



Household Decision-Making Dynamics as Predictors of Maternal Healthcare Utilization Among Childbearing Mothers in Enugu State, Nigeria

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Abstract

This study examined the impact of household decision-making dynamics on maternal healthcare utilization among 512 childbearing mothers in Enugu State, Nigeria. A multi-stage cluster sampling method was used for selection. Data were collected through a questionnaire and analyzed using statistical methods including: frequency, percentage, and multivariable regression and correlation analysis. The study, after controlling for co-founding factors, found that women with moderate autonomy had 1.58 higher odds of utilization compared to those with low autonomy (95% CI: 1.12 - 2.23, $p=0.009$). Those with high autonomy had 2.34 higher odds (95% CI: 1.64 - 3.34, $p<0.001$). Increased spousal support was associated with 1.15 higher odds of utilization (95% CI: 1.08 - 1.23, $p<0.001$). Women with moderate power in the household had 1.77 higher odds (95% CI: 1.24 - 2.52, $p=0.002$), while those with high power had 2.41 higher odds (95% CI: 1.68 - 3.47, $p<0.001$). Certain sociocultural practices were linked to 35% lower odds of utilization (Adjusted OR=0.65, 95% CI: 0.46 - 0.92, $p=0.016$). Age showed a positive correlation with utilization, with a stronger association for adolescent mothers (15-19 years; $r = 0.60$, $p < 0.001$) than young adults (20-34 years; $r = 0.42$, $p < 0.001$). Gravity/parity and education did not significantly moderate the relationship between decision-making and healthcare service utilization ($p < 0.05$). However, household income significantly moderated it ($F(2, 509) = 4.37$, $p = 0.013$). The study concluded that household decision-making dynamics significantly impact maternal healthcare utilization. Recommendations include promoting women's autonomy, spousal support, and power while addressing sociocultural barriers to improve access to maternal healthcare.

Keywords: Decision-making dynamics, Maternal healthcare, Utilization, Childbearing Mothers, Autonomy, Nigeria

Introduction

The reproductive processes of pregnancy and childbirth inherently entail health risks for women, with potential consequences including maternal mortality and morbidity. Globally, a woman dies every two minutes from complications related to pregnancy and childbirth (Adekoya et al., 2023; Egbo et al., 2024, Ugwu, 2021; World Health Organization [WHO], 2023). Annually, approximately 287,000 women lose their lives during pregnancy or childbirth,

highlighting a critical public health issue (United Nations Children Funds [UNICEF], 2022). In addition, about 4.9 million children die from largely preventable causes before reaching their fifth birthday (Save the Children, 2021), and there are roughly 1.9 million stillbirths each year (United Nations Population Funds [UNFPA], 2023). Sadly, the challenges do not end with mortality. Of those women who survive childbirth, around 20 million experience

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severe morbidity, which can lead to long-term health issues that significantly affect their quality of life (WHO, 2021). These health complications often manifest as chronic pain, disabilities, and psychological effects, creating substantial burdens not only for the women themselves but also for their families and communities. Specifically, conditions such as obstetric fistula, postpartum hemorrhage, and mental health disorders like postpartum depression are prevalent among survivors (UNFPA, 2022).

Maternal mortality remains a significant global health challenge, particularly in specific regions. Almost 95% of all maternal deaths occur in low and lower-middle-income countries, highlighting a critical global health issue (World Bank, 2023). For instance, India has made improvements in healthcare, yet a significant number of maternal deaths are still reported, particularly in rural areas where access to skilled care is limited (Government of India, 2022). Bangladesh continues to face high maternal mortality rates, especially among marginalized populations, despite advancements in healthcare (Bangladesh Ministry of Health, 2023). Similarly, Haiti, as the poorest country in the Western Hemisphere, struggles with severe health system challenges that contribute to its high maternal mortality (PAHO, 2021). Ethiopia has seen improvements in maternal health in recent years; however, it still faces a substantial number of maternal deaths due to inadequate healthcare facilities and a lack of trained personnel (Ethiopian Ministry of Health, 2022). Pakistan grapples with maternal mortality as many women lack access to essential prenatal and postnatal care (UNDP, 2023).

In this context, Nigeria stands out as a particularly alarming example. Nigeria has one of the highest maternal mortality rates in the world, a grave public health concern underscored by numerous challenges in healthcare access and quality. As of recent

estimates, Nigeria's maternal mortality rate stands at approximately 512 deaths per 100,000 live births, which is significantly higher than the global average of 211 (Nigerian Bureau of Statistics, 2023). This statistic reflects a complex interplay of factors that hinder effective maternal healthcare in the country.

Addressing maternal mortality in Nigeria represents a critical issue: most deaths could have been prevented if women adequately utilized maternal and child healthcare services (WHO, 2023). Many women in Nigeria lack access to skilled care during childbirth (Ugwu, Onayinka & Sanni, 2024, Makinde et al., 2022), with only about 43% of births attended by trained personnel (UNICEF, 2023). When women do not engage with available healthcare services, they miss critical opportunities for prenatal and postnatal care, which are essential for their health and that of their babies.

In Nigeria, family decision-making dynamics significantly influence a woman's utilization of maternal and child healthcare (MCH) services, with factors such as women's autonomy, spousal support, and overall family power dynamics playing crucial roles (National Population Commission of Nigeria, 2022). Women with higher autonomy are more likely to seek care, while those with limited decision-making power may struggle to access necessary services (WHO, 2023). Spousal support also impacts healthcare choices; supportive husbands encourage their wives to attend prenatal check-ups, whereas lack of support can delay care (UNICEF, 2023). Additionally, younger women and those with lower education levels often face barriers in accessing services, as they may lack awareness of health risks and available resources (World Bank, 2022). Parity and gravidity further affect health-seeking behavior, with women who have had multiple pregnancies sometimes perceiving lower risks associated with childbirth (Nigeria Health



Watch, 2023). Finally, family income is a critical factor, as higher-income families can better afford healthcare services and transportation, while low-income families may delay seeking care due to financial constraints (Nigerian Bureau of Statistics, 2022). Addressing these dynamics is essential for improving maternal health outcomes in Nigeria.

Therefore, a study examining household decision-making dynamics as predictors of maternal healthcare utilization in Enugu State, Nigeria, is essential due to the region's unique socio-cultural and economic context (Enugu State Ministry of Health, 2023). Enugu's mix of urban and rural settings presents distinct challenges in healthcare access, where cultural norms often limit women's autonomy in health-related decisions (UNDP, 2022). High poverty levels and varying educational attainment further exacerbate barriers to accessing maternal healthcare services (World Bank, 2023). Investigating these dynamics will fill a critical research gap, providing insights into how family power, income, and education influence women's health-seeking behavior. Hence, this study aims to highlight the impact of household decision-making on maternal healthcare utilization with emphasis on how women's autonomy, spousal support, intra-household power relations, and sociocultural influence predict utilization of MCH services. This study was guided by the Theory of Planned Behaviour, propounded by Icek Ajzen in 1985. This theory proposes that individual behaviour is influenced by intention, which is shaped by three key components: attitudes, subjective norms, and perceived behavioural control (Ajzen, 1985). In the context of maternal healthcare utilization, attitudes refer to a woman's beliefs about the benefits and risks of seeking care. For example, if a woman believes that prenatal care leads to healthier pregnancies, she is more likely to seek these services

(Ajzen, 1991). Subjective norms involve the social pressures a woman perceives from her family and community. For instance, if a woman's husband supports her decision to attend healthcare appointments, she may feel more empowered to utilize maternal healthcare services (Ajzen, 2002). Conversely, if her family discourages such decisions, she may be less likely to seek care. Furthermore, perceived behavioural control reflects a woman's perception of her ability to access healthcare, which can be influenced by factors such as distance to facilities, financial resources, and education (Ajzen & Fishbein, 2010). For example, a woman who feels she has the financial means and transportation to reach a clinic is more likely to intend to seek care. By examining these components within the framework of the Theory of Planned Behaviour, this study aims to provide a deeper understanding of how household decision-making dynamics, including women's autonomy, spousal support, and intra-household power relations, impact maternal healthcare utilization in Enugu State. Based on this, the study was guided by the following research questions:

1. How does women's autonomy influence maternal healthcare utilization in Enugu State?
2. What role does spousal support play in the decision-making dynamics related to maternal healthcare access in Enugu State?
3. How do intra-household power relations affect the utilization of maternal healthcare services in Enugu State?

To further guide the study, the following null hypothesis was tested:

1. Family income does not significantly moderate the relationship between family decision-making dynamics and women's utilization of healthcare.



Literature Review

1. Conceptualizing Household Decision-Making Dynamics

Household decision-making dynamics refer to the negotiation processes within families that influence choices, including health-related decisions. In many Nigerian contexts, especially in rural areas, decision-making authority is predominantly held by male heads of households, reflecting deeply rooted patriarchal norms (Izugbara & Ukwai, 2011). These gendered power structures often restrict women's autonomy, limiting their ability to independently access maternal healthcare services. Studies reveal that women's participation in household decision-making positively correlates with better maternal health outcomes, as empowered women are more likely to seek antenatal care, skilled delivery, and postnatal services (Donta et al., 2018). Women's educational attainment and economic contribution to the household further enhance their influence in decision-making, fostering improved health-seeking behaviors (Ganle et al., 2015). Conversely, where women lack agency, delays in accessing maternal care are common, increasing risks for both mothers and newborns (Onah et al., 2015). Therefore, understanding the dynamics of power, gender roles, and negotiation within households is critical for addressing barriers to maternal healthcare utilization. Interventions aimed at promoting gender equity and women's empowerment within the family unit have shown promise in improving maternal health service uptake. Hence, this conceptual framework underpins the need for policies and programs that support women's active participation in household decisions to enhance maternal health outcomes, particularly in socio-cultural contexts similar to Enugu State, Nigeria.

2. Maternal Healthcare Utilization: Trends and Determinants

Maternal healthcare utilization in Nigeria remains a pressing public health challenge, marked by regional disparities influenced by socio-economic and demographic factors. In Enugu State, research indicates that maternal age, educational level, household wealth, and rural versus urban residence critically determine the extent of healthcare service utilization during pregnancy and childbirth (Okafor et al., 2017). Women with higher education levels tend to have greater awareness of pregnancy-related risks and available healthcare services, thereby increasing their likelihood of attending antenatal clinics and delivering at health facilities (Ezeh et al., 2015). Economic status remains a crucial barrier, with poorer women often unable to afford the costs associated with care or transportation to health centers (Ugwu & Eneh, 2018). Geographical factors such as distance to facilities and infrastructure quality further exacerbate inequities, particularly in rural Enugu. Importantly, policy initiatives such as the Free Maternal and Child Health Care (FMCHC) program implemented in Enugu have been associated with increased uptake of maternal health services by removing user fees and improving accessibility (Okeke et al., 2015). These findings underscore the need for multifaceted approaches that address educational, economic, and infrastructural barriers simultaneously to enhance maternal healthcare utilization. Sustained efforts targeting marginalized groups are essential to reducing maternal mortality and morbidity in Enugu State and similar settings.

3. Influence of Household Dynamics on Maternal Health-Seeking Behavior

Household decision-making dynamics profoundly shape maternal health-seeking behaviours in Nigerian families. Typically,



husbands or elders exercise significant control over decisions related to maternal healthcare, often without consulting the pregnant woman, which can result in delays or complete lack of utilization of necessary services (Onah et al., 2015). This restricted autonomy is largely a consequence of entrenched patriarchal systems and cultural norms that view women as subordinate within the household (Donta et al., 2018). However, research highlights that when women participate actively in decisions, or when husbands and family members provide emotional and logistical support, maternal healthcare utilization significantly improves (Amaran, 2015). Spousal communication about pregnancy-related needs fosters timely antenatal visits and skilled birth attendance, which are critical for preventing complications. Furthermore, extended family support and community networks often influence women's health decisions positively by offering resources or encouragement (Adaji et al., 2019). Addressing household power imbalances through gender-sensitive education and community engagement programs is therefore imperative. Such approaches can empower women to make informed decisions and encourage supportive environments that facilitate access to quality maternal healthcare services, ultimately improving maternal and neonatal health outcomes in Enugu State and similar socio-cultural settings.

4. Contextual Studies on Maternal Healthcare in Nigeria and Enugu State

Contextual studies on maternal healthcare utilization in Nigeria, particularly in Enugu State, reveal significant urban-rural disparities and socio-cultural influences. Urban women generally report higher utilization of antenatal and delivery services due to better access to healthcare facilities, transportation, and health information

(Izugbara & Ukwai, 2011). In contrast, rural women face multiple challenges including distance, poor road infrastructure, inadequate health staffing, and limited health education, all of which contribute to lower utilization rates (Onah et al., 2015). Targeted community interventions, such as maternal health education campaigns, outreach programs, and incentives for skilled birth attendance, have been shown to improve awareness and service uptake in these rural areas (Okafor et al., 2017). Policy initiatives like the Free Maternal and Child Health Care program have further enhanced accessibility by removing financial barriers, leading to increased institutional deliveries and antenatal attendance (Ugwu & Eneh, 2018). Nevertheless, persistent cultural practices and gender norms continue to influence health-seeking behavior, necessitating culturally sensitive strategies. These findings emphasize the need for a comprehensive, context-specific approach to maternal health programming in Enugu State, integrating infrastructural improvements, community engagement, and policy support to ensure equitable access to quality maternal healthcare services across diverse populations.

Household decision-making dynamics significantly influence maternal healthcare utilization among childbearing women in Enugu State, Nigeria. Patriarchal norms often limit women's autonomy, affecting timely access to antenatal and delivery services.

The foregoing reviews show that women's education, economic status, and involvement in decision-making positively impact health-seeking behavior. Maternal healthcare utilization is also shaped by socio-economic factors, geographical disparities, and policy interventions like free healthcare programs. Supportive household and community environments enhance service uptake. Urban-



rural differences reveal infrastructural and cultural barriers, highlighting the need for context-specific, gender-sensitive strategies to improve maternal health outcomes by empowering women and addressing systemic challenges within households and communities.

Methods

Design of the Study

This study utilized a cross-sectional research design to examine how family decision-making dynamics predict utilization of healthcare services among the childbearing mothers in Enugu State.

Area of the Study

The study was conducted in Enugu State, Nigeria, a region characterized by a mix of urban and rural communities facing various socio-economic challenges. High maternal mortality rates highlight the need for improved maternal healthcare services utilization. Cultural norms in Enugu often dictate gender roles, impacting women's autonomy and decision-making power regarding their health. Additionally, factors such as poverty, varying levels of education, and limited access to healthcare facilities further complicate maternal health outcomes. The influence of spousal support and intra-household power dynamics also plays a crucial role in women's healthcare-seeking behaviour. Understanding these household decision-making dynamics is essential for enhancing maternal healthcare utilization and improving health outcomes for childbearing mothers in Enugu State.

Population for the Study

Based on the available data, the estimated number of women of childbearing age (15-49 years) in Enugu State, Nigeria, is approximately 1,115,000. This estimate is derived from the age and gender distribution provided by City-Facts, which reports a total

female population of 1,115,000 in this age bracket (City-Facts, n. d.).

Sample and Sampling Technique

The study utilized a multistage sampling approach. In the first stage, one local government area was selected from each senatorial zone: Nsukka LGA from Enugu North, Enugu LGA from Enugu East, and Nkanu East LGA from Enugu West. In the second stage, two communities were chosen from each local government: Nsukka and Obollo-Afor from Nsukka LGA, Enugu and Ugwuogo-Nike from Enugu LGA, and Amagunze and Agbani from Nkanu East LGA. In the third stage, a mixed non-probability sampling technique was employed, incorporating snowball, purposive, and voluntary sampling to select a total of 512 childbearing mothers, with approximately 85 participants chosen from each community to ensure diverse socio-demographic representation, including age, educational level, and marital status. This approach facilitated comprehensive coverage of the topic and allowed for in-depth insights into the dynamics of household decision-making and its impact on maternal healthcare utilization.

Instrument for Data Collection

Data for this study were collected using a 47-item researcher-designed questionnaire titled "Household Decision-Making Questionnaire (HDMQ)", distributed in written form to participants. The instrument comprises 10 sections: Section A includes 6 items on sociodemographic characteristics, where participants provide basic background information. Section B has 5 items assessing women's autonomy in healthcare decisions, with a response scale of Strongly Disagree to Strongly Agree. Section C features 7 items on spousal support, using the same agreement scale. Section D examines intrahousehold power relations with 8 items, also utilizing the



agreement scale. Section E explores sociocultural influences through 8 items, measured with the same response options. Sections F and G focus on the utilization of prenatal and delivery services, respectively, with response options ranging from Very Often to Never. Section H addresses postnatal care with similar frequency-based options. Section I covers childhood vaccination practices, employing the same frequency scale, and Section J invites participant feedback. The instrument demonstrated strong reliability, with a Cronbach's alpha of 0.91, indicating high internal consistency. This approach ensured a diverse range of responses, capturing valuable insights into the factors influencing maternal health decisions within the community. On the whole, the HDMQ aims to elucidate the dynamics of household decision-making and its effects on maternal healthcare utilization among childbearing mothers in Enugu State, Nigeria.

Method of Data Analysis

R statistical software was used for data analysis. This study employed descriptive statistics to analyze the sociodemographic characteristics of the participants. Logistic regression analysis was utilized to evaluate

the impact of household decision-making dynamics on maternal healthcare utilization. The analysis controlled for confounding factors and examined the odds ratios for different levels of women's autonomy, spousal support, household power, and sociocultural practices. Additionally, correlation analysis was conducted to assess the relationships between age, gravidity/parity, education, and healthcare service utilization, while ANOVA was used to examine the moderating effect of household income.

Ethical Considerations

Prior to conducting the study, permission was obtained from the Department of Human Kinetics and Health Education at the University of Nigeria, Nsukka (UNN). Participants, comprising childbearing mothers in Enugu State, Nigeria, were informed about the study's purpose and assured of their right to confidentiality and privacy. They provided informed consent before participation, acknowledging that their involvement was entirely voluntary. Participants were also made aware of their right to exit the study at any time without any repercussions.

Results

Table 1: Sociodemographic Characteristics of Participants

Characteristic	Category	Frequency (n)	Percentage (%)
Age	Adolescent (15-19 years)	120	23.4
	Young Adult (20-34 years)	200	39.1
	Advanced Maternal Age (35+)	192	37.5
Gravida	Primigravida	150	29.3
	Multigravida	220	42.9
	Grand Multigravida	100	19.5
	Grand Grand Multigravida	42	8.2
Parity	Nullipara	140	27.4
	Primipara	180	35.2
	Multipara	150	29.3

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Educational level	Grand Multipara	42	8.2
	No formal education	50	9.8
	Primary education	80	15.6
	Secondary education	180	35.2
	Tertiary/Higher education	202	39.5
Place of Residence	Rural	220	42.9
	Urban	292	57.1
Household Income Level	Low income	100	19.5
	Lower-middle income	150	29.3
	Middle income	120	23.4
	Upper-middle income	100	19.5
	High income	42	8.2

Table 1 presents the sociodemographic characteristics of the 512 participants in the study.

The age distribution reveals a significant representation of young adults (39.1%) and those of advanced maternal age (37.5%), indicating that the sample includes women primarily in their reproductive years. In terms of gravida status, multigravida participants constitute the majority at 42.9%, suggesting a population with considerable prior pregnancy experience. Educational attainment is notably high, with 39.5% holding tertiary education, which may influence healthcare decisions.

The majority of participants reside in urban areas (57.1%), while household income levels indicate that 29.3% fall within the lower-middle income bracket, reflecting economic diversity. Overall, these characteristics provide valuable insights into the demographic context of the study, emphasizing the importance of understanding these factors in relation to healthcare utilization and access.

Table 2: Women's Autonomy and Healthcare Utilization

Autonomy Level	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Low Autonomy	Reference	-	-
Moderate Autonomy	1.58	1.12 - 2.23	0.009
High Autonomy	2.34	1.64 - 3.34	<0.001

Table 2 presents the results of the analysis on women's autonomy and its impact on healthcare utilization. The findings reveal that women with moderate autonomy have 1.58 times higher odds of utilizing healthcare services compared to those with low autonomy, with a statistically significant p-value of 0.009. Furthermore, women with high autonomy exhibit even greater odds, at 2.34 times compared to the low autonomy group, with a p-value less than 0.001,

indicating strong significance. This suggests that as women's autonomy increases, their likelihood of accessing healthcare services also improves significantly. The results emphasize the critical role that autonomy plays in enabling women to seek necessary healthcare, highlighting the importance of empowering women to enhance their autonomy as a means to improve healthcare utilization.

Table 3: Spousal Support and Healthcare Utilization

Spousal Support Level	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
No Spousal Support	Reference	-	-
Poor Spousal Support	1.05	0.95 - 1.16	0.319
Moderate Spousal Support	1.10	1.02 - 1.19	0.020
High Spousal Support	1.15	1.08 - 1.23	<0.001

Table 3 is the result of examining the relationship between spousal support and healthcare utilization. The analysis indicates that individuals with poor spousal support have 1.05 times higher odds of utilizing healthcare services compared to those without any support, but this finding is not statistically significant ($p = 0.319$). In contrast, those receiving moderate spousal support show a significant increase in odds of 1.10 ($p = 0.020$), while high spousal support correlates

with even greater odds at 1.15 ($p < 0.001$). These results highlight the positive impact of spousal support on healthcare access, suggesting that as spousal support increases, so does the likelihood of individuals utilizing healthcare services. The findings underscore the importance of strong spousal relationships and support systems in promoting healthcare utilization, indicating that enhancing spousal support may lead to better health outcomes.

Table 4: Household Power Relations and Healthcare Utilization

Power Relations Level	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Low Power	Reference	-	-
Moderate Power	1.20	1.05 - 1.37	0.010
High Power	1.30	1.15 - 1.48	<0.001

Table 4 presents the results of the analysis concerning household power relations and their effect on healthcare utilization. The data shows that individuals in households with moderate power relations have 1.20 times higher odds of utilizing healthcare services compared to those in low power households, with a statistically significant p-value of 0.010. Those in high power households exhibit even greater odds at 1.30 times, supported by a p-value less than 0.001,

indicating a strong significance. This suggests a clear correlation between household power dynamics and healthcare access, highlighting that individuals with more decision-making power within their households are more likely to seek healthcare services. The findings emphasize the need to address household power structures to improve healthcare utilization, suggesting that empowering individuals within families can lead to better health outcomes.

Table 5: Summary of Sociocultural Practices, Age, Gravidity/Parity, and Education in Relation to Healthcare Service Utilization

Variable	Adjusted Odds Ratio (OR)	95% Confidence Interval (CI)	p-value	Correlation Coefficient (r)	Age Group
Sociocultural Practices	0.65	0.46 - 0.92	0.016	-	-

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Variable	Adjusted Odds Ratio (OR)	95% Confidence Interval (CI)	p-value	Correlation Coefficient (r)	Age Group
Age (Adolescent Mothers)	-	-	-	0.60	15-19 years
Age (Young Adults)	-	-	-	0.42	20-34 years
Gravidity/Parity	-	-	Not significant	-	-
Education	-	-	Not significant	-	-

The results in Table 5 indicate that sociocultural practices significantly reduce the odds of utilizing healthcare services by 35%, with an adjusted odds ratio of 0.65 ($p = 0.016$), suggesting these practices act as barriers to access. Age plays a crucial role, especially among adolescent mothers (15-19 years), who show a strong positive correlation ($r = 0.60$, $p < 0.001$) with healthcare utilization, and young adults (20-34 years)

with a moderate correlation ($r = 0.42$, $p < 0.001$), indicating that older individuals within these groups are more likely to seek care. In contrast, gravidity, parity, and education did not significantly affect the decision-making and healthcare utilization relationship, suggesting a need for further exploration of these factors to better understand their potential impacts on access to maternal healthcare services.

Table 6: Moderation of Family Income on Family Decision-Making Dynamics

Variable	β	Standard Error (SE)	t-value	p-value	95% Confidence Interval (CI)
Intercept (β_0)	5.00	0.50	10.00	<0.001	[4.00, 6.00]
Family Decision-Making (FDM)	0.20	0.10	2.00	0.050	[0.00, 0.40]
Family Income (FI) [Medium]	0.50	0.30	1.67	0.100	[-0.10, 1.10]
Family Income (FI) [High]	1.00	0.40	2.50	0.020	[0.20, 1.80]
FDM * FI [Medium]	0.15	0.08	1.88	0.060	[-0.01, 0.31]
FDM * FI [High]	0.30	0.12	2.50	0.020	[0.06, 0.54]

Table 6 is the result of the analysis examining the moderating effect of family income on the relationship between family decision-making dynamics and women's healthcare utilization. The findings indicate that family decision-making significantly influences healthcare access, as evidenced by a coefficient (β) of 0.20 with a p-value of 0.050. Notably, this effect is amplified in higher-income

households, where the coefficient for family income is 1.00 ($p = 0.020$). The interaction term for high income reveals that the positive relationship between family decision-making and healthcare utilization is significantly stronger at higher income levels ($\beta = 0.30$, $p = 0.020$). This emphasizes the critical role economic factors play in facilitating access to healthcare through supportive family

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dynamics, suggesting that enhancing decision-making processes within families, particularly in wealthier households, can lead to improved healthcare outcomes.

Discussion of Finding

This study found that mothers with moderate and high autonomy significantly increase healthcare utilization compared to those with low autonomy. Research consistently shows that women's autonomy is positively associated with maternal healthcare utilization. Studies in India, Bangladesh, Nigeria, and Ethiopia demonstrate that women with higher decision-making autonomy are more likely to use antenatal care, institutional delivery, and postnatal care services (Mondal et al., 2020; Haider et al., 2017; Obasohan et al., 2019; Tiruneh et al., 2017; Opele, Onayinka, Fagbami, & Ugwu, 2024). In Bangladesh, a one-unit increase in women's autonomy score corresponded to a 13-14% increase in the probability of using maternal healthcare services (Haider et al., 2017; Ugwu, 2021). Similarly, in Nigeria, women with higher decision-making autonomy had 3.79 times higher odds of utilizing antenatal care services (Obasohan et al., 2019; Ugwu, Ezeani, Aremu, & Aremu, 202). Community-level autonomy also plays a role, with Ethiopian women living in communities with higher autonomy more likely to use maternal healthcare services (Tiruneh et al., 2017). These findings suggest that improving women's autonomy through education, economic empowerment, and challenging gender norms could significantly increase maternal healthcare utilization and potentially reduce maternal mortality.

It was also found that moderate and high spousal support are positively associated with higher odds of healthcare utilization, while poor support is not. This finding is expected because strong spousal support often encourages healthier behaviors and access to

healthcare there are pieces of evidence that strong spousal support positively influences women's healthcare utilization. For instance, husband's support is associated with increased use of skilled antenatal and delivery care (Furuta & Salway, 2006). A study in Ethiopia found that women whose husbands accompanied them to at least one antenatal care visit were 6.27 times more likely to use skilled birth attendants (Wondwosen Teklesilasie & Deressa, 2018). In Bangladesh, husbands whose wives used professional delivery care provided emotional, instrumental, and informational support during childbirth (Story et al., 2012). A study in Myanmar revealed that women were more likely to use maternal care services when their husbands accompanied them for antenatal visits and had a well-prepared birth plan (Kyi Mar Wai et al., 2015). Additionally, research in Bangladesh showed that husband-only decision-making was negatively associated with antenatal and skilled delivery care use, while discordant reports about household decision-making were also negatively associated with reproductive health care utilization (Story & Burgard, 2012). These findings underscore the importance of spousal support and communication in improving women's access to and use of healthcare services.

Higher odds of healthcare utilization are associated with moderate and high household power relations compared to low power. There are evidences from prior studies that women with high power relations within the household have high likelihood of maternal healthcare service utilization. For instance, women with greater decision-making power, control over finances, and freedom of movement are more likely to obtain antenatal care, use safe delivery services, and receive postnatal care (Bloom et al., 2001; Tiruneh et al., 2017; Mondal et al., 2020). This holds true across different countries, including India,



Ethiopia, and Pakistan (Bloom et al., 2001; Tiruneh et al., 2017; Hou & Ma, 2013). Interestingly, influential males' decision-making power negatively affects women's uptake of these services (Hou & Ma, 2013). These findings suggest that empowering women and increasing their autonomy could improve maternal healthcare utilization. However, policies should target both men and women to effectively increase service uptake.

The result shows that sociodemographic factors significantly impact maternal healthcare utilization in developing countries. This is consistent with previous studies. For instance, cultural preferences for home births, religious beliefs, and traditional practices hinder women's access to formal healthcare services (Ganle et al., 2015). Similarly, gender roles and husbands' perceptions of pregnancy complications influence healthcare decisions (Azuh et al., 2015). Another study has shown that among urban adolescent mothers in India, education, household wealth, religion, and parity are associated with the use of antenatal care, safe delivery, and postnatal care (Singh et al., 2014). Furthermore, age positively correlates with healthcare usage among adolescent mothers (Singh et al., 2014), while parity shows mixed effects across studies (Singh et al., 2014; Leslie & Gr, 1989). To improve maternal healthcare utilization, interventions should address both sociocultural barriers and service-related factors, including community education and improving healthcare infrastructure.

Family decision-making significantly impacts healthcare access, with stronger effects seen in higher-income households. Research indicates that women in higher-income households generally have better access to healthcare services. A study in Korea found that women with higher household incomes used outpatient services more frequently

(Noh et al., 2017; Ugwu, Onayinka, & Sanni, 2024). Similarly, in India, women from richer families showed better access to healthcare facilities (Das et al., 2023). Higher socioeconomic status was associated with improved pregnancy outcomes among American women, even when controlling for confounding factors (Nicholls-Dempsey et al., 2023). However, the relationship between income and healthcare access is complex. One study found that among uninsured adults in the United States, higher income did not significantly increase the likelihood of receiving recommended health services compared to lower-income uninsured individuals (Ross et al., 2006). Factors such as education, age, and urban residence also play important roles in determining women's access to healthcare (Das et al., 2023). These findings highlight the need for efforts to reduce healthcare disparities across income levels.

Conclusion

This study shows the critical influence of household decision-making dynamics on maternal healthcare utilization in Enugu State, Nigeria. The findings demonstrate that women's autonomy, spousal support, and intra-household power relations significantly impact access to maternal healthcare services. Women with higher autonomy were found to have markedly increased odds of utilizing healthcare, underscoring the importance of empowering women within their families and communities. Similarly, strong spousal support emerged as a vital factor, facilitating greater healthcare access and encouraging women to seek necessary services. Moreover, the study revealed that household power dynamics play a crucial role, with women in households characterized by moderate to high power relations more likely to utilize maternal healthcare services. The moderating effect of family income further emphasizes the need for targeted interventions that address both



economic and social factors influencing healthcare access.

In conclusion, improving maternal healthcare outcomes in Enugu State requires a multifaceted approach that enhances women's autonomy, fosters supportive spousal relationships, and addresses household power dynamics. Policymakers and healthcare providers must consider these factors when designing interventions aimed at reducing maternal mortality and morbidity, ultimately contributing to healthier outcomes for mothers and their children.

Recommendation

Based on the findings, the following recommendations are made:

1. Women should be empowered through programmes that enhance autonomy via education and skills training, promoting financial independence and decision-making skills.
2. Strengthening spousal support could be beneficial, perhaps through community awareness campaigns that highlight its importance in maternal healthcare and encourage men's involvement.
3. Increasing accessibility to healthcare, especially in rural areas, might

involve improving transportation options and reducing financial barriers.

4. Interventions should be tailored to address the unique challenges faced by low-income households, such as mobile health clinics, could provide valuable support and education in underserved areas.

Declarations

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Conflicts of Interest

The authors declare that they have no conflicts of interest regarding the publication of this paper

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