) reported attending two sessions, while a slightly higher number, 118 (32.6%), received care more than four times. Regarding the services provided during ANC, 352 participants (97.2%) received antimalarial medication, 194 (53.6%) benefited from health education sessions, and 326 (90.1%) were given tetanus immunizations. In addition, 208 (57.5%) were prescribed haematinics, 230 (63.5%) had urine and blood samples collected for laboratory testing, and 286 (79%) underwent physical examinations conducted by healthcare personnel.

The table further shows the distribution of decision-making authority regarding ANC attendance. A total of 156 women (32.5%) independently decided when and where to seek

antenatal care, while 118 (24.5%) indicated that their husbands made the decision alone. Joint decision-making between the women and their husbands was reported by 194 respondents (40.2%). Only a small fraction (2.9%) stated that the decision was made by a mother-in-law or sister-in-law.

If you did not attend ANC, why didn't you? (You may tick more than one response)

Table 4b: (n-120)

Reason	Frequency	Percent (%)
I have little or no knowledge about ANC clinics	18	15.0
I have no need for ANC since I'm in good health	28	23.3
Too busy to attend ANC clinics	16	13.3
ANC clinics are expensive and I cannot afford it	46	38.3
ANC clinic too far from my home	20	16.7
Waiting time is too long at ANC	12	10.0
My husband disapproves	20	16.7
Poor quality of the services	8	6.7
Because of religion	30	25.0
Health workers are rude	18	15.0

*****Responses not mutually exclusive.

The most frequently cited reason for not attending antenatal care (ANC) among respondents was the high cost, with 38.3% perceiving ANC services as too expensive. This was followed by religious beliefs, cited by 25% of the women, while 23.3% felt that ANC was unnecessary because they considered themselves healthy. Other reasons included husband's disapproval (16.7%), busy schedules (13.3%), negative attitude of health workers (15%), lack of awareness about ANC (15%), and long waiting times (10%).

What is your husband or partner's attitude towards ANC attendance?

Table. 4c: Partner's perception of ANC (n=482)

Variable	Frequency	Percent (%)
Husband's attitude towards ANC		
Positive	354	73.4
Negative	74	15.4
Don't know	54	11.2
Was there any pregnancy you did not use ANC because your husband did not approve?		
Yes	186	38.6
No	296	61.4
Reason based on cost of treatment (n = 296)		
Yes	118	63.4
No	68	36.6

Table 4c reveals that the majority of respondents' partners (73.4%) had a positive disposition towards antenatal care (ANC), while 15% exhibited a negative attitude. Additionally, 11.2% of respondents were undecided about their partner's stance. The data further indicate that 36.8% of the women had experienced at least one pregnancy during which their partners discouraged them from utilizing ANC services. Among those affected, 63.4% cited the high cost of ANC as the primary reason for their partner's disapproval.

Table 5: utilization of maternal health care services for delivery care (n=482)

Variable	Frequency	Percent (%)
Delivered at the health centre		
Yes	214	44.4
No	268	55.6
Delivered at other facility (n = 268)		
Traditional birth attendant's home	184	68.6
At home	22	8.2
In the church	58	21.6
Others	4	1.9
Reasons for not delivering at the health centre (n = 268)		
Expense for delivery at health centre is unaffordable	96	35.8
Dislike behaviour of health workers at health centre	28	10.4
Wishes to deliver at home where relatives are nearby	20	7.6
More trust on TBA/relatives than health workers	64	23.9
My mother-in-law said so	16	5.9
My husband said so	44	16.4
Who takes decision on where to have the baby? (n = 482)		
Myself	188	39.0
My husband	104	21.6
Jointly with my husband	176	36.5
Mother-in-law/sister-in-law	14	2.9
Was there any delivery you did not use the PHC centre because your husband did not approve? (n = 482)		
Yes	308	63.9
No	174	36.1

Table 5 presents data on delivery locations and decision-making dynamics among the respondents. It shows that more than half of the respondents (56%) did not deliver at a health centre, while 44% did. Among those who did not use a health centre (n = 268), the majority, 184 respondents (68.7%) delivered with the assistance of Traditional Birth Attendants (TBAs). This was followed by 58 respondents (21.6%) who delivered in church settings, and 22 (8.2%) who delivered at home.

The reasons cited for not delivering at a health centre were varied. The most common reason was the cost of services, reported by 96 respondents (35.8%). This was followed by 64 respondents (23.9%) who expressed greater trust in TBAs or relatives than in health workers. Another 44 respondents (16.4%) attributed the decision to their husbands. Additional reasons included negative attitudes of health workers (28 respondents or 10.4%), a preference for delivering at home with relatives nearby (20 respondents or 7.6%), and the influence of mothers-in-law or other in-laws (16 respondents or 5.9%).

Regarding decision-making on place of delivery, 188 respondents (39%) made the decision independently. This was followed by 176 respondents (36.5%) who made the

decision jointly with their husbands, and 104 respondents (21.6%) whose husbands made the decision alone. Lastly, the data indicate that 308 respondents (63.9%) did not utilize the health centre for all their deliveries due to their husband's disapproval.

The association between women decision making autonomy and use of maternal health services?

Table 6: Cross tabulation between decision making autonomy and utilization of antenatal services

Decision Area	Response	Utilization of ANC - Yes (%)	Utilization of ANC - No (%)	χ^2 (P-value)
Who takes decision about where and when to attend ANC				10.953 (0.012)
	Myself	112 (30.9)	44 (36.7)	
	My husband	82 (22.7)	36 (30.0)	
	Jointly with my husband	160 (44.2)	34 (28.3)	
	My mother-in-law/sister	8 (2.2)	6 (5.0)	
Who takes decision on where to have your baby				10.851 (0.013)
	Myself	132 (36.5)	56 (46.7)	
	My husband	76 (21.0)	28 (23.3)	
	Jointly with my husband	146 (40.3)	30 (25.0)	
	My mother-in-law	8 (2.2)	6 (5.0)	

p= 0.5,

The findings reveal a statistically significant association between women's decision-making autonomy and their utilization of maternal health care services. This is evidenced by the Chi-square analysis for antenatal care (ANC) services, which produced a value of 10.953 with a p-value of 0.012. A similar result was observed for delivery care services, with a Chi-square value of 10.581 and a p-value of 0.013, both of which are statistically significant at the 0.05 level.

Based on these results, the study concludes that women's autonomy in decision-making is significantly related to their utilization of maternal health services. This conclusion was derived from analysing the responses of women who independently decided when and where to seek maternal care, as well as those who made such decisions jointly with their spouses.

The association between women economic status (e.g wealth index) and use of maternal health services?

Table 7: The economic status and utilization of antenatal services

Socio-economic Status (SES)	Utilization for ANC - Yes (%)	Utilization for ANC - No (%)	χ^2 (P-value)	Utilization for Delivery - Yes (%)	Utilization for Delivery - No (%)	χ^2 (P-value)
Poorest	70 (58.3)	50 (41.7)	40.137 (0.000)	38 (31.7)	82 (68.3)	48.055 (0.000)
The Very Poor	82 (68.3)	38 (31.7)		62 (51.7)	58 (48.3)	
The Poor	110 (83.3)	20 (16.7)		80 (66.7)	40 (33.3)	
The Least Poor	110 (90.3)	12 (9.8)		88 (72.1)	34 (27.9)	

p= 0.05

The findings revealed a statistically significant association between respondents' economic status and their utilization of maternal health services at primary health care centres. The Pearson Chi-square test produced values of 40.137 (p=0.000) for antenatal care (ANC) utilization and 48.055 (p=0.000) for delivery care services, both indicating strong significance at the 95% confidence level. These results suggest that women categorized as "least poor" and "poor" were more likely to utilize ANC and delivery services compared to those in the "very poor" and "poorest" socio-economic status (SES) groups.

Discussion

The study revealed that the majority of respondents (75.1%) attended antenatal care (ANC) services. However, only 214 women (44.4%) delivered in health centres, while 268 (55.6%) gave birth outside health facilities. This pattern reflects a commonly observed disparity between ANC attendance and the actual utilization of skilled delivery services. Similar findings were reported by Okonufua *et al*. (2018), who noted high ANC attendance but comparatively low uptake of institutional delivery care. Likewise, Desta, Mengistu, and Arero (2024) [10] found that while many women accessed antenatal services, significantly fewer opted for facility-based deliveries during their most recent full-term pregnancies. Cost-related barriers and mobility difficulties during the onset of labour were identified as key factors limiting access to institutional delivery.

A significant correlation was found between women's autonomy in decision-making and their use of maternal health services. Women who independently determined the timing and location of antenatal care (ANC) and childbirth—or those who made such choices jointly with their husbands were more likely to utilize these services than those whose decisions were made by others, such as spouses, mothers-in-law, or other family members. This outcome supports the findings of Adedokun, Uthman, and Bisiriyu (2023) [1], who reported that women with either independent or joint decision-making power with their spouses had a higher tendency to access formal maternal health services. Likewise, Simona Simona (2022) [18] noted that women who shared health-related decisions with their

husbands were twice as likely to attend ANC sessions. Shanto *et al*. (2023) [17] also recorded a strong positive relationship between female autonomy and maternal healthcare utilization. However, contrasting evidence from Chiang *et al*. (2012) [9] indicated no meaningful link between women's involvement in household decision-making and their use of maternal health services, implying that autonomy alone may not always influence healthcare use.

Notably, the present study revealed a considerable degree of autonomy among women in rural areas an unexpected finding, considering the typically dominant role of in-laws, especially parents-in-law, in influencing health decisions in such settings. This observed autonomy may suggest evolving social norms, rising awareness facilitated by community organizations, or the increasing influence of feminist thought.

Additionally, a strong association was established between socio-economic status (SES) and the use of maternal health services. Women from higher SES groups were more inclined to seek maternal care compared to those with lower incomes. This aligns with Simona Simona's (2022) [18] findings that women of elevated socio-economic standing had greater access to formal ANC services. Similarly, Nwosu and Ataguba (2019) [14] found that women living below the poverty line were far more likely to give birth at home. Further, Yun-Jung Eom *et al*. (2025) [20] reported that financial independence significantly increased the likelihood of maternal service utilization. The expenses associated with clinic visits often create barriers for financially dependent women, thereby supporting the view that economic empowerment promotes greater access to maternal health services.

Consent for publication

All authors gave consent for the publication of the work.

Competing interest

There is competing interests.

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