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Factors influencing the acceptance of cesarean sections among women of reproductive age in ekiti state, Nigeria

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Abstract

The study examined factors influencing the acceptance of cesarean sections among Women of Reproductive age in Ekiti State. Specifically, the study assessed how socio-demographic and socio-economic factors influenced the acceptance of cesarean sections. A descriptive survey research design was employed for the study. The population for this study consisted of women of reproductive age spread across the three senatorial districts of Ekiti State. The sample for the study was 325 women of reproductive age whose selection was based on multistage sampling procedure. An interviewer administered questionnaire was used to collect data for the study. The reliability of the instrument was determined through Cronbach's Alpha method and a reliability co-efficient of 0.9 was obtained. All data obtained were analyzed using descriptive and inferential statistics. The research questions were analyzed with descriptive statistics using frequency counts, percentage, mean and standard deviation. Hypotheses formulated were tested using linear and multiple regression analysis at 0.05 level of significance. The findings revealed that age, educational status, religious belief, cultural belief and socio-economic status respectively has significant influence on acceptance of cesarean sections among the participants. It was therefore recommended that public health officials should re-orientate women of reproductive age on cesarean sections as an alternative means of child delivery; elderly Primigravida and Multigravida women should be encouraged to undergo cesarean sections delivery if there are indications for it in order to reduce the risk of complications through vaginal delivery method.

Keywords: Cesarean sections; Delivery; Pregnancy; Reproductive age; Women

1. Introduction

When difficulties emerge during pregnancy or delivery, cesarean sections (CS) are among the basic obstetric care treatments that help ensure the health and wellbeing of mothers and their infants (Nilsen et al, 2014). When a prolonged pregnancy and/or labor is regarded undesirable and the vaginal route is not possible, this surgical treatment may be utilized to facilitate a fast delivery of the baby, saving the mother's life.

However, cesarean sections has historically been seen as an aberrant method of giving birth by others, most especially in this part of the world. Upon hearing that a lady has just given birth through Caesarian section, some people create the impression that she is either weak or incomplete sexually, these shows that cesareansurgery is being accepted grudgingly in most sub-Saharan African nations, including Nigeria, despite evident clinical need, and most women hope not to undergo it. According to Adeoye and Kalu (2011), this is because the ladies of South Western Nigeria still see a woman's inability to give birth while still a virgin as a curse of an unfaithful woman, which in turn causes them to feel a range of negative emotions.

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In western nations including the United States, the United Kingdom, and Bangladesh, the rate of cesarean sections (CS) has risen substantially in recent years (McAra-Couper et al., 2017), likely because to the widespread belief that CS may help reduce difficulties for both mothers and their newborns. However, reports of low CS prevalence in Nigeria suggest that there are unmet demands in the country's cesarean sections rates. Low rates of cesarean sections birth in Nigeria have been attributed to a number of causes, including rural residency, religious belief, lack of antenatal visit, lack of health insurance coverage, lack of husband/education, partner's and birth order.

World Health Organization (WHO) researchers started out to find the optimum rate of elective cesarean deliveries in 1985, in response to the widening gap between countries in this area. The 15% of women in SW Nigeria who the WHO estimates will have elective c-sections do so despite widespread mistrust, misunderstanding, dread, shame, agony, and fury (Adeoye and Kalu, 2011).

Statistics from the World Health Organization (WHO) show that between 2012 and 2015, around 303,000 women lost their lives during or shortly after giving birth to a child. Most of these fatalities happened in countries with little medical resources, such as Nigeria. In 2010, Nigeria was responsible for over 14% (40,000) of worldwide maternal deaths, and in 2011, the country had the highest maternal mortality rate, with a rate of between 1000 and 1500 deaths per 100,000 births.

In addition, a study by Ugwu and De Kok (2015) found that women avoid elective cesarean sections for a variety of reasons, including the fear of abandonment by their husband and in-laws, the negative attitudes and cultural beliefs that pregnant women hold about cesarean sections, the inability to have the desired number of children as a result of previous cesarean sections, and the high cost of the procedure.

These, and other socio demographic factors like age, education level, cultural belief, religious belief, and family socioeconomic status, are among the reasons why some women refuse to have a cesarean sections, even when it is demonstrated that they could not give birth vaginally or undergo normal delivery and their lives and that of the unborn child(ren) are at high risk.

According to the researcher's first-hand accounts from conversations with expectant mothers, cesarean sections is always viewed as an abnormal method of childbirth because most people are shocked to learn that someone just gave birth via cesarean section and begin viewing the woman as someone who is not complete reproductively and less of a woman. Hence the researchers reason for wanting to know the various factors that may play a role in women's reluctance to have the cesarian surgery do. The main purpose of this study is to determine the socio-demographic factors and socio-economic factors influencing the acceptance of cesarean section among women of reproductive age in Ekiti State.

2. Materials and methods

2.1. Study Area

Ekiti State is located in southwestern Nigeria and was created on October 1, 1996, from part of Ondo State. It is known as the "Fountain of Knowledge" due to its rich cultural heritage and intellectual prowess. The state is predominantly inhabited by the Yoruba ethnic group and divided into three senatorial districts which includes:

Ekiti North Senatorial District: This district comprises several local government areas, including Ekiti East, Ekiti North-East, and Ekiti West.

Ekiti Central Senatorial District: This district consists of local government areas such as Ado, Efon, Ekiti East, Ekiti South-West, and Irepodun/Ifelodun.

Ekiti South Senatorial District: This district includes local government areas like Ekiti South-West, Ikere, Ise/Orun, and Emure.

2.2. Research Design

This study utilized a descriptive survey research approach, which entails the methodical gathering, analyzing, interpreting, and reporting of relevant data. The study's focus on a large population and the design's flexibility both lend credence to its suitability for this investigation.

2.3. Study Population

Women of child-bearing age in Ekiti State's three senatorial districts — Ekiti North, Ekiti South, and Ekiti Central — and the state's sixteen local government areas served as the study's population.

2.4. Sample and Sampling Techniques

The study's sample size of 325 women of childbearing age was determined by a multi-stage sampling process. In the first step, we used a basic random sample procedure to choose one local government from each of Ekiti state's three senatorial districts (balloting method). The second step was to choose two municipalities from each of the chosen municipalities using a stratified random sampling method. This yielded a total of six municipalities.

In the third step, we used a simple random sampling method to choose two health facility centers in each of the six towns (for a total of twelve centers), and in the fourth, we used the same method to select 30 respondents from each center.

2.5. Research Instrument

The data for this research was collected using interviewer administered questionnaire. There were three parts to the instrument. The first part of the survey collected basic information about each respondent, while the second part asked about the social and demographic aspects that influence their opinions on the cesarean section method of delivery. The instrument based on a modified 4-point Likert scale of Strongly Agree (SA)=4, Agree(A)=3, Disagree(D)=2 and Strongly Disagree (SD)=1.

2.6. Validity of the Instrument

To ascertain the validity of the instrument, the instrument was presented to the experts in Human Kinetics and Health Education, Tests and Measurement and Community Health Practitioners for proper validation, examination and modifications.

2.7. Reliability of the Instrument

Twenty (20) duplicates of the questionnaire were sent in a different city to establish the instrument's dependability. Cronbach's alpha was used to see whether there was a correlation between the scores on the administered questionnaires; after carefully analyzing each item and eliminating those found to be unreliable, a reliability coefficient of 0.896 was calculated. Therefore, the research instrument was deemed valid.

2.8. Administration of the Instrument

In order to gain access to the respondents, permission was taken from the head of antenatal clinic in each of the health facility centers. The instrument was administered to the respondents with the help of three trained research assistants who were trained on the procedures to follow in the administration of the instrument.

2.9. Data Analysis

Both descriptive and inferential analysis were used to analyse the data. The research questions were answered with descriptive statistics using mean, frequency counts and percentages. Hypotheses 1- 5 formulated were tested using linear regression while hypothesis 6 was tested using multiple regression analysis at 0.05 level of significance

3. Results and discussion

3.1. Socio-demographic factors influencing the acceptance of cesarean section among women of reproductive age in Ekiti State

Table 1 reveals that respondents' levels of agreement with each of the variables affecting cesarean section acceptability among women of reproductive age in Ekiti State ranged from a high of 12.41 to a low of 11.70 on the Likert scale. Women of childbearing age in Ekiti State gave economic considerations the highest aggregate mean score (12.41) when considering what variables affect whether or not they are open to having a cesarean sections. This was followed by other considerations such as age (12.36), religious belief (12.17), educational position (11.93), and culture (11.70) in that order. Women of childbearing age in Ekiti State had a narrow range of agreement on the variables that affect their willingness to have a cesarean sections (4.11–4.78). Therefore, it can be concluded that the main determinants affecting

women of reproductive age in Ekiti State's approval of cesarean sections are socioeconomic status, age, and religious belief.

Table 1 Socio-demographic factors influencing the acceptance of caesarean section among women of reproductive age in Ekiti State (N=325)

Factors influencing the acceptance of caesarean section	Mean	S.D
Economic	12.41	4.90
Age	12.36	4.78
Religious Belief	12.17	4.11
Education Status	11.93	4.15
Cultural Belief	11.70	4.51
	12.11	4.45

3.2. Age and acceptance of Cesarean section

As shown in Table 2 below, A p-value of 0.000 indicates statistical significance at the 0.05 level, therefore the F-value of 640.784 for the linear regression of the age component on the acceptability of cesarean section delivery among women of reproductive age is significant. So, we can't accept the status quo. That is to say, older women in Ekiti State are more likely to approve of cesarean sections. The results also showed that a unit variation in age component provides 0.815 beta weight in acceptability of cesarean section delivery among women of childbearing age, and that age accounts for 66.5% (R2=0.665) of the total variance in cesarean section acceptance.

Table 2 Linear Regression Analysis of Age and Acceptance of Caesarean Section

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	16.046	1.278		12.560	0.000
Age	2.441	0.096	0.815	25.314	0.000
Model Summary					
R	0.815				
R^2	0.665				
Adjusted R^2	0.665;				
F-Statistic (Sig.)	640.784(0.000)				

3.3. Educational status and acceptance of cesarean section

The p-value of 0.000 indicates statistical significance at the 0.05 level, therefore Table 3 demonstrates that the F-value of 1006.031 for the linear regression of the educational component on the acceptability of cesarean sections birth among women of reproductive age is significant. So, we can't accept the status quo. This suggests that education has a crucial role in determining whether or not women of childbearing age in Ekiti State accept cesarean sections delivery. A unit variation in educational component generates 0.870 beta weight in acceptability of cesarean sections delivery among women of reproductive age, and the results also showed that education accounts for 75.7% (R2=0.757) of the overall changes in the acceptance of cesarean sections delivery.

Table 3 Linear Regression Analysis Educational status and Acceptance of Caesarean Section

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	10.448	1.194		8.754	0.000
Educational Status	2.997	0.094	0.870	31.727	0.000
Model Summary					
R	0.870				
R^2	0.757				
Adjusted R^2	0.756				
F-Statistic (Sig.)	1006.031(0.000)				

3.4. Influence of Religious belief on the acceptance of cesarean sections among women of reproductive age in Ekiti State.

Linear regression of religious belief on acceptability of cesarean sections birth among women of reproductive age yielded an F-value of 1133.378 (Table 4), which is statistically significant at the 0.05 level of significance since the p-value is less than 0.05. So, we can't accept the status quo. To rephrase, the acceptability of cesarean sections among women of childbearing age in Ekiti State is significantly influenced by religious belief. The results also showed that religious beliefs are responsible for 77.8% (R2=0.77.8) of the total variation in women's acceptance of cesarean sections birth, with a change of 1 unit in religious beliefs yielding a 0.815 beta weight in women's acceptance of cesarean sections delivery.

Table 4 Linear Regression Analysis of Religious Belief and Acceptance of Caesarean Section

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	8.783	1.173		7.486	0.000
Religious Belief	3.073	0.091	0.882	33.666	0.000
Model Summary					
R	0.882				
R^2	0.778				
Adjusted R^2	0.778				
F-Statistic (Sig.)	1133.378(0.000)				

3.5. Influence of cultural belief on the acceptance of cesarean sections among women of reproductive age in Ekiti State

According to Table 5, the linear regression of cultural belief on acceptability of cesarean sections delivery among women of reproductive age has a significant F-value of 600.893, with a p-value of 0.000 (less than 0.05). So, we can't accept the status quo. This suggests that among women of childbearing age in Ekiti State, there is a strong age-related effect on the adoption of cesarean sections birth. A unit variation in cultural belief component generates 0.806 beta weight in acceptance of cesarean sections delivery among women of reproductive age, and the results also showed that the age factor accounts for around 65.0% (R2=0.650) of the overall changes in the acceptability of cesarean sections delivery.

Table 5 Linear Regression Analysis of Cultural Belief and Acceptance of Caesarean Section

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	16.264	1.309		12.423	0.000
Cultural Belief	2.558	0.104	0.806	24.513	0.000
Model Summary					
R	0.808				
R^2	0.650				
Adjusted R^2	0.649				
F-Statistic (Sig.)	600.893(0.000)				

3.6. Socioeconomic status on the acceptance of cesarean

On table 6, the linear regression of family income on acceptance of cesarean sections delivery among women of reproductive age has an F-value of 531.960, which is statistically significant at the 0.05 level of significance since the p-value is less than 0.05. So, we can't accept the status quo. This result suggested that cesarean sections acceptability among women of childbearing age in Ekiti State is significantly influenced by family wealth. In addition, the results showed that a unit variance in family income resulted in 0.815 beta weight in acceptance of cesarean sections delivery among women of reproductive age, suggesting that family income accounts for 62.2% (R2=0.665) of the total variance in the acceptance of cesarean sections delivery.

Table 6 Linear Regression Analysis of Socio-economic status and the acceptance of Caesarean Section

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	16.389	1.382		11.856	0.000
Family income status	2.402	0.104	0.789	23.064	0.000
Model Summary					
R	0.789				
R^2	0.622				
Adjusted R^2	0.621				
F-Statistic (Sig.)	531.960(0.000)				

3.7. Demographic variables as a determinant on acceptance of cesarean sections among women of reproductive age in Ekiti State

Table 7 indicates that at the 5% level of significance, (F =2406.825; p0.05). To put it another way, we reject the null hypothesis since the p-value of 0.000 is too little to be accepted at the 5% level of significance. Therefore, among women of childbearing age in Ekiti State, cesarean sections acceptability is strongly correlated with demographic characteristics. Positive and statistically significant correlations (R=0.987; p0.05) were also found between the demographic characteristics and women's acceptance of cesarean sections. In addition, the results demonstrated that 97.4% (R2= 0.974100) of the shifts was related with the observed demographic factors combined, while the remaining 2.6% (R2= 0.074100) was accounted for by variables not addressed in this research. The results showed that among women of childbearing age in Ekiti State, the factor of age was the most predictor of acceptance of cesarean sections (=.350, p0.05). Factors such as family wealth (= 0.329, p0.05), level of education (= 0.229, p0.05), religious conviction (= 0.165, p0.05), and cultural conviction (= 0.104, p0.05) all trailed closely behind.

Table 7 Multiple Regression Analysis of Factors Influencing the Acceptance of Caesarean Section

	Unstandardized Coefficients		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	16.389	1.382		11.856	0.000
(Constant)	0.522	0.437		1.194	0.233
Age	1.048	0.051	0.350	20.362	0.000
Education	0.789	0.069	0.229	11.354	0.000
Religious Belief	0.574	0.063	0.165	9.127	0.000
Cultural Belief	0.331	0.062	0.104	5.366	0.000
Socio-economic status	1.003	0.042	0.329	24.076	0.000
Model Summary					
R	0.987				
R^2	0.974				
Adjusted R^2	0.974				
F-Stat.(Sig.)	2406.825 (.000)				

4. Discussion

This research indicated that cesarean sections acceptance rates were highest among women of reproductive age in Ekiti State who had higher levels of education, higher household incomes, and more conservative religious beliefs. Consistent with this finding, Bam et al. (2020) found that women's socioeconomic status, service availability, psychological variables, safety beliefs, sociocultural influences, prior vaginal delivery experience, and advanced maternal age all play a role in their decision to accept cesarean sections. Trust in God for a safe delivery was also revealed to be a prevalent factor driving the decision to have a cesarean sections by Bam et al, (2021).

The research also found that among women of childbearing age in Ekiti State, acceptability of cesarean sections birth is strongly influenced by age, with age accounting for 66.5% of the total variation in acceptance of cesarean sections delivery. Consistent with this result, Loke et al. (2015) discovered that CDs are favored by women who are worried about having a baby at a ripe old age or who have selected a very favorable date for the birth. The study confirms the findings of Anikwe et al. (2019) that younger mothers are more likely to accept cesarean sections in the future.

5. Conclusion

In this study it is indicated that demographic characteristics are drivers of cesarean sections acceptability among women of reproductive age in Ekiti State. Furthermore, the observed demographic factors accounted for 97.4% of the shifts, with the age factor having the strongest predictive power on acceptability of cesarean sections among women of reproductive age in Ekiti State.

Recommendations

In line with the findings of the study, the following recommendations were made:

- Public health officials should re-orientate women of reproductive age on cesarean sections as an alternative means of child delivery.
- Elderly Primigravida and Multigravida women should be encouraged to undergo cesarean sections delivery if there is indication for it in order to reduce the risk of complications through vaginal delivery method.
- Women of low educational status should be educated on the advantages of child delivery through cesarean sections
- Religious leaders should be encouraged to give adequate support to project the importance of cesarean sections delivery.

- Community sensitization should be carried out in order to remove cultural myths that discourage people from undergoing cesarean sections as means of delivery.
- Government should subsidize the cost of accessing child delivery through cesarean sections.

Limitations of the Study

Because of the reluctant attitude of certain respondents, the time required to complete the research activity was extended. However, this does not affect the reliability of the result of the study.

Contribution to Knowledge

The study jointly examined the influence of age, educational status, religious belief, cultural belief and socio-economic status on acceptance of cesarean sections among Women of Reproductive age in Ekiti State

Suggestions for Further Study

It is suggested that similar study should be conducted in other states and by extension to cover geopolitical zones in Nigeria.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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