Original Research Article

PREVALENCE OF PRIMARY CAESAREAN SECTION DELIVERIESAMONG PRIMIGRAVIDA AND MULTIPAROUS WOMEN IN A TERTIARY HEALTH FACILITY IN NIGERIA.

LIST OF ABBREVATION

B/P: Beat per minute
CS: Caesarean section
OOP: Out-Of-Pocket
WHO: World Health Organization

ABSTRACT

Background: Caesarean section (C/S) is a vital emergency obstetric intervention for saving lives of mothers and newborns[1]. In order to meet the sustainable development goal to reduce maternal mortality, increased access to obstetric interventions such as CS is of critical importance

Objectives: The aim of the study was to determine the prevalence of primary caesarean section among primigravida and multiparous women in a tertiary health facility in Nigeria.

Methodology: This was a cross-sectional study carried out among 142 women at Specialist teaching hospital Irrua, employing a systematic and random sample technique. Data was analyzed using IBM SPSS version 21.0 software for descriptive statistics. The Chi square test was used to test for association, the level of significance was set as $p < 0.05$.

Results: It was discovered that Two-third (63%) of the participants has had caesarean section, As regards the prevalence of primary Caesarean section among multiparous women, this study observed that about a few of the respondents (11.3%) had Caesarean section for the first time in their pregnancy. On the financial implications, this study revealed that two-third (66.7%) paid between ₦10,000-₦49,000 and majority (80.3%) that did Cesarean section paid about ₦100,000 - ₦299,000. The study reveals that statistical significance (p=0.04) was seen from the mode of payment delivery and caesarean section out of pocket money was more

Conclusion: Findings from this study shows that prevalence of Cesarean section is more common in the primigravida than in the multiparous women as being pregnant for the first time as they are more prone to conditions like prolong labor, fetal distress and obstructed labor. The study also indicates that majority paid out of pocket and a few respondents were insured

KEY WORDS: Caesarean section, Primigravida, Nulliparous, Multigravida, Delivery.

1.0 INTRODUCTION

1.1 BACKGROUND

Caesarean section (C/S) is a vital emergency obstetric intervention for saving lives of mothers and newborns[1]. In order to meet the sustainable development goal to reduce maternal mortality, increased access to obstetric interventions such as CS is of critical importance. As a result of women limited access to routine and emergency obstetric services in Nigeria, the country is a major contributor to the global burden of maternal mortality[2].

Caesarean section rates are progressively rising in many parts of the world. One suggested reason is increasing requests by women for caesarean section in the absence of clear medical indication such as previous caesarean section, malpresentation, failure to progress in labor, placenta previa, placenta abruptio, multiple pregnancy, contracted pelvic, fetal diseases and maternal diseases[3] The reported benefits of planned caesarean section include greater safety for the baby and less pelvic floor trauma for the mother, avoidance of labor pain and convenience. The potential disadvantages, from observational studies, include increased risk of major morbidity or mortality for the mother, adverse psychological sequelae, and problems in subsequent pregnancies, including uterine scar rupture and greater risk of stillbirth and neonatal morbidity[3].

The global concerns around CS rates are understandable. When medically justified, a CS can prevent maternal and perinatal mortality and morbidity. CS is associated with short and long term risk, which can extend beyond the current delivery and affect future pregnancies[4]. In addition, the increase in CS rate is uncontrollable, with no sign that it is slowing down. The situation is aggravated by the fact that the causes of the rise are not fully understood but emerge as a complex multifactorial labyrinth involving health systems, health care providers, women, societies and even fashion and media[4].

CS rate from 1990 to 2018 for countries all over the world indicated that rate of CS continues to rise in high, middle, low income countries [1]. Since 1985, CS has increased in both developing and developed countries [1].

The rate of CS is as high as 25.9% in China, 32.3% in Australia/New Zealand and 45.9% in Brazil. There is an argument that many of the CS deliveries in these countries were in excess, medically unjustified and unnecessary. In several developing countries, where over 60% of the word's births occur, the population based prevalence of CS is low-For example, 3% in West Africa. In 2008, merely 2% of births were delivered in Nigeria, and the rate remained unchanged in 2013 [5]. This prevalence is considerable lower than for many African countries including Ghana (12.8% in 2014), Lesotho (9.7% in 2014) and Uganda (5.22% in 2011). The considerably low population based prevalence of Cs in Nigeria suggests unmet needs which may contribute to poor maternal and neonatal outcomes in the country [5].

The expenses incurred during caesarean section vary with places. In Australia, the cost of CS averaged ($716 [+/- 1419], in Nepal is US$129 while in Bangladesh, the self-reporting cost of CS delivery in a study determinant of out of pocket payments on child delivery care was $249.8 +/- 153.54. In Pakistan, the average cost of cs was $162. In Rwanda the average cost of CS delivery was $339($320 to $380) for out-pocket payers; while for those under health insurance, co-payment was $34. In a comparative analysis of caesarean delivery among out of pocket and health insurance clients in Ilorin, Nigeria, the cost of CS among 93% of out of pocket respondents is between USD 351-500, while 90% of those on health insurance paid less than USD 300. Another study done among women in Ado Ekiti, Ekiti State documented a mean cost of ₦205,765 +/- 17339.7($514.4 +/- $43.3) [2].

1.2 STATEMENT OF PROBLEM

The socioeconomic status of women is a determinant of the prevalence of CS. Overall, since the 2000s, analyses from developed countries have found that women of lower socioeconomic status are more likely than those of higher socioeconomic status to have CS delivery. Women with lower educational levels have significantly higher rates of caesarean deliveries: 24.9% for those who only completed primary school, 25.2% for those who did some secondary school, and 25.4% for those who did complete secondary school, while the most highly educated women (post-secondary education) have a CS rate of only 22.8%. The CS rate is 25.1% for unemployed women but 24% for working patients[7].

Developing countries in Africa such as Ghana, Nigeria and Ethiopia, the prevalence of CS is high in women with low socioeconomic status and high in women with high socioeconomic status. However, the proportion of CS delivery among women with low socioeconomic status is 5% while

that of women with high socioeconomic status is 27.5%. There is high rate of maternal and fetal mortality due to underuse of CS in women with low socioeconomic status [8].

1.3 JUSTIFICATIONS OF STUDY

The increase in the morbidity and mortality rate among multiparous and primigravidas in ISTH Irrua, due to prolong labor and fetal distress as a result of failed vagina delivery brings about the need for this study. This study will enable doctors know the prevalence of primary caesarean section amongst primigravida and multiparous women in their facility and device a means to intervene in other to prevent the complications associated with failed vaginal delivery which could lead to morbidity or mortality where caesarean section is indicated through proper education of the women during antenatal visits and public sensitization.

1.5 OBJECTIVES OF STUDY

The study is aimed to determine the prevalence of primary caesarean section among primigravida and multiparous women in a tertiary health facility. The study went to further ascertain the financial implications of primary Cs among primigravida and multiparous women in ISTH.

2.0 REVIEW OF LITERATURE

2.1THE PREVALENCE OF PRIMARY CS AMONG PRIMIPAROUS WOMEN

In Saudi Arabia, a retrospective study on the Caesarean section in the primigravida. During the study period there were 15301 deliveries. The overall C/S rate for 1996 was 12% and for 1997 was 13%. The rate of C/S in the primigravida was 12%. The rate of C/S in primigravida that presented with breech was 41%. C/S in the unbooked primigravida was 15% compared to the booked primigravidas of 12%. Fetal distress with or without failure of progress was the main indication of C/S in Singleton cephalic presentations.[9]. This study was able to show the rate of C/S in both the booked and unbookedprimigravidas, the rate of C/S in unbookedprimigravidas was higher than those in booked primigravidas. The study failed to compare the rate of C/S in both primigravidas and multiparous women.

In Iraq, a cross-sectional study was conducted on the Caesarean section rate in a sample of primigravida women in the public maternity hospital in Erbil city. Antenatal care visits were reported by 390 (97.5%) primigravida women with 271(69.5%) having adequate antenatal care (4 visits and more) and 180 (46.2%) starting the visits during the first trimester of pregnancy. Anemia was diagnosed in 108(27%) participants. 123 (30.8%) primigravida women had C/S;41(33.3%) of them were anaemic and 30(24%) were in fertile. C/S was significantly associated within creasing maternal age and history of treatment of infertility [10].

In Benue state, an hospital based retrospective study was done on Prevalence of Caesarean section delivery among primigravidae in general hospital Gboko. A total of 770 women delivered during the study period, and among these women 224 underwent C/S. The C/S prevalence was 29.1%. Result showed that, out of 224 C/S cases, 208 of them had emergency C/S while the remaining 16 cases had elective C/S. As far as various indications of C/S are concerned, previous C/S was the most frequent indication (33.5%), followed by cephalo-pelvic disproportion accounting for 29%, and 20.1% accounting for fetal distress [11].

2.2THE PREVALENCE OF PRIMARY CS AMONG MULTIPAROUS WOMEN

In India, a prospective randomized hospital based study on the prevalence of primary C/S in multiparous women was done and It was observed that total number of cases in multiparous women was 86 (29.05%), total number of cases of primary C/S in nulliparous women was 135 (45.61%) and the total number of repeat C/S was 75 (25.34%) [12]. It was worthy of note that the study considered the nulliparous women also.

In Gulbarga, a retrospective study on primary C/S among multiparous women was done. Prevalence studies were done on 200 multiparous women who had primary C/S. Primary caesarean rate among multiparous women in this study was 10.28%. Around 41.5% multiparous women belonged to age group 25-29 years and 0.5% of women were above 40 years of age. 19.5% were grand multiparous women. 68% multiparous women did not receive by regular antenatal care. Emergency C/S deliveries were performed among 96% of cases [13]. The study did not consider the nulliparous women which the researcher's current study seeks to cover.

In Tanzania, an analytical cross-sectional hospital based study was done on Prevalence of primary caesarean section deliveries among primiparous and multiparous women at Iringa regional hospital. The prevalence rate of primary C/S was 247(21.6%) out of 1144 deliveries between January 2017 and June 2018. The highest indication of C/S was fetal distress which was fetal heart rate below 120b/m and above 160b/m 79(32%) followed by prolonged labor 65(25.1%). There was a high prevalence of primary C/S among primigravida and multiparous women which is above the recommended WHO threshold of 15% [14].

2.3 FINANCIAL IMPLICATION OF PRIMARY CAESAREAN SECTION AMONG PRIMIGRAVIDA AND MULTIPAROUS WOMEN

A study done in Brazil with the aim of determining the cost effectiveneUss analysis of natural childbirth and C/S for normal risk pregnant women, natural childbirth was dominant compared with elective C/S for primiparous normal risk pregnancy women, presenting lower cost (R$5,210.96 vs R$5,753.54) and better or equal effectiveness for all evaluated outcomes. For multiparous women with previous uterine scar, C/S presented lower cost(R$5,364.07) than natural childbirth (R$5,632.24), and better equal effectiveness; therefore C/S is more efficient for this population [15]. This study did not consider comparing level of occupation with method of C/S delivery among the women and how its cost effect on the women.

A systematic study was done to identify costing studies published and unpublished from January 2000 to May 2019 at sub Sahara Africa which showed out of 1652 studies identified, 48 fulfilled the inclusion criteria. C/S costs between USD 56-377 and USD 80-562 respectively. It indicates that these costs are relatively high in this region and that patient costs were largely catastrophic relative to a 10% of average national per capital income [16].

A cross sectional study was carried out in Tanzania to access the economic consequences of caesarean section delivery. Women who had given birth in the last 12 months before the survey were interviewed and a regression model was used to estimate the effect of C/S on cost. C/S increased the likelihood of paying for health care by 16% compared to vaginal delivery. The additional cost of CS compared to vagina delivery was 20USD, but reduced to 11USD when restricted to public facilities [17]. The consequences were not fully understood in the study.

A study was done in Central and Volta regions in Ghana to evaluate the economic outcomes of policy of fee. There was a statistically significant decrease in the mean out of pocket for C/S and normal delivery at health facilities after the introduction of the policy. The percentage decrease was highest for C/S at 28.40% followed by normal delivery at 25.80%. The total amount of payment for C/S fell by 21.6% [18].

A comparative study of caesarean deliveries among out-of-pocket and insurance clients was done at Anchormed Hospital, Illorin, North Central Nigeria. Of 1246 deliveries, 410(32.9%) had C/S; of these, 186(45.4%) were health-insured and 224(54.6%) were OOP payers. The health-insured were mostly civil servants (60.0% vs 40.0%; P=0.009) of high social class (48.0%vs 29.0%; P=0.001). The payment for C/S was higher among OOP (P=0.001) whereas duration from hospital discharge to payment of hospital bill was higher for health-insured (P=0.001) [19].

In Northern Nigeria, a cross sectional study was done to access the cost and pattern of financing maternal health care services in rural communities. The study population consisted of women within the reproductive age group who had experienced childbirth 12 months or less prior to the study. The mean age of the respondent was 29 years and 49% had no personal income. The cost of delivery ranged from ₦5650.5 or (US$376.70) with an average cost of ₦450 or (US$3) for normal deliveries

as against ₦13950 or (US$93) for complicated deliveries requiring caesarean section. The cost of C/S accounted for 65.7% ₦166,995 or (US$1,113.30) of total delivery cost for all respondents while normal delivery accounted for only 19.3% ₦49005 or (US$326.70) [20].
It is hoped that at the end of the study, the cost of delivery and all that concerns childbirth will be looked into and good policies will be implemented to ensure affordability and adequate care for mother and child.

3.0METHODOLOGY

3.1 STUDY AREA

The study area was at Irrua Specialist Teaching Hospital (ISTH). ISTH covers the following health care services: surgery, obstetrics and gynecology, pediatrics, ophthalmology, radiology, dentistry, community/public health and so many other specialties as well as research institute for the diagnosis and treatment of Lassa fever so as to meet the health care needs of the people.
The O and G department has the Obstetrics and Gynecology units. The Labor ward, antenatal and Post-natal ward are components of the Obstetrics unit while the Gynecology Emergency, Pre-op and Post- op Gynecology bays are components of the Gynecology unit. There are about 1000 caesarean sections occurring yearly in ISTH.

3.2 STUDY DESIGN

A descriptive cross sectional study design was employed for the study.

3.3 STUDY POPULATION

The study participants was pregnant women at antenatal clinic at obstetrics and gynecology department in ISTH.

3.4 STUDY DURATION

The study covered a period of 7months.

3.5a INCLUSION CRITERIA

Consentingpregnant (primigravida and multiparous women) who came for antenatal at obstetrics and gynecology department in ISTH.

3.5b EXCLUSION CRITERIA

Those that came for antenatal care but had an obstetric emergency

3.6 SAMPLE SIZE ESTIMATION

Sample size is estimated using Cochran's formula for cross sectional surveys [22].

Sample size $n= \frac{Z^2Pq}{d^2} =$……...

n= Sample size
Z = Standard normal deviation, set at 1.96 to correspond to 95% confidence interval.
P = Prevalence of condition under study taking from the highest value in the literature in previous studies.
q = 1-P
d = Error margin allowed from the study which is a measure of level of accuracy.
For this study;
Z = 1.96
P = 90% i.e 0.90 (prevalence value in the study of caesarean section in private and public health facilities in underserved South Asian communities)[23].
d = 0.05
From the formula above

Sample size $n= \frac{Z^2Pq}{d^2}$

or $n= \frac{Z^2P(1-P)}{d^2}$

$n = \frac{(1.96)^2 \times 0.90 \times (1-0.90)}{}$

$$n = \frac{3.8416 \times 0.90 \times 0.1}{(0.05)^2} = \frac{0.345744}{0.0025}$$

$$n = \frac{0.345744}{0.0025}$$

n = 138, 29, approximately 138

From the calculation above, the estimated sample size was138.

corrected sample size/1-non-response rate. 138/1-0.1=138/0.9 =13.8= 14

10% of sample size was added to cover for possible non-response during the course of study. Therefore, the estimated sample size was 138 + (10% of 138) =14+138= 152. A total of 152 respondents.

3.7 SAMPLINGTECHNIQUE

A systematic and simple random sampling technique was used for this study. Participants who will be used for this study, it was recorded that about 30 women come for antenatal clinic a day and 500 women come in a month based on the population about 152 samples will be collected so in a day about 15 questionnaires will be shared daily in 10 days. 30 ballots would be given to the women, 15 would indicate numbers from 1 to 15, while the other 15 ballots would be blank. To ensure that each person has equal chance of being selected, the ballots was placed in a bowl and juggled, then given to the women to select from it. Those that selected the ballots with indicated numbers were recruited for that day.

3.8 STUDY INSTRUMENT AND DATA COLLECTION METHOD

Questionnaire: A semi structuredinterviewer based questionnaire was employed for the study. The questions from the questionnaire was engaged with participants and important results and conclusions recorded.

The questionnaire covered the following the sections:

Section A: Sociodemographic characteristics

Section B: Prevalence of Caesarean section among primigravida and multigravida

Section C: Financial implication of Caesarian section among primigravida and multigravida

3.9 PRETESTING

To ensure the reliability, the instrument was pretested among consenting adult participants at obstetric and gynecology department of Par Excellence hospital, a private hospital in Emado Edo state, for 10 women who fit into the inclusion criteria. The first draft of questionnaires was based on the literature review on the specific objectives.

3.10 DATA ANALYSIS

Statistical test of association between proportions was done by the use of appropriate test of statistics using the Statistical Package for the Social Sciences (SPSS) version 21. Simple data was presented using frequency table, sociodemographic characteristics was cross tabulated with the prevalence of caesarean section. The mean was measured with 2_+ standard deviation. Statistical level of significance was set at $p < 0.05$, construction of 95% confidence interval and odds ratio were done where applicable. Association between the dependent and independent variable was tested using Chi-square.

3.11 ETHICAL CONSIDERATION

3.11a Institutional consent

The consent for this research was sought for from the department of Community Medicine Ambrose Alli University Ekpoma, the head of obstetrics and gynecology department at Irrua Specialist Teaching Hospital. Ethical approval for the study was sought from the Heath research ethical review committee Irrua Specialist Teaching Hospital.

3.11b Individual informed consent

Both verbal and written informed consents were obtained from respondents before the questionnaires were administered. The purpose of the research were explained to the respondents as best as possible and they were made to understand that information gotten were strictly confidential

with information gotten stored in files and kept away from unauthorized access and soft copy stored in pass-worded laptops which was made available to only the researchers.

3.11c Ethical approval

The research was sought and obtained from the ethical review community of Irrua specialist hospital.

4.0 RESULTS

INTRODUCTION:

A total 152 were recruited for this study but only 142 responded giving a response rate of 93.4%. The following findings were observed and represented in charts and table below.

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Variable	Frequency (n=142)	Percent (%)
AGE GROUP (YEARS)		
21 – 25	23	16.2
26 – 30	62	43.7
31 – 35	30	21.1
36 – 40	22	15.5
41 – 45	5	3.5
Mean age ±SD	30.5 ± 5.2	
LEVEL OF EDUCATION		
Primary	41	57.7
Secondary	82	28.9
Tertiary	19	13.4
MARITAL STATUS		
Married	123	86.6
Single	11	7.7
Cohabiting	5	3.5
Divorce	3	2.1
ETHNICITY		
Esan	71	50
Etsako	17	11.9
Bini	11	7.7
Igbo	14	9.9
Yoruba	8	5.6
Urhobo	5	3.5
Igala	5	3.5
Agbede	4	2.8
Ijaw	4	2.8
Owan	3	2.1
OCCUPATION[27]		
Entreprenuer	56	39.4
Professional	43	30.3
Skilled	20	14.1
Unemployed	18	12.7
RELIGION		
Christianity	112	78.9
Islam	26	18.3

Traditional	4	2.8

From the Socio-demographic Characteristics, it is observed that the highest number of age group is between 26-30 years (43.7%). More than half (57.7%) of the participants had tertiary level of education. Majority (86.6%) are married. The Esan Speaking tribe is the most dominant and they are half of the respondents (50%), the highest number of respondents (28.2%) is professionals. Majority (78.9%) are Christians.

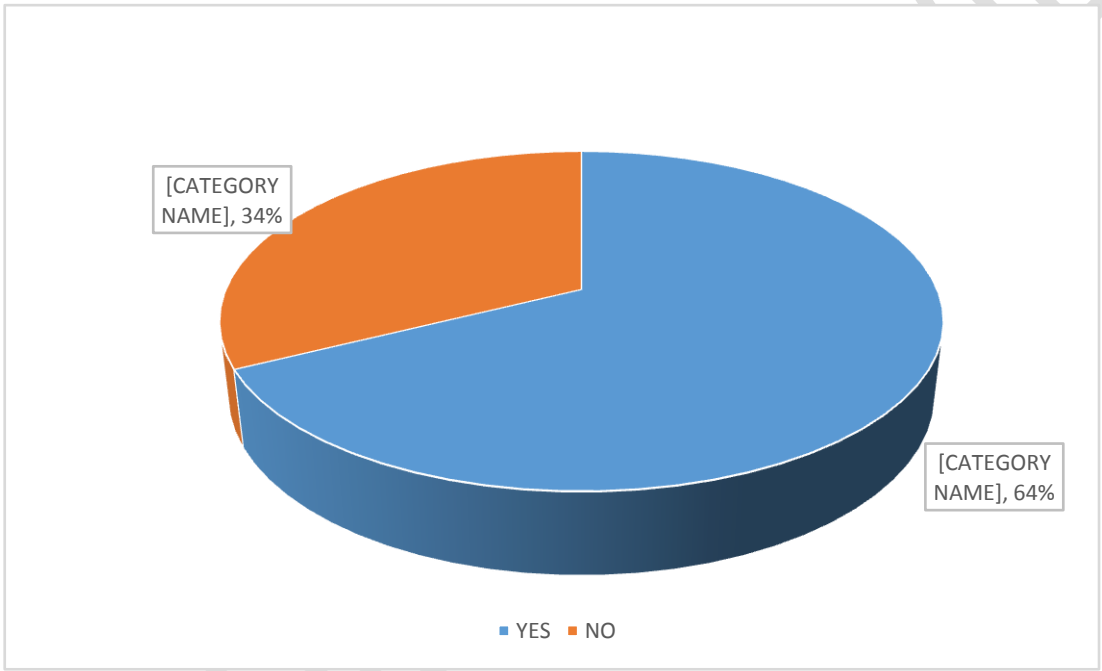

Fig. 1-**Frequency of Multigravida.**

64% of the participants have been pregnant before the current pregnancy

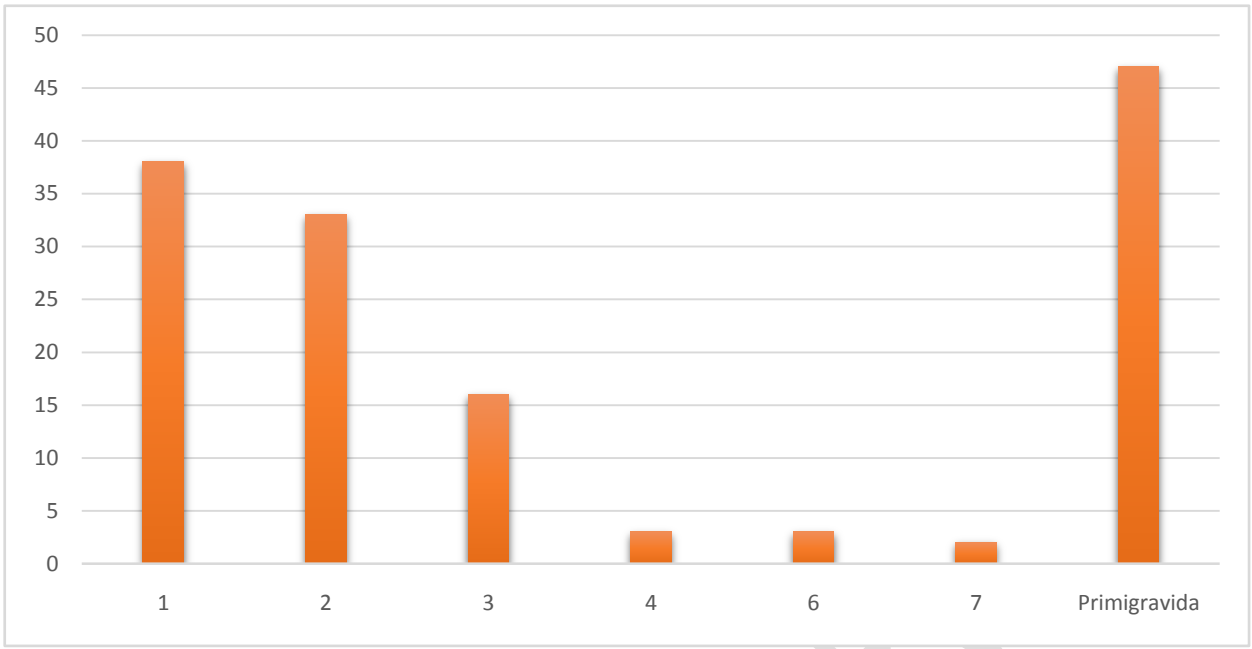

Fig 2- **Frequency of child birth amongst respondents**
The bar chart above shows the number of deliveries of respondents as most participants are primigravida or nullipara followed by primipara and subsequently multiparous women with less than 5% being grand multiparous

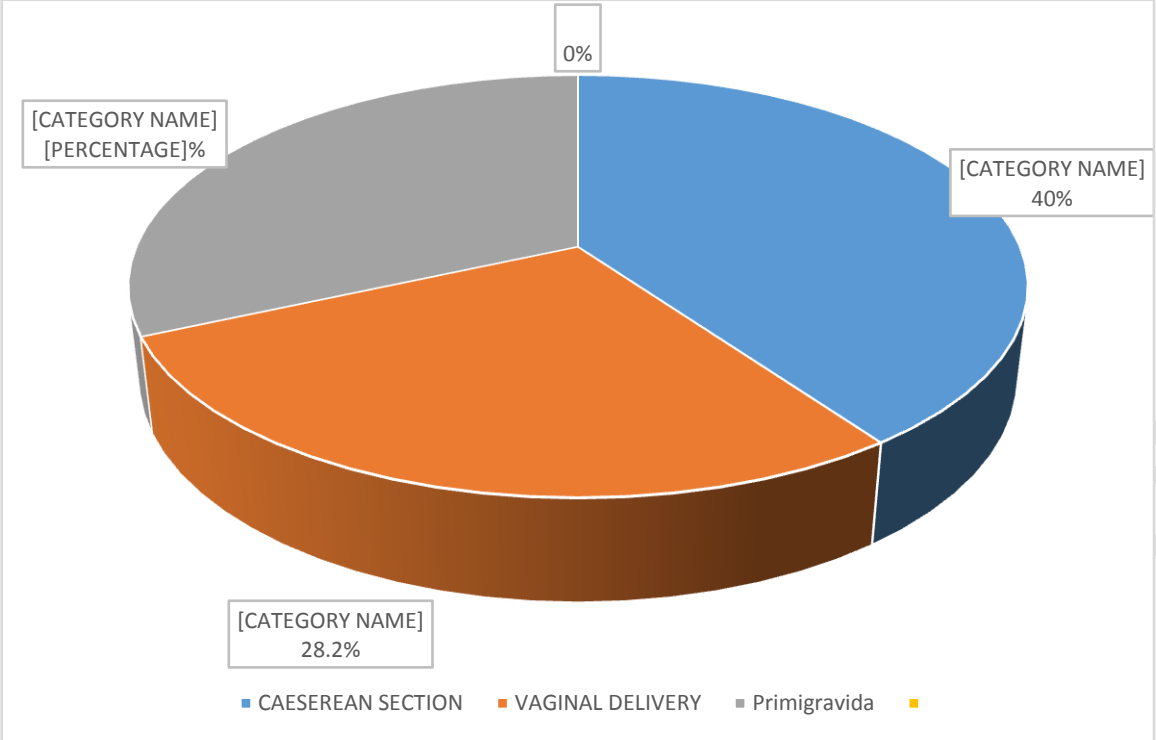

Fig. 3 -Mode Of Delivery of respondents.

Majority of the women have given birth through caesarean section 40%

TABLE 2: INDICATION OF CAESAREAN SECTION

Variable	Frequency (n=142)	Percentage (%)
Indication for Caesarean Section		
No Indication	81	57
Prolonged Labour	18	12.7
Fetal distress	14	9.9
History of previous caesarean section	10	7.0
Obstructed Labour	9	6.3
Pre-emclampsia	8	5.6
Bleeding	2	1.4

As regards indication for the caesarean section, prolonged labor (12.7%) was more evident as preeclampsia (5.6%) is least.

TABLE 3: FREQUENCY OF CAESAREAN SECTION

Frequency of Caesarean Section	N=142	%
Number of respondents who	81	57.0

have not had Caesarean section and primigravida		
1	45	31.7
2 and above	16	11.3

Primary caeserean section was moreas 31.7% had CS once.

TABLE 4: FREQUENCY OF ADMISSIONS

Admission of child in the hospital	N=90	%
No	61	67.8
Yes	29	32.2
Number of Days Mother spent On Admission After Child Birth	N=69	
1 – 3	30	43.5
4 – 6	25	36.2
7 – 9	9	13.0
10 – 12	4	5.8
13 – 15	1	1.4
MEAN ± S.D	3.87 ± 2.2	
Number of Days Child Stayed on Admission	N=32	
1 – 3	9	28.1
4 – 6	11	34.4
7 – 9	8	25
10 – 12	3	9.4
13 – 15	1	1.4
MEAN ± S.D	5.44 ± 2.918	

On child admission in the hospital, it is observed that 32.2% of the 90 respondents were admitted in the hospital after birth. Highest number of days spent in the hospital was 13-15 days and 1-3 days being the least number of days spent in the hospital.

TABLE 5: FINANACIAL IMPLICATION

VARIABLE	FREQUENCY	PERCENTAGE (%)
Amount of money Paid For Normal Delivery	N=48	
<₦10,000	6	12.5
₦10,000 - ₦49,000	32	66.7
₦50,000 - ₦99,000	7	14.6
>₦100,000	3	6.3
Amount Paid ForCaeserean Section	N=61	
<₦100,000	8	13.1

₦100,000 - ₦299,000	49	80.3
₦300,000 - ₦499,000	3	4.9
>₦500,000	1	2.0
Method of Bill payment	N=87	
Out Of Pocket	40	45.9
From Salary Advance	20	22.9
Through Insurance Scheme	11	12.6
Unspecified	9	10.3
Borrowed	7	8.1
	N=29	
Amount paid for child admission in the hospital		
<₦10,000	4	13.8
₦10,000 - ₦49,000	19	65.5
₦50,000 - ₦99,000	5	17.2
₦100,000	1	3.4

From the respondents that have given birth through vagina delivery, it is observed that majority paid between ₦10,000 - ₦49,000. In comparison to the amount paid for CS from the data, it is observed that majority paid between ₦100,000 - ₦299,000 with payment mostly made from out of pocket (45.9%), with majority (65.5%) paying about ₦10,000-₦49,000.

TABLE 6:
SELECTED SOCIAL DEMOGRAPHIC FACTORS AND CAESEREAN SECTION

Variable	**CAESEREAN SECTION**				
AGE GROUP (YEARS)	**Primary CS**	**More than 1 CS**	**Total**	**F-exact**	**P-value**
21 – 25	**N=45(%)**	**N=16(%)**	**61(%)**		**10.93**
26 – 30	4(6.6)	-	**<0.001*** 4(6.6)		
31 – 35	29(47.5)	10(16.4)	39(63.9)		
36 – 40	4(6.6)	-	4(6.6)		
41 – 45	6(9.8)	6(9.8)	12(19.6)		
LEVEL OF EDUCATION	2(3.3)	-	2(3.3)		
Primary					
Secondary	4(6.6)	-	4(6.6)	**1.53**	**0.47**
Tertiary	15(24.6)	6(9.8)	21(34.4)		
	26(42.6)	10(16.4)	36(59.0)		

It is observed that there is statistical significance between number of ceaserean section and age group of respondents ($p<0.001$) as level of statistical significance is less than the set level of statistical significance of $p=0.05$. However, there is no level of significance between level of education and number of cesarean section.

TABLE 7:
COST AND CAESEREAN SECTION

Amount Paid ForCaeserean Section	Primary CS N=45(%)	More than 1 CS N=16(%)	Total 61(%)	F- exact	P-value
<₦100,000	8(13.1)	-	8(13.1)	**6.83**	**0.009***
₦100,000 - ₦299,000	36(59.0)	13(21.3)	49(80.3)		
₦300,000- ₦499,000	-	3(4.9)	3(4.9)		
>₦500,000	1(1.6)	-	1(1.6)		

It is observed that there is statistical significance between number of ceaserean section and amount paid for CS (p=0.009) as level of statistical significance is less than the set level of statistical significance of p=0.05. However, there is no level of significance between number of birth and cesarean section.

TABLE 8: MODE OF PAYMENT AND CAESREAN SECTION

VARIABLE	CAESEREAN SECTION				
Mode Of Payment	**Primary CS N=45(%)**	**More than 1 CS N=16(%)**	**Total 61(%)**	**X^2 11.8**	**P-value 0.04***
Out Of Pocket	21(34.4)	4(6.6)	25(40.9)		
From Salary Advance	12(19.7)	5(8.2)	17(27.9)		
Through Insurance Scheme	6(9.8)	5(9.2)	11(18.0)		
Unspecified	4(6.6)	-	4(6.6)		
Borrowed	2(3.3)	2(3.3)	4(6.6)		

Out of pocket payment was the main means for payment and there was statistical significance as p=0.04 were level of statistical significance is set at <0.05

TABLE 9:
NUMBER OF BIRTH AND CAESEREAN SECTION

VARIABLE	CAESEREAN SECTION				
Have you given birth before this pregnancy?	**Primary CS N=45(%)**	**More than 1 CS N=16(%)**	**Total 61(%)**	**X^2 2.37**	**P-value 0.124**
Yes	39(63.9)	16(26.2)	55(90.2)		
No	6(9.8)	0	6(9.8)		

There was no statistical significance between caeserean section and number of birth as p=0.124 as statistical significance is set at p=0.05.

TABLE 10:
NUMBER DAYS ON ADMISSION AFTER BIRTH AND CASEREAN SECTION

VARIABLE	CAESEREAN SECTION				
Number of days on admission after child birth?	**Primary CS N=45(%)**	**More than 1 CS N=16(%)**	**Total 61(%)**	**X^2 10.0**	**P-value 0.07**
1-3	13	4	17		
4-6	18	7	25		
7-9	9	2	11		
10-12	4	2	6		
13-15	1	-	1		

There is statistical significance as P=0.022 were level of statistical significance is set at p>0.05.

5.0 DISCUSSION

The study focused on prevalence of primary caesarean section among primigravida and multiparous women carried out in the Antenatal Care Unit of the obstetrics and gynecology department of the Specialist Teaching Hospital Irrua Edo State, Nigeria. A total of 152 participants were recruited for the study but only 142 participants responded.

Generally, of the 142 respondents, two-third (63%) of the participants has had caesarean section in contrast to a study done in Benue state and Iraq were C/S rate was recorded to be 29% [11] and 30.8% respectively. It was observed that primary Caesarean section among primiparous women in the study was 31.7%. This is in contrast to the study done in Saudi Arabia were it was observed that a lower caesarean section rate of 12% was prevalent among primiparous [9]. However, prevalence value of primary Caesarean section in the study was closely related and similar to the study done in Iraq were 30.8% was prevalent among primiparous women. Similar outcome was reportedly noted in a research conducted in Benue Delta state of Nigeria was a prevalence value of 30% was reported.[9]

As regards the prevalence of primary Caesarean section among multiparous women, this study observed that about a few of the respondents (11.3%) had Caesarean section for the first time in their pregnancy as against the study done in India where caesarean section was recorded amongst 29% of the multiparous women in their study participants[12]. The findings in the study was also similar to a study done in Gulbarga[12] and Tanzania[14] were similar prevalence value was recorded.

On the financial implications, this study revealed that two-third (66.7%) paid between ₦10,000-₦49,000 and majority (80.3%) that did Cesarean section paid about ₦100,000 - ₦299,000. This was seen as quite on the high side as compared to the over view on a studies done in Sub-Sahara Africa that showed that costs were relatively high in the region and catastrophic to the 10% of average per capital income [16]. The prevalence was also seen to be relatively high for Caesarean section Ghana than for vaginal delivery [18]. This is mainly due to the economic crisis that seems to have ravaged the world especially from the extra cost incurred post COVID -19. Highest form of payment was through out of pocket which about half (50%) of the respondents used, this was not the case in a study done in Ilorin Nigeria were half of the participants in that study paid for delivery services were insured [20].

The average number of days spent on admission in the hospital after childbirth through caesarean section is 4days, this is has been noticed to be consistent in most parts of the world such as USA [25], India [26], Italy [27]. In other parts of Africa like Rwanda [28], Ethiopia [29], number of days

has been reported to be about 5 days based on complications that may arise for those done in the rural areas. The longer the stay in the hospital tends to have some financial burden on patients in the hospital has most patients are not insured and make payment out of pocket.

There was statistical significance ($p<0.001$) between age group and caesarean section as about two-third (66%) of the participants fell within the age group of 26-30 years as against a study done in Ethiopia where prevalence value was highest between 35-39 years [21]. There was a similarity of this study with a study in Addis Ababa, Ethiopia that shows that most participants were 20-29years [22]. This clearly shows that prevalence of caesarean section is common in the early reproductive age group and less common in the late age a few (3.3%) were recorded amongst the age group of 41-45 years.

The cost of cesarean section was also observed to be statistically significant ($p=0.009$) as most (80%) of the participants paid between ₦100,000-₦299,000 for cesarean section largely affected by the region it was done. This was similar to the study done in Sub-Sahara Africa[18] and in Ghana[16] with respect to per capital income.

The study reveals that statistical significance ($p=0.04$) was seen from the mode of payment delivery and caesarean section out of pocket money was more. This was common in studies carried out in Brazil [15], Tanzania [14] and Volta Ghana [16]. Payment via Insurance Scheme and through borrowing were the least, this is in contrast to the study done in Ilorin Nigeria [19] were most participants used insurance as the main means of settling delivery bills. This study reveals that not many pregnant women are insured which will have gone a long way to ease the financial burden of delivery services.

On indication for cesarean section, prolonged labor was majorly identified as the reason for cesarean section followed by fetal distress, unlike the study done in Saudi Arabia[9] were breech presentation was identified as the major indication for Cesarean section. In Benue state Nigeria, frequency of previous cesarean section indication was identified followed by cephalopelvic disproportion [11]. In another study in China, maternal request was identified as the main reason for Cesarean section [23].

5.1 CONCLUSION

Findings from thus study shows that prevalence of Cesarean section is more common in the primigravida than in the multiparous women as being pregnant for the first time as they are more prone to conditions like prolong labor, fetal distress and obstructed labor. The study also indicates that majority paid out of pocket and a few respondents were insured.

5.2 RECOMMENDATIONS

To The Government

The issue of affordable healthcare especially for pregnant women cannot be over emphasized as this is enshrined within the tenants of the safe mother hood initiative. Policies on better and safe delivery should be improved upon. However, in order to ensure the delivery of a healthy baby to a happy mother, caesarean section cannot be over emphasized. There for required skills and expertise are needed for management in detecting various indications for Cesarean section. This can be fully achieved when health workers are trained adequately. Also, the government should organize publicity for educating the populace on delivery and caesarean section so as to demystify any myth of not opting for cesarean section as a safe route of delivery. As regards cost of health care, it is the duty of the government to ensure that her people have access to quality delivery services at low cost to prevent complications that may arise in pregnancy and to prevent Maternal/infant mortality from other unsafe birth practices due to insufficient funds especially in this part of the world that's still developing. Therefore, government should ensure policies that will encourage the populace to opt for insurance there by making health affordable for women especially in the area of Cesarean section.

To The Health Workers:

A more radical approach from the health sector is needed to undergo evidence-based interventions that address these factors, such as disseminating delivery protocols and practice guidelines, and

strengthening hospitals' monitoring and supervision systems will be key to reducing the potential risks of complications in pregnancy through Cesarean section. Counseling and birth preparation should be improved upon by health workers as to alleviate any fears of birth delivery processes.

To The Populace:

The people should embrace good health seeking behavior. Pregnant women should routinely visit antennal care for early detection of the outcome of mode of delivery of pregnancy as to avoid complications in delivery. This will better prepare their minds and insurance will go a long way in assisting women financially as regards receiving adequate health care at desirable and affordable cost; they should be therefore encouraged to key into insurance policies that will be of great benefit to them financially.

5.3 General Public Health Implication of The Study

Cesarean section is key towards achieving safe delivery. Various indications for caesarean section such as fetal distress, prolonged labor, pre-emclampsia, obstructed labor and bleeding were observed and discussed in this study. However, it is the opinion of the researcher that further studies should be done especially to find out if the women will of their own will venture to deliver their babies via cesarean section without waiting for birth complications to occur which is seen as the main reason for the caesarean section. It has been observed that primary and repeat cesarean section reach their highest levels both nationally and internationally with 30.3% of live births in the United States, being cesarean deliveries especially based on maternal request [24] but this has not been reflected in this study as close to two-third of respondents (57%) claimed to have non-indication for cesarean section. This buttresses the need for better delivery in health care services and enlightenment such that cesarean section is seen as a necessary means to an end where the need arises.

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