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Attitude Towards Caesarean Section as a Delivery Option among Pregnant Women in Ogbomoso, Oyo State

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ABSTRACT

This study explored the attitudes toward Caesarean Section (C-section) as a delivery option among pregnant women in Ogbomoso, Oyo State, utilizing a descriptive cross-sectional design. The target population comprised aged 18 to 45 years who registered and are attending antenatal clinic of the hospital for their antenatal care services, estimated at approximately 900. The random sampling technique through ballot was employed in the study, and a sample size of 298 participants was selected for the study which was determined using the Fisher's formula. Data collection was facilitated through a well-structured questionnaire, which boasted reliability coefficients of 0.73 for attitudes towards C-sections. Statistical analyses, including percentage, standard deviation, and Analysis of Variance (ANOVA), were conducted at a 0.05 alpha level. The study unveiled that 675 (67.5%) majority exhibited a generally positive attitude towards C-sections. Age groups 18-30 and 31-40 years showed similar attitudes, with a criterion mean of 2.55, indicating a broadly shared positive perspective across age groups. However, educational attainment and religious beliefs were found not to significantly influence attitudes towards C-sections [$F(4,291) = 1.473, p > 0.05$ for education; $F(3,292) = 1.936, p > 0.05$ for religion]. The study concluded that pregnant women in Ogbomoso have a generally positive attitude towards C-sections as a delivery option, with minor variations across different age groups but no significant differences based on educational attainment or religious affiliation. It is recommended that healthcare providers continue educational efforts to demystify C-sections, addressing specific misconceptions and cultural beliefs, and ensure equitable access to C-section information and services for pregnant women across all demographics in Ogbomoso.

INTRODUCTION

Background to the Study

The outcome of pregnancy for every couple is as important as the news of conception. Pregnant women keep faith with the progress of their pregnancy believing that the day of delivery would bring an untold happiness that almost completely erases the pain and stress that accompany the process of delivery. All over the world, the mode of delivery for pregnant women has always taken two forms, either through a vaginal birth or a caesarean section (C/S). Vaginal birth often seen as normal birth is the escape of an infant from the birth canal which may be spontaneous or assisted forceps delivery. However, caesarean section utilizes a surgical method that is a life-saving procedure which may sometimes be the only feasible option for complicated pregnancies in the wisdom of the World Health Organization (WHO), (2015), and is focused at ensuring the delivery of a healthy infant to a hale and hearty and fulfilled mother (Anikwe, *et al.*, 2019).

Globally, the rates of caesarean section have been on the rise (Roberts, *et al.*, 2015; Betran, *et al.*, 2016) especially in developed countries. However, in Nigeria, prevalence of caesarean section has been reported with ranges of 2.1 - 16.6% (Sunday-Adeoye & Kalu, 2011; Gunn, *et al.*, 2017; Adewuyi, *et al.*, 2019) with most regions of the country having unmet caesarean section needs. Assessing the frequency of caesarean section can be a very important

index that reflects met and unmet needs among a given population especially in settings with disproportionate maternal mortality like Nigeria. The global accepted consensus regarding the rates of caesarean section in a given population was decided over three decades by the World Health Organization as 5%-15% with evidence suggesting that rates reaching 10% have the potential of reducing death of maternal and newborn (Betran, *et al.*, 2016).

The indication for caesarean section is far reaching and basically, is meant to save the life of the baby and mother when the delivery puts them at risk of loss of life. These include but not limited to foetal distress, abruption placentae, abnormal presentation, history of previous caesarean section, preeclampsia/eclampsia, placenta praevia, macrosomic babies, for prevention of Human Deficiency Virus (HIV) disease in the neonates, obstructed labour, and cephalopelvic disproportion (Waniala, *et al.*, 2020).

A few studies in Nigeria have reported that pregnant women demonstrate negative perceptions about caesarean section (Sunday-Adeoye & Kalu, 2011; Amiegheme, *et al.*, 2016; Abazie & Abdul-Kareem, 2019). For example, the study among pregnant women in South Western Nigeria revealed that the narratives surrounding caesarean section is often viewed with suspicion, aversion, misconception, fear, guilt, to say the least (Sunday-Adeoye & Kalu 2011). This may not be so different with what would be seen in other regions and has the potential to deter women

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from opting for caesarean section even in the face of emergencies and obvious obstetrics indications.

Findings about acceptance of caesarean section are with mixed results in literature. On one hand, some studies concluded that many Nigerian women may never accept caesarean section option despite its benefits. This view is supported by available evidence with few hospital based studies reporting acceptance of caesarean section rates ranging from 6.9% - 22% (Faremi, *et. al.*, 2014; Ugwu & Kok, 2015; Lawani, *et. al.*, 2019). On the other hand, other studies have reported that majority of the mothers in their study population accepted caesarean section as a mode of birth (Omobolanle, *et al.*, 2018; Panti, *et al.*, 2018).

The drawbacks surrounding the rejection of caesarean section in Nigeria are many-sided and include reproductive failure, high cost, lack of information, partner's support/opinion and religious beliefs (Lawani, *et. al.*, 2019).

Statement of Problem

Every midwife and obstetrician alike is keen at providing maternal services that are safe, timely and scientifically driven in order to ensure maternal mortality is brought to near zero level. While vaginal delivery appears to be desirable by most women and culturally appealing in Nigeria, caesarean section as a means of childbirth plays a crucial role especially for high risk pregnancies and should never be undermined if the goal three of the sustainable development (SDG) must be achieved by year 2030. A sustained negative view about caesarean section among pregnant women can however increase the risks of perinatal and neonatal deaths and hinder the achievement of the SDG target of reducing both mother and new-born deaths (Naa-Gandauet *et. al.*, 2019). Unfortunately, in developing countries like Nigeria, most of the maternal deaths during delivery may be attributed to refusal of caesarean section delivery (Sunday-Adeoye, & Kalu, 2011; Jeremiah, *et. al.*, 2011).

Refusal of caesarean section mode of delivery is common in Nigeria, with a study reporting a rate of about 11.6% in their study population (Chigbu & Iloabachie, 2007). The researcher has observed keenly in his clinical practice that most women do not continue their antenatal care and refuse to visit the hospital once they are counseled about the need for an elective or emergency caesarean section when their expected date of delivery approaches. Rather, a good number of mothers search for alternative care from delivery homes, untrained birth attendant or faith based settings with the hope that vaginal delivery is still possible. This trend is worrisome and a lasting solution to curb these avoidable deaths is needed. Additionally, there is the urgent need to identify barriers to attitude of caesarean section.

Aim and Objectives of the Study

The aim of the study is to determine the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State. The specific objectives of the study are as follows:

1. To determine the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State.

2. To ascertain the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on age.

3. To examine the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on religion.

4. To determine the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on educational attainment.

Research Questions

The following research questions were answered by this study:

1. What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State?

2. What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on age?

3. What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on religion?

4. What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on educational attainment?

Research Hypotheses

The following hypotheses were tested at 0.05 alpha level.

HO₁: There is no significant difference between age and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State.

HO₂: There is no significant difference between religion and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State.

HO₃: There is no significant difference between educational attainment and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State.

LITERATURE REVIEW

Concept of Caesarean Section

The surgical procedure in which incision(s) (one or more) is/are made through a mother's abdomen and uterus by gynaecologist to deliver a single or multiple babies is termed caesarean section by Becher & Stokke, (2013). This surgical procedure in which a woman's abdomen is incised in this case a laparotomy, and uterus in which case is called hysterectomy, is to enhance the delivery of one or more babies, or to take out a dead fetus (Amiegheme, *et. al.*, 2016; Abazie & Abdul-Kareem, 2019). The delivery of a foetus, placenta and membranes through an abdominal and uterine incision after the age of viability (which is 28 weeks of gestation in developing countries) also describes this concept (Nwobodo, *et. al.*, 2011).

Prevalence/Incidence of Caesarean Section

Available evidences suggest that prevalence of CS is higher in developed countries compared to developing countries Nigeria inclusive. Caesarean delivery is used in excess in many developing and developed countries (Betrán, *et. al.*, 2016). For example, the rate is as soaring as 25.9% in China, 32.3% in Australia/New Zealand, 45.9% in Brazil, 26.1% in United States of America (Gibbons, *et. al.*, 2012; Betrán, *et. al.*, 2016; Amiegheme, *et. al.*, 2016). However, the community-based prevalence of C/S in Nigeria exposes a figure that is, far below the 10% recommended by the WHO (Adewuyi, *et. al.*, 2019). Additionally, there has been no significant increase in this rate for several years in the country. For example, in 2008, merely 2% of births were done via C/S (Nigeria Demographic and Health Survey 2009) and the figure remained unaffected in 2013 (Nigeria Demographic and Health Survey, 2013) while the report of Adewuyi, *et. al.*, (2019) showed a prevalence rate of 2.1% (95% CI 1.8 to 2.3). The incidence of C/S in most health institutions in Nigeria ranges between 20 and 30% (Ebeigbe & Ilesami, 2004; Inyang-Etoh & Etuk, 2013), but globally, it is about 10% to 35% (Nwobodo, *et. al.*, 2011; Ojiyi, *et. al.*, 2012). Precisely, in Nigeria national statistics puts the rate as 1.8% (Gibbons, *et. al.*, 2010). The rates are relatively higher from tertiary health facilities in different regions of the country. Lower rates were reported from northern Nigeria, with 10.1% in Kano (Jido & Garba, 2012), 10.6 in Sokoto, 11.8% in Maiduguri (Geidam, *et. al.*, 2009), and 20.3% from Birnin Kebbi (Nwobodo & Wara, 2004);

while higher toll were seen from southern Nigeria as follows; 25% in Sagamu (Oladapo, *et. al.*, 2004), 27.6% in Enugu (Ugwu, *et. al.*, 2011), and 34.5% in Abraka (Igberase, *et. al.*, 2009). These prevalence rates are significantly lower than that for several African countries including Ghana (12.80% in 2014), Lesotho (9.70% in 2014) and Uganda (5.22% in 2011) (Ghana Statistical Service, 2015; Cavallaro, *et. al.*, 2013; Uganda Bureau of Statistics, 2011).

Theoretical Framework
Health Belief Model

The health belief model was developed in 1950s (Pender *et al.*, 2006). It suggests that health-seeking behaviour is influenced by a person’s perception of a health-related threat and how they value the actions needed to reduce this threat. The health belief model assumes that behaviour change when a person simultaneously: Recognizes that there is enough reason to make a health concern relevant (perceived susceptibility and severity); Understands that they may be vulnerable to a disease or negative health outcomes (perceived threat); Realizes that behaviour change can be beneficial and the benefits of that change will outweigh any costs (perceived benefits and barriers); The health belief model proposes that a person’s health-related behaviour depends on the perceptions of four critical areas - the severity of a potential illness, the person’s susceptibility to that illness, and the benefit of taking a preventive action

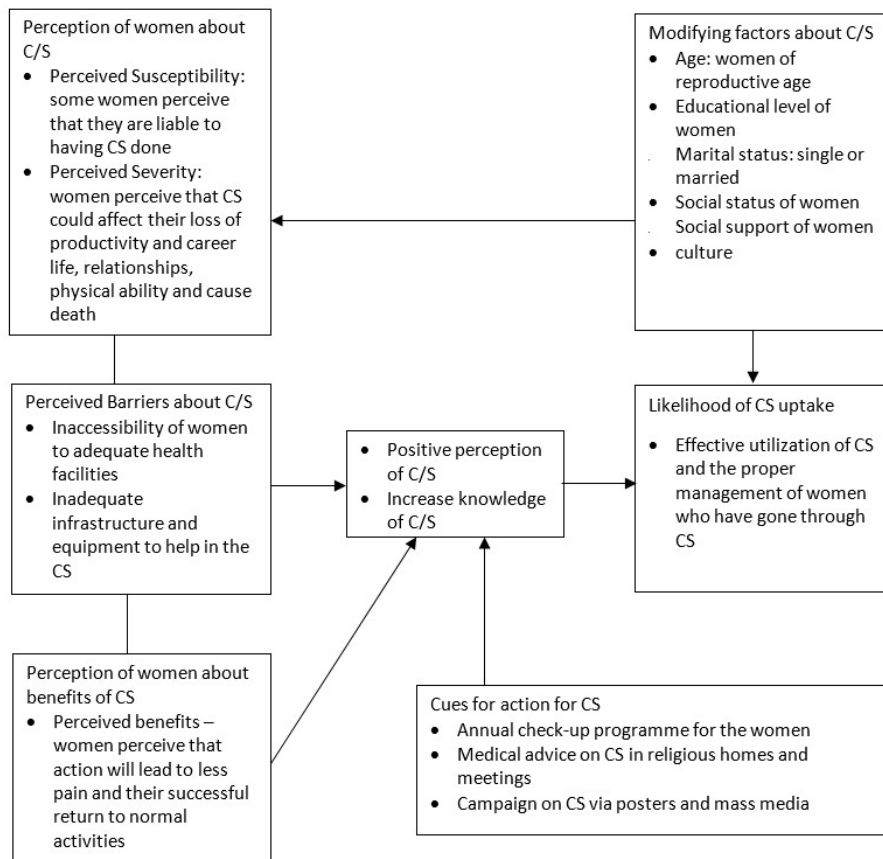


Figure 1: Model for the study: Health Belief Model

Empirical Review

Reports from other parts of South West Nigeria show similar trend; Faremi, *et. al.*, (2014) reported that 69.5% of the respondents perceived caesarean section as preferable to vaginal delivery as the pain in vaginal delivery is usually unpleasant, 66.0% disagreed that babies born through caesarean section are more healthy than their other counterpart that are born through vaginal delivery. In addition, they found that 59.1% of the women said any woman who delivers through caesarean section miss an important life experience. Bukar *et. al.*, (2014) found that 6.3% of the women believed that having caesarean section was due to failure of reproductive function of a woman, with 106 (41.7%) citing destiny as reason for caesarean delivery. This report may not be unconnected with the findings that although majority 204 (80.3%) respondents were aware of caesarean delivery, they 90 (44.1%) obtained the information from friends.

Owonikoko, *et. al.*, (2015) in their study findings reported that 46.8% of the respondents believed that CS was too expensive and 14.2% thought that after one CS, subsequent deliveries will be by CS. Only 50(12.5%) believed that women who delivered through CS are abnormal; 6.5% held the view that babies born with CS generally have a low intelligent quotient (IQ); 15% of women were of the opinion that women who had CS are likely to die from the procedure; 2.8% believed that babies born with caesarean births are likely to die soon after birth. Conclusively, 53.8% of the women had right perception about CS which was statistically significant with their age group, educational status, occupation of the respondents with partners' educational status and occupation ($p < 0.001$).

In a similar study, Olajubu, *et. al.*, (2018) concluded that most of the women perceived caesarean section good with mean perception scores above average (29.96 ± 5.24). The study stated specifically that most (81.8%) women did not agree that caesarean section was a taboo; the devil's work (82.8%); nor that caesarean section was performed on unfaithful women (84.9%). Instead they established that caesarean section was not an abnormal means of birth (73.2%) and that abnormal position of placenta, big baby, or the baby not being positioned well were some of the hints for caesarean section (80.1%) and vaginal birth following caesarean section was possible (78.7%). This perception was found to be associated with the women's age group, educational status and religion.

Abazie and Abdul-Kareem (2019) in their study on pregnant women's knowledge and perceptions of caesarean section in Lagos state, Nigeria, reported that majority of respondents (68.5%) had a negative perception of caesarean section. This negative view was significantly associated with their socio-demographic variables (age, religion, educational status, parity, occupation).

Available evidence pertaining to the population-based prevalence of C/S in Nigeria reveals a threshold that is, far below the 10% recommended by the WHO. This was properly documented by Adewuyi, *et. al.*, (2019) that the prevalence of C/S was low, indicating unmet needs

in the use of caesarean delivery in Nigeria and very low acceptance for this life saving procedure. The report of Eifediyi *et al* (2015) posits that area of residence did not improve the acceptance of C/S as the acceptance of Nigerian women living in urban and semi-urban settings were still low making one wonder what this will look like in the rural communities. This assumption is buttressed by the recent findings of Abazie & Abdul-Kareem (2019) from Lagos state Nigeria that although most (90.3%) of the respondents had heard of C/S only 8.9% had experienced it. In the combined data-sets of Ugwu & de Kok (2015), C/S accounted for about 14% of all deliveries. In total, 22 % of maternity clients refused C/S and more than 90 % of the C/S in the focal hospital were emergencies which may indicate late arrival at the hospital after seeking assistance elsewhere. They confirmed that some women do refuse C/S and that this occurs on a somewhat regular basis.

A cross sectional study in the North-Eastern part of Nigeria by Bukar, *et. al.*, (2014) documented that most, 226 (89.0%), would not request for caesarean section. Although majority ($\chi^2 = 2.589$, $p = 0.000$) would prefer vaginal delivery, none of the respondents would decline caesarean delivery if indicated. Faremi, *et. al.*, (2014) reported that only 6.9% will accept caesarean section. The obstetric history of the respondents showed that vast majority (75.9%) had their last baby through normal vaginal delivery, 5.9% through caesarean section and 3.4% through assisted vaginal delivery but 42.9% will agree if given the option of caesarean section for their next delivery. Owonikoko, *et. al.*, (2015) found that only 32.3% respondents had undergone previous CS and 92(70.8%) of them believed that the CS was justified. Almost all 377(94.2%) considered vaginal delivery as preferred method while only 4.3% wanted CS. In findings of Ezeome, *et. al.*, (2018), 13% of the women will reject CS for themselves no matter the circumstance while majority of them will accept the procedure if their husbands consent. Only 4% will opt for cesarean delivery because of previous bad experience while another 4% will accept any route of delivery offered provided it brings about a safe delivery. It is interesting to note that all those who opted for C/S had tertiary education.

More recently, Lawani, *et. al.*, (2019) found that although all their respondents were aware of C/S as an operative abdominal procedure for delivery; only 14.0% had experienced the procedure previously. Over four-fifths (82.3%) of those who have had a previous C/S were well informed about the indications. When asked if they would accept a C/S when indicated in future, 79.7% said they would accept, while the others would decline. Also, Anikwe, *et. al.*, (2019) noted in their study findings that more than half of the respondents would not accept caesarean section when indicated in a future pregnancy. This was significantly predicted by the health care attention and maternal age. Furthermore, acceptance of C/S was only due to emergency which accounted for 74.5% of the caesarean section and the commonest indication was foetal distress.

METHODOLOGY

Research Design

This study adopted a mixed-method study design to assess the attitude towards caesarean section among pregnant women in General Hospital, Ogbomosho, Oyo State.

Study Population

The population for this study comprised of pregnant women aged 18 to 45 years who registered and are attending antenatal clinic of the hospital for their antenatal care services. From the clinic records, an average of 900 pregnant women was seen in a month prior to the study.

Inclusion Criteria

This study will be carried out; among pregnant women aged 18 – 45 years, women registered for antenatal clinic in the facility, pregnant women irrespective of previous C/S status (if woman has done previous C/S or not) will be studied.

Exclusion Criteria

Pregnant women who are registered in the facility but are critically ill at the time of conducting the study.

Sample and Sampling Technique

The quantitative study involved 298 randomly selected pregnant mothers however, a response rate of 296(99.3%) was achieved.

Sample Size

The sample for this study was 298, this was derived using the Fisher's formula (see Appendix 1).

Respondent sampling: a random sampling technique done through ballot was used to select and distribute questionnaire to respondents for a period of one month until the sample size was reached.

Instrument for Data Collection

The instrument used for the data collection is a questionnaire. The instrument was developed after

thorough literature review (Owonikoko, *et al* 2015).

The questionnaire is self-structured and it comprised four sections: section A comprised of 8 itemed open and closed-ended socio-demographic questions, section B consisted of 10 items on attitude towards caesarean section.

Validity

Face and content validity of the instruments was established by presenting the questionnaire to the experts in the field of Medicine to assess and certify that the items are relevant to the area of research to which they are designed. All corrections and suggestions made to the questionnaire were effected thus making it valid.

Procedure for Data collection

Two research assistants were recruited and trained on the instrument and data collection process. An informed consent form attached with the questionnaire was given to each participant after seeking verbal consent, thereafter, the questionnaires were completed by the respondents. The completed questionnaires were retrieved upon completion on the spot. Data collection will be done over four (4) weeks.

Method of Data Analysis

Before the data will be entered to SPSS version 23.0, it was checked for completeness, inconsistencies and cleaned. Data cleaning was done on the entered data and double-check for its consistency with the paper questionnaire. Descriptive and inferential statistics were used to analyze the data. The descriptive statistics such as weighted mean score was used to analyse the attitude, the criterion mean of 2.50 was indicative of positive attitude and values less than 2.50 indicated negative attitude. Analysis of variance was used in testing hypotheses postulated for the study at 0.05 alpha level.

RESULTS AND DISCUSSION

Data Analysis

Table 1: Respondents' Socio-demographic data (n=296)

Variables	Frequency	Percentage
Age (in years)	Mean = 30.0574	SD = 4.54657
≤ 20	1	0.3
21 – 30	175	59.1
31 – 40	115	38.9
≥ 40	5	1.7
Marital status		
Single	17	5.7
Married	279	94.3
Educational level		
No formal education	6	2.0
Primary education	9	3.0

Secondary education	60	20.3
Tertiary education	221	74.7
Religion		
Christianity	290	98.0
Islam	4	1.4
Traditional religion	2	0.7
Number of children		
Nullipara	140	47.3
1	80	27.0
2	52	17.6
3 and above	85	20.6
History of C/S		
Yes	43	14.5
No	253	85.5
Educational status of husband		
No formal education	2	0.7
Primary education	8	2.7
Secondary education	71	24.0
Tertiary education	215	72.6
Occupation of husband		
Unemployed	23	7.8
Unskilled	16	5.4
Skilled professional	257	86.8

Table 1 below shows the respondent's personal characteristics with majority between ages 21 – 30years, married, with tertiary education, and of Christian faith. Also, the majorities were into business and have two children.

With regards to the age of respondents, 1(0.3%) is ≤ 20years, 175(59.1%) are 21 – 30years, 115(38.9%) are between 31 – 40years while 5(1.7%) are ≥40years. The marital status of respondents showed that majority 279(94.3%) are married, while 17(5.7%) are single.

Regarding patient's educational level, the majority 221(74.7%) have tertiary education, 60(20.3%) secondary education, 9(3.0%) primary education while 6(2.0%) had no formal education. The religion showed that majority 290(98.0%) practice Christianity, 4(1.4%) are Islam while 2(0.7%) are of traditional religion. The number of

children of respondents showed that majority 140(47.3%) are nulliparous, 80(27.0%) had 1 child, 52(17.6%) had 2 children while 85(20.6%) had 3 or more children. Respondents were asked history of C/S, 43(14.5%) had done C/S before while 253(85.5%) had not.

The educational level of husband showed that majority 215(72.6%) have tertiary education, 71(24.0%) secondary education, 8(2.7%) primary education while 2(0.7%) had no formal education. With respect to occupation of husband, majority 257(86.8%) are skilled professionals, 23(7.8%) are unemployed, 16(5.4%) are unskilled.

Research Question 1

What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State?

Table 2: Attitude towards Caesarean Section as a delivery option among pregnant women

SN	Items	\bar{X}	SD	Remark
1	I believe that a C-section is a safe option for delivering my baby.	2.67	1.13	**
2	In my community, having a C-section is culturally accepted as a normal delivery method.	2.07	1.12	*
3	I prefer natural birth over a C-section because it is the natural way of delivering a baby.	2.66	1.15	**
4	I would consider a C-section if my healthcare provider recommended it as the best option for my health or my baby's health.	2.77	1.10	**
5	I am afraid of the postoperative pain associated with a C-section.	2.98	.85	**
6	I am concerned that the recovery time after a C-section would be longer than for a vaginal delivery.	2.23	1.28	**

7	C-sections should only be considered when a vaginal delivery poses a risk to the mother or baby.	2.91	1.06	**
8	My family's or friends' opinions about C-sections significantly influence my attitude towards it.	2.58	1.22	**
9	My concern about the cost of a C-section is a significant factor in my delivery method decision.	2.0	1.16	**
10	I feel well-informed about the risks and benefits of C-sections compared to vaginal delivery.	2.61	.87	**
Grand mean		2.55	1.09	**

**Good Attitude. *Poor Attitude.

The table summarizing attitudes towards Caesarean Section (C-section) among pregnant women in Ogbomoso, Oyo State, reveals nuanced perspectives on this delivery option. The grand mean score of 2.55, coupled with a standard deviation of 1.09, indicates a generally positive attitude towards C-sections among the participants. Items such as the belief in C-section's safety (mean=2.67) and willingness to consider it if recommended by healthcare providers (mean=2.77) scored relatively high, showing trust in medical advice and recognition of C-section's safety. Conversely, the cultural acceptance of C-sections in the community (mean=2.07) and concern about the cost associated with the procedure (mean=2.0) scored lower, reflecting areas

of apprehension and potential barriers to choosing this method. The fear of postoperative pain (mean=2.98) and the belief that C-sections should only be an option when vaginal delivery poses risks (mean=2.91) also indicate areas of concern that influence attitudes. These findings suggest a complex interplay of medical trust, cultural beliefs, financial considerations, and personal preferences shaping attitudes towards C-sections among pregnant women in Ogbomoso.

Research Question 2

What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on age?

Table 3: Attitude towards Caesarean Section as a delivery option among pregnant women based on age

S/N	Items	18-30 years		31-40 years		40-above years	
		(N= 176)		(N= 115)		(N= 5)	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
1	I believe that a C-section is a safe option for delivering my baby.	2.63	1.02	2.68	.60	2.72	.25
2	In my community, having a C-section is culturally accepted as a normal delivery method.	2.43	.59	2.32	.79	2.46	.76
3	I prefer natural birth over a C-section because it is the natural way of delivering a baby.	2.58	.67	2.69	.69	2.60	.67
4	I would consider a C-section if my healthcare provider recommended it as the best option for my health or my baby's health.	2.63	1.17	2.59	.78	2.56	.74
5	I am afraid of the postoperative pain associated with a C-section.	2.95	.45	3.0	.51	3.03	.40
6	I am concerned that the recovery time after a C-section would be longer than for a vaginal delivery.	2.26	.99	2.32	.55	2.10	.81
7	C-sections should only be considered when a vaginal delivery poses a risk to the mother or baby.	2.44	.76	2.55	.75	2.61	.18
8	My family's or friends' opinions about C-sections significantly influence my attitude towards it.	2.53	.97	2.61	.58	2.61	.54
9	My concern about the cost of a C-section is a significant factor in my delivery method decision.	2.38	1.05	2.29	.79	2.39	.81
10	I feel well-informed about the risks and benefits of C-sections compared to vaginal delivery.	2.63	1.04	2.68	.83	2.63	.89
Grand mean		2.55	.97	2.57	.83	2.57	.75

The table presenting attitudes towards Caesarean Section (C-section) as a delivery option among pregnant women in Ogbomoso, Oyo State, based on age groups, illustrates slight variations in perceptions across different age categories. The grand mean scores for the age groups of 18-30 years (2.55), 31-40 years (2.57), and 40-above years (2.57) are closely aligned, suggesting a generally consistent attitude towards C-sections across all age groups. Notably, the fear of postoperative pain associated with a C-section was highest among the oldest age group (3.03 for 40-above years), although this group had the smallest sample size (N=5), which may limit the generalizability of this finding. Younger women (18-30 years) and those in the 31-40 years age group showed similar levels of concern regarding C-section safety, cultural acceptance,

and influence of healthcare provider recommendations. Concerns about the recovery time and the cost of C-sections were slightly lower in the oldest age group, indicating possible variations in priorities or experiences with healthcare. Overall, the findings suggest that while there are some differences in attitudes towards C-sections based on age, the variations are relatively minor, pointing to a broadly shared perspective on C-sections as a delivery option among pregnant women in Ogbomoso, regardless of age.

Research Question 3

What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on religion?

Table 4: Attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on religion

S/N	Items	Christianity		Islam		Traditional Religion	
		(N=290)		(N= 4)		(N= 2)	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
1	I believe that a C-section is a safe option for delivering my baby.	2.63	1.02	2.68	.60	2.72	.25
2	In my community, having a C-section is culturally accepted as a normal delivery method.	2.33	.59	2.22	.79	2.26	.76
3	I prefer natural birth over a C-section because it is the natural way of delivering a baby.	2.63	.67	2.69	.69	2.60	.67
4	I would consider a C-section if my healthcare provider recommended it as the best option for my health or my baby's health.	2.59	1.17	2.59	.78	2.56	.74
5	I am afraid of the postoperative pain associated with a C-section.	2.95	.45	3.0	.51	3.03	.40
6	I am concerned that the recovery time after a C-section would be longer than for a vaginal delivery.	2.26	.99	2.32	.55	2.40	.81
7	C-sections should only be considered when a vaginal delivery poses a risk to the mother or baby.	2.54	.76	2.55	.75	2.61	.18
8	My family's or friends' opinions about C-sections significantly influence my attitude towards it.	2.53	.97	2.61	.58	2.61	.54
9	My concern about the cost of a C-section is a significant factor in my delivery method decision.	2.38	1.05	2.40	.79	2.42	.81
10	I feel well-informed about the risks and benefits of C-sections compared to vaginal delivery.	2.72	1.04	2.65	.83	2.63	.89
Grand mean		2.56	.97	2.57	.83	2.58	.75

The table comparing attitudes towards Caesarean Section (C-section) among women of reproductive age in Rivers State based on religion indicates minor differences in perceptions among followers of Christianity, Islam, and Traditional Religion. With grand mean scores of 2.56 for Christianity, 2.57 for Islam, and 2.58 for Traditional Religion, the data suggests a generally consistent attitude towards C-sections across different religious backgrounds. Despite the small sample sizes for Islam (N=4) and Traditional Religion (N=2), which may affect the robustness of comparisons, the findings show that concerns such as the safety of C-sections, cultural acceptance, influence of healthcare provider

recommendations, fear of postoperative pain, recovery time, and the financial aspects of C-sections are universally prevalent. The slight variations in mean scores across the religious groups do not indicate significant disparities in attitudes, suggesting that religion, within this context, plays a minimal role in shaping the perceptions of C-sections among women of reproductive age in Rivers State.

Research Question 4

What is the attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on educational attainment?

Table 5: Attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State based on educational attainment

SN	Items	Non formal		Primary		Secondary		Tertiary	
		(N= 2)		(N= 8)		(N= 71)		(N= 215)	
		\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
1	I believe that a C-section is a safe option for delivering my baby.	2.67	.81	2.80	.81	2.64	.99	2.66	.25
2	In my community, having a C-section is culturally accepted as a normal delivery method.	2.44	.18	2.38	.89	2.38	.76	2.46	.76
3	I prefer natural birth over a C-section because it is the natural way of delivering a baby.	2.64	.54	2.62	.60	2.58	.97	2.59	.67
4	I would consider a C-section if my healthcare provider recommended it as the best option for my health or my baby's health.	2.58	.81	2.64	.79	2.58	1.05	2.53	.74
5	I am afraid of the postoperative pain associated with a C-section.	2.97	.89	2.91	.69	3.08	1.04	2.97	.40
6	I am concerned that the recovery time after a C-section would be longer than for a vaginal delivery.	2.32	.60	2.27	.74	2.04	.55	2.29	.81
7	C-sections should only be considered when a vaginal delivery poses a risk to the mother or baby.	2.55	.79	2.59	.40	2.57	.75	2.58	.18
8	My family's or friends' opinions about C-sections significantly influence my attitude towards it.	2.61	.69	2.57	.81	2.57	.58	2.61	.54
9	My concern about the cost of a C-section is a significant factor in my delivery method decision.	2.44	.88	2.31	.18	2.40	.79	2.31	.81
10	I feel well-informed about the risks and benefits of C-sections compared to vaginal delivery.	2.56	.51	2.66	.54	2.53	.83	2.63	.89
Average		2.31	.67	2.58	.65	2.54	.83	2.56	.61

The study examining the attitude towards Caesarean Section (C-section) as a delivery option among pregnant women in Ogbomoso, Oyo State, based on educational attainment reveals nuanced insights across different educational levels. The average scores across educational groups-Non-formal (2.31), Primary (2.58), Secondary (2.54), and Tertiary (2.56)-indicate a generally positive attitude towards C-sections, with slight variations. Women with primary education reported the highest average attitude score, suggesting a slightly more favorable or accepting view of C-sections compared to other groups. Those with non-formal education had the lowest average score, which might reflect less exposure to or understanding of the benefits and safety of C-sections. The fear of postoperative pain was consistently noted across all educational levels, with secondary education

participants expressing the highest concern (3.08). Concerns about recovery time were lowest among those with secondary education. Interestingly, knowledge about the risks and benefits of C-sections showed a relatively uniform distribution across educational levels, with tertiary-educated women feeling slightly more informed. These findings suggest that educational attainment does influence perceptions of C-sections, albeit modestly, with a generally positive attitude prevailing across the spectrum.

Testing of Hypotheses

Hypothesis 1

There is no significant difference between age and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State

Table 6: Analysis of Variance (ANOVA) showing significant difference between age and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomoso, Oyo State

Sources of variance	Sum of squares	Df	Mean sum of squares	F-value	p-value	Decision
Between group	12.769	3	1.277	2.002	.030	Ho
Within group	605.889	292	.638			Retained
Total	618.658	295				

*Not Significant, $p > 0.05$

The Analysis of Variance (ANOVA) conducted to examine the relationship between age and attitudes towards Caesarean Section (C-section) among pregnant women in Ogbomosho, Oyo State, reveals a statistically significant difference based on age groups. The between-group variance, with a sum of squares of 12.769, mean sum of squares of 1.277, and an F-value of 2.002, results in a p-value of .030, suggesting that age does indeed have a significant effect on attitudes towards C-sections among the study population. Given that the p-value (.030) is less than the conventional alpha level of .05, the null

hypothesis (H₀), which posited no significant difference between age groups and attitudes towards C-section as a delivery option, is rejected. This finding indicates that the perception and acceptance of C-sections as a delivery option vary significantly with age among pregnant women in Ogbomosho, Oyo State.

Hypothesis 2

There is no significant difference between religion and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomosho, Oyo State

Table 7: Analysis of Variance (ANOVA) showing significant difference between religion and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomosho, Oyo State

Sources of variance	Sum of squares	Df	Mean sum of squares	F-value	p-value	Decision
Between group	3.596	3	.360	1.936	.037	Ho
Within group	176.466	292	.186			Retained
Total	180.062	295				

*Not Significant, $p > 0.05$

The Analysis of Variance (ANOVA) conducted to investigate the difference between religion and attitude towards Caesarean Section (C-section) as a delivery option among pregnant women in Ogbomosho, Oyo State, resulted in a p-value of .037. This indicates that, at a conventional alpha level of 0.05, there is a statistically significant difference in attitudes towards C-sections among the different religious groups studied. The F-value of 1.936, derived from a between-group sum of squares of 3.596 and a mean sum of squares of .360, suggests that the variance in attitudes towards C-sections is attributable to religious affiliation to some extent. Despite the significant p-value, the decision to retain the null hypothesis (H₀) suggests a careful interpretation of

results, particularly considering the p-value is close to the conventional threshold, indicating a relatively marginal difference. This finding implies that while there are detectable differences in attitudes towards C-sections among religious groups in Ogbomosho, these differences are not profound enough to warrant rejection of the null hypothesis, pointing towards a nuanced influence of religion on these attitudes.

Hypothesis 3

There is no significant difference between educational attainment and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomosho, Oyo State

Table 8: Analysis of Variance (ANOVA) showing significant difference between educational attainment and attitude towards Caesarean Section as a delivery option among pregnant women in Ogbomosho, Oyo State

Sources of variance	Sum of squares	Df	Mean sum of squares	F-value	p-value	Decision
Between group	8.508	4	.945	1.473	.153	Not Retained
Within group	610.151	291	.642			
Total	618.658	295				

*Not Significant, $p > 0.05$

The Analysis of Variance (ANOVA) aimed at assessing the impact of educational attainment on attitudes towards Caesarean Section (C-section) among pregnant women in Ogbomosho, Oyo State, revealed that there is no statistically significant difference in attitudes based on educational levels. The p-value obtained was .153, which is above the conventional significance level of 0.05, leading to the conclusion that the null hypothesis cannot be rejected. This outcome is supported by an F-value of 1.473 derived from a between-group sum of squares of 8.508 and a mean sum of squares of .945, indicating that the variance in attitudes towards C-sections among the different educational groups is not substantial enough to

be considered statistically significant. The findings suggest that educational attainment does not play a significant role in shaping the attitudes of pregnant women in Ogbomosho towards opting for a C-section as a delivery method, pointing towards the possibility that other factors, such as cultural, personal, or healthcare-related influences, may be more pivotal in determining these attitudes.

DISCUSSION

The findings from Ogbomosho, indicating a generally positive attitude towards Caesarean Sections (C-sections) with notable reservations, align closely with broader trends observed in the empirical reviews from other parts

of Nigeria. The high scores for trust in medical advice and recognition of C-sections' safety echo sentiments reported by Olajubu *et al.* (2018), where most women did not view C-sections as taboo or abnormal. This suggests a growing acceptance of C-sections as a safe delivery method when recommended by healthcare professionals, underscoring the importance of medical advice in shaping attitudes. However, the concerns about cultural acceptance and financial costs mirror challenges highlighted by Abazie & Abdul-Kareem (2019) and Owonikoko *et al.* (2015), indicating that cultural perceptions and economic barriers continue to influence attitudes towards C-sections significantly. The apprehension regarding postoperative pain and the belief that C-sections should be reserved for complicated deliveries resonate with the findings of Faremi *et al.* (2014) and Bukar *et al.* (2014), who reported mixed perceptions about the necessity and outcomes of C-sections. These parallels suggest that while there is a base level of acceptance of C-sections across Nigeria, deeply ingrained cultural beliefs and economic considerations play a crucial role in shaping individual attitudes, necessitating targeted interventions that address these specific concerns to improve the overall perception and acceptance of C-section as a viable delivery option. The findings from the ANOVA analysis, demonstrating a significant difference in attitudes towards Caesarean Section (C-section) based on age among pregnant women in Ogbomoso, Oyo State, complement the nuanced views presented in the empirical reviews. This significant variance across age groups suggests that younger and older women may have differing concerns and perceptions regarding C-sections, a trend that echoes the broader patterns observed in the empirical literature. For instance, the empirical review highlighted that perceptions towards C-section vary with socio-demographic factors, including age, as seen in studies by Owonikoko *et al.* (2015) and Olajubu *et al.* (2018), where attitudes and acceptance levels were influenced by age, alongside education and religion. The specific concern about postoperative pain being higher in the oldest age group aligns with Owonikoko *et al.*'s findings on the significant concern over C-section costs and the fear of subsequent deliveries being through C-section. These findings underscore the complexity of factors influencing attitudes towards C-sections and the importance of age as a determinant of these attitudes. The variance in perceptions based on age emphasizes the need for targeted educational and informational interventions that address the specific concerns and misconceptions of different age groups, to improve the overall acceptance and understanding of C-section as a safe and viable delivery option. The ANOVA findings that reveal a statistically significant difference in attitudes towards Caesarean Section (C-section) based on religious affiliation among pregnant women in Ogbomoso, Oyo State, resonate with the empirical evidence previously discussed, which highlighted the impact of cultural and religious beliefs on the perception of C-sections. For instance, Olajubu

et al. (2018) found that most women did not perceive C-sections as taboo or associated with negative religious connotations, reflecting a level of acceptance that varied by religious beliefs. This variation aligns with the ANOVA results indicating that religious groups in Ogbomoso have slightly different attitudes towards C-sections, albeit these differences are not substantial enough to fundamentally alter overall perceptions of C-section as a delivery option. The marginal significance (p -value of .037) suggests that while religion does influence attitudes towards C-sections, this influence is nuanced and may not lead to starkly contrasting views between different religious groups. This underscores the importance of considering the subtle ways in which religion and culture intersect to shape healthcare decisions and perceptions, especially in a diverse societal context like Ogbomoso. It highlights the need for culturally sensitive healthcare communication and education strategies that respect and address the specific concerns and beliefs of different religious communities, thereby facilitating a more inclusive understanding and acceptance of C-sections as a safe and viable option for childbirth.

The findings from the study in Ogbomoso, indicating no statistically significant difference in attitudes towards Caesarean Section (C-section) based on educational attainment, contrast with some of the empirical evidence suggesting that education can influence perceptions and acceptance of C-sections. For instance, the empirical reviews highlighted that higher education levels often correlate with a greater acceptance and understanding of C-sections, as seen in the studies by Ezeome *et al.* (2018) and Lawani *et al.* (2019), where educated women showed more acceptance towards the procedure. However, the ANOVA results from Ogbomoso suggest that, within this specific context, educational attainment does not significantly affect attitudes towards C-sections, implying that other factors—such as cultural beliefs, personal experiences, or the quality of healthcare information received—might play a more critical role in shaping these attitudes. This discrepancy underscores the complexity of factors influencing healthcare decisions and perceptions, highlighting that educational interventions alone may not be sufficient to change attitudes towards C-sections. It suggests the need for comprehensive approaches that combine education with cultural sensitivity and personal counseling to address the multifaceted concerns and beliefs surrounding C-sections among pregnant women in Ogbomoso.

CONCLUSION

The comprehensive study on the attitudes towards Caesarean Section (C-section) as a delivery option among pregnant women in Ogbomoso, Oyo State, has illuminated the multifaceted nature of these attitudes, revealing that while there are slight variations based on age, religion, and educational attainment, these differences are not profoundly significant to alter the general perception of C-sections. The findings suggest a generally

positive attitude towards C-sections across different demographic and socio-economic groups, albeit with nuanced apprehensions related to cultural acceptance, postoperative pain, recovery time, and cost. The lack of significant variance in attitudes based on educational attainment underscores the overriding influence of cultural and personal factors over formal education in shaping these attitudes. This study contributes valuable insights into the complex interplay of factors influencing pregnant women's attitudes towards C-sections in Ogbomoso, highlighting the need for targeted educational and healthcare interventions that address specific concerns and misconceptions, and promote informed decision-making regarding childbirth methods.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

1. There is a need for comprehensive public health education campaigns aimed at increasing awareness and understanding of Caesarean Section (C-section) as a safe and viable delivery option. These campaigns should be designed to address common misconceptions and fears about C-sections, such as concerns about postoperative pain, recovery time, and cultural stigmas. Utilizing various media platforms, community engagement initiatives, and healthcare provider-patient discussions, these educational efforts should aim to dispel myths and provide evidence-based information on the safety, benefits, and circumstances under which C-sections may be recommended.

2. Healthcare professionals in Ogbomoso should be encouraged and trained to engage in more effective, empathetic communication with pregnant women regarding their delivery options. This includes providing detailed explanations of the reasons why a C-section might be necessary, discussing the risks and benefits of different delivery methods, and reassuring women about the safety and commonality of C-sections. Better communication can help build trust between healthcare providers and patients, making women more open to considering C-sections if medically indicated.

3. Recognizing the influence of cultural beliefs and practices on childbirth decisions, interventions should be culturally sensitive and involve community leaders, religious figures, and local organizations in promoting positive attitudes towards C-sections. Collaborating with these community influencers can help change perceptions at a grassroots level, ensuring that educational messages are more effectively received and accepted. Additionally, initiatives that involve men and family members in the educational process can help create a more supportive environment for women making decisions about childbirth methods.

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APPENDIX 1

$$n = Z^2 p(1 - q) / I^2$$

Z = normal deviation at the desired confidence interval.

It is set at 95%, hence Z is 1.96

p = proportion of the population who indicated they will accept caesarean section in a previous study i.e. 77.5% by Pantı, *et. al.*, 2018

q = proportion without the desired characteristics, = 1 - p. This is 0.225

I = degree of precision which is taking as 5%

$$\text{Therefore } n = (1.96)^2 \times 0.775(0.225) / (0.05)^2$$

$$n = 3.8416 \times 0.174375 / 0.0025$$

$$n = 267.9516$$

Since target population of pregnant women is less than 10,000, there is need to adjust for non-response rate.

$$nf = n / 1 - Nr$$

Where Nr = a constant 10% (0.1)

n = calculated total sample size

nf = adjusted sample size

$$nf = 267.9516 / 1 - 0.1$$

$$nf = 267.9516 / 0.9$$

$$Nf = 298$$