

**Socio-Demographic Determinants of Choice of Delivery Place among Antenatal Women Attending Health Facilities in Eleme Local Government Area, Rivers State**

**Goodluck Azuonwu**

Department of Nursing, University of Port Harcourt, Rivers State, Nigeria.

[goodator2002@yahoo.com](mailto:goodator2002@yahoo.com)

+234 803 464 8721

**Evelyn George-Obe**

Department of Foundation Studies,

Rivers State College of Health Science and Management Technology Port Harcourt, Nigeria

[eveluv4life@gmail.com](mailto:eveluv4life@gmail.com)

08067931016

**Abstract**

This study investigated the socio-demographic determinants of choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area. Four research questions and four hypotheses guided the study. The research design adopted for this study was a descriptive research design with a population of 134,100 women of childbearing age. A multistage sampling procedure was adopted to select a sample size of 440. The instrument for data collection in this study was a structured questionnaire with a reliability coefficient of 0.718. The finding of the study showed that the choice of delivery place among women was healthcare facility 226 (55.5%), which was chosen more among women who were single, those with fewer number of children, younger women within 20-24 years and those who resided in the semi-urban environs. The result revealed that there was a significant relationship between choice of delivery place and marital status ( $X^2$ - value = 24.12,  $df = 12$ ,  $P < 0.05$ ). It was concluded that the socio-demographic determinants of their choice were marital status, parity, age and location. It was recommended that health professionals should increase their campaign on maternal health with more emphasis on health facility delivery among women.

*Keywords:* socio-demographic, determinants, choice, delivery place, antenatal women

**Introduction**

The choice of delivery place is where the women chose to deliver her baby. Kifle et al. (2018) noted that, the choice of delivery place can be referred to the place where women preferably choose to deliver their babies at the time of child birth which could be either in a health facility delivery or at home. According to Singh et al. (2014), the choice of delivery place is where pregnant women decide to go for child delivery under the supervision of birth attendant; and the decision on where to deliver during labour is an important aspect of maternal healthcare which must not be compromised if positive delivery outcome is expected and that, childbirth in a health facility attended by skilled birth attendant is associated with lower rates of maternal morbidity and mortality than home births. Thus, women are expected to choose healthcare facility for delivery where they will be attended to by skilled birth attendant, but several factors could influence their choice which could vary in certain socio-demographic context such as marital status, age, location and parity.

The number of children a woman has, also known as parity has been found to determine their choice of delivery place as shown in literature. Tebekaw et al. (2015) revealed that having fewer number of children is associated with delivery at health care facilities. This could be explained by the fact that those having fewer number of children have lesser financial commitment for the upkeep of the children thus, are more likely to be able to shell out other bills including healthcare bills, than those with more children; who will be saddled with more financial burden due to the high cost of living in Rivers State cum the high cost of skilled healthcare added to resources which are limited. This scenario is even worse if a woman has a marital status that does not promote intimacy and facilitate support from the husband, particularly, non-married women. According to Nwankwo et al.

(2019), the utilization of health facilities for childbirth may increase if there is involvement of relations, especially husbands. The marital status notwithstanding, the location an antenatal woman is could also influence her choice of delivery place.

The location an individual is can influence their health behaviour due to several environmental factors and referral orders surrounding the person which suggests and appeal to the person's senses with a result action. The study of Yaya et al. (2018) showed that, overall percentage of women who delivered at health facility was 39.8%, with the rate being substantially higher among urban (67.8%) compared with their rural (30.2%) counterparts. This report may not be argued against because those in the rural areas may have more challenges accessing health care facilities due to the debilitated nature of the facilities in several rural areas, inadequate or absence of healthcare personnel in some cases as more healthcare workers are more desirous to be in the urban area than the rural areas. This makes many women take to traditional birth attendants who are easily accessible to them. Thus, being in a rural or urban area could also be investigated as a determinant factor to the choice of place of delivery. In any location a woman is, the prevailing religion could also contribute to the person's choices.

Age is the number of years an individual has lived on earth which is basically measured in years. Age is an important demographic variable when it comes to the reproductive health of an individual. According to Yahya and Pumpaibool (2019), age was found to have a significant association with the choice of place of birth. This association could be that younger women, particularly adolescent women may be shy and may have been pregnant out of wed-lock and at such, not bold enough to move around with the pregnancy to register in a healthcare facility for delivery. But, if such women are well taken care of by their older relatives, they may be encouraged to have a health care facility-based delivery.

In Rivers State, despite the effort of government in ensuring that health care facilities are distributed across the different local government areas, observation has shown the prevalence of non-facility based delivery attended that unskilled birth attendants. Certainly, some factors could be implicated for this thus, this study was aimed at investigating the socio-demographic determinants of choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area. The following research questions were answered:

1. What is the relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area?
2. What is the relationship between parity and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area?
3. What is the relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area?
4. What is the relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area?

**Hypotheses:** The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.
2. There is no significant relationship between parity and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.
3. There is no significant relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.
4. There is no significant relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.

### **Methodology**

The research design adopted for this study was a descriptive research design with a population which consisted of 134,100 women of childbearing age, within 15-49 years (National Population Commission Census Projection, 2016). The sample size for the study was 440 with was selected using multistage sampling procedure. At the first stage, the simple random sampling was used to select communities in Eleme. The second stage phase involved the use of non-proportionate sampling

technique to get the number of residents to be selected from each of the ten communities that made up Eleme local government area (44 women from each of the ten communities). The third stage involved the use of simple random sampling technique to select households while the third stage involved the use of the simple random sampling technique to select the respondents in each household until the determined number in the community is completed. The instrument for data collection in this study was a structured questionnaire with a reliability coefficient of 0.718 titled, "Choice of Delivery Place Questionnaire (CDPQ)". It was developed by the researcher following an extensive literature search on the subject. The data collected were analyzed with the aid of the Statistical Package for Social Sciences (SPSS) version 25.0 using percentage and Chi-square test at 0.05 level of significance.

**Results**

**Research Question 1:** What is the relationship between marital status and the choice of delivery place among women attending health facilities in Eleme Local Government?

**Table 1:** Frequency distribution showing the relationship between marital status and the choice of delivery place among women attending health facilities in Eleme Local Government

Marital Status	C h o i c e o f d e l i v e r y p l a c e F ( % )				T o t a l
	H o m e	Healthcare facility	TBA place	Ministry/ c h u r c h	
Single	1 ( 2 . 2 )	25(54.3)	20(43.5)	0 ( 0 . 0 )	4 6 ( 1 0 0 )
Married	11(4.7)	113(47.9)	112(47.5)	0 ( 0 . 0 )	2 3 6 ( 1 0 0 )
Separated/Divorced	7 ( 1 4 . 0 )	22(44.0)	21(42.0)	0 ( 0 . 0 )	5 0 ( 1 0 0 )
Cohabiting	2 ( 3 . 2 )	37(59.7)	22(35.5)	1 ( 1 . 6 )	6 2 ( 1 0 0 )
Widowed	3 ( 2 3 . 1 )	5 ( 3 8 . 5 )	5 ( 3 8 . 5 )	0 ( 0 . 0 )	1 3 ( 1 0 0 )
<b>T o t a l</b>	<b>2 4 ( 5 . 9 )</b>	<b>202(49.6)</b>	<b>180(44.2)</b>	<b>1 ( 0 . 2 )</b>	<b>4 0 7 ( 1 0 0 )</b>

Table 1 showed the relationship between marital status and the choice of delivery place among women attending health facilities in Eleme Local Government. The result showed that most of the women 25(54.3%) who are single chose healthcare facility, 113(47.9%) of the women married chose healthcare facility, 22(44.0%) of the women who are separated/divorced chose healthcare facility, 37(59.7%) who are cohabiting chose healthcare facility while 5(38.5%) of women who are widowed chose healthcare facility and traditional birth attendant place as their choice of delivery place. Hence, the choice of health care facility for delivery was found more among women who are cohabiting and single attending health facilities in Eleme Local Government.

**Research Question 2:** What is the relationship between parity and the choice of delivery place among women attending health facilities in Eleme Local Government?

**Table 2:** Frequency distribution showing the relationship between parity and the choice of delivery place among women attending health facilities in Eleme Local Government

P a r i t y	C h o i c e o f d e l i v e r y p l a c e F ( % )				T o t a l
	H o m e	Healthcare facility	TBA place	Ministry/ c h u r c h	
1-3 children	11 ( 5 . 0 )	116(53.0)	91(41.6)	1 ( 0 . 5 )	219(100)
4-6 children	8 ( 5 . 3 )	67(44.7)	75(50.0)	0 ( 0 . 0 )	150(100)
More than 6 children	5 ( 1 3 . 2 )	19(50.0)	14(36.8)	0 ( 0 . 0 )	38(100)
<b>T o t a l</b>	<b>2 4 ( 5 . 9 )</b>	<b>2 0 2 ( 4 9 . 6 )</b>	<b>180(44.2)</b>	<b>1 ( 0 . 2 )</b>	<b>4 0 7 ( 1 0 0 )</b>

Table 2 showed the relationship between parity and the choice of delivery place among women attending health facilities in Eleme Local Government. The result revealed that most women

116(53.0%) with 1-3 number of children chose healthcare facility as their choice of delivery, 75(50.0%) of women with 4-6 number of children chose traditional birth attendant place as their choice of delivery place while 19(50.0%) of women with more than 6 children attending health facilities in Eleme Local Government chose healthcare facility as their choice of delivery. Hence, the choice of healthcare facility for delivery place was seen more among women with fewer number of children attending health facilities in Eleme Local Government.

**Research Question 3:** What is the relationship between age and the choice of delivery place among women attending health facilities in Eleme Local Government?

**Table 3:** Frequency distribution showing the relationship between age and the choice of delivery place among women attending health facilities in Eleme Local Government

A g e	C h o i c e o f d e l i v e r y p l a c e				F ( % )
	H o m e	Healthcare facility	TBA place	Ministry/ C h u r c h	
15-19 years	0 ( 0 . 0 )	1 ( 1 4 . 3 )	6 ( 8 5 . 7 )	0 ( 0 . 0 )	7 ( 1 0 0 )
20-24 years	3 ( 5 . 8 )	35 ( 6 7 . 3 )	13 ( 2 5 . 0 )	1 ( 1 . 9 )	52 ( 1 0 0 )
25-29 years	6 ( 6 . 1 )	50 ( 5 0 . 5 )	43 ( 4 3 . 4 )	0 ( 0 . 0 )	99 ( 1 0 0 )
30-34 years	4 ( 5 . 5 )	30 ( 4 1 . 1 )	39 ( 5 3 . 4 )	0 ( 0 . 0 )	73 ( 1 0 0 )
35-39 years	2 ( 3 . 2 )	31 ( 5 0 . 0 )	29 ( 4 6 . 8 )	0 ( 0 . 0 )	62 ( 1 0 0 )
40 years and above	9 ( 7 . 9 )	55 ( 4 8 . 2 )	50 ( 4 3 . 9 )	0 ( 0 . 0 )	114 ( 1 0 0 )
<b>T o t a l</b>	<b>24 ( 5 . 9 )</b>	<b>202 ( 4 9 . 6 )</b>	<b>180 ( 4 4 . 2 )</b>	<b>1 ( 0 . 2 )</b>	<b>407 ( 1 0 0 )</b>

Table 3 showed the relationship between age and the choice of delivery place among women attending health facilities in Eleme Local Government. The result showed that majority 6(85.7%) of the women between 15-19 years chose traditional birth attendant place as their choice for delivery, 35(67.3%) of women within 20-24 years chose healthcare facility as their choice of delivery place, 50(50.5%) of women between 25-29 years also chose the healthcare facility as their choice of delivery place, 39(53.4%) of them within 30-34 years chose the traditional birth attendant place for delivery, 31(50.0%) of the respondents within the age range of 35-39 years chose the healthcare facility as their choice of delivery place, while 55(48.2%) of women between 40 years and above chose the healthcare facility as their choice of delivery place. Thus, the choice of healthcare facility for delivery was seen more among younger women within 20-24 years attending health facilities in Eleme Local Government.

**Research Question 4:** What is the relationship between location and the choice of delivery place among women attending health facilities in Eleme Local Government?

**Table 4:** Frequency distribution showing the relationship between location and the choice of delivery place among women attending health facilities in Eleme Local Government

L o c a t i o n	C h o i c e o f d e l i v e r y p l a c e				F ( % )
	H o m e	Healthcare facility	TBA place	Ministry/ C h u r c h	
U r b a n	4 ( 3 . 9 )	45 ( 4 4 . 1 )	53 ( 5 2 . 0 )	0 ( 0 . 0 )	102 ( 1 0 0 )
S e m i - u r b a n	14 ( 6 . 9 )	106 ( 5 2 . 2 )	82 ( 4 0 . 4 )	1 ( 0 . 5 )	203 ( 1 0 0 )
R u r a l	6 ( 5 . 9 )	51 ( 5 0 . 0 )	45 ( 4 4 . 1 )	0 ( 0 . 0 )	102 ( 1 0 0 )
<b>T o t a l</b>	<b>24 ( 5 . 9 )</b>	<b>202 ( 4 9 . 6 )</b>	<b>180 ( 4 4 . 2 )</b>	<b>1 ( 0 . 2 )</b>	<b>407 ( 1 0 0 )</b>

Table 4 showed the relationship between location and the choice of delivery place among women attending health facilities in Eleme Local Government. The result revealed that most 53(52.0%) of the women who reside in the urban area chose traditional birth attendant place as their choice of delivery place, 106(55.2%) of the women who live in a semi-urban environment chose the healthcare facility

as their choice of delivery place while 51(50.0%) of women who reside in the rural area also chose the health care facility as their choice of delivery place. Thus, the choice of healthcare facility for delivery place was found more among the women who resided in the semi-urban environs attending health facilities in Eleme Local Government.

**Test of Hypotheses**

**Hypothesis 1:** There is no significant relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.

**Table 5:** Chi-square table showing the relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme LGA

Marital Status	C h o i c e o f d e l i v e r y p l a c e F ( % )					d f	X <sup>2</sup> -value	P-value	Decision
	Home	Healthcare facility	TBA place	Ministry	Total				
Single	1(2.2)	25(54.3)	20(43.5)	0(0.0)	46(100)	12	24.12	0.02	Rejected
Married	11(4.7)	113(47.9)	112(47.5)	0(0.0)	236(100)				
Separated/ Divorced	7(14.0)	22(44.0)	21(42.0)	0(0.0)	50(100)				
Cohabiting	2(3.2)	37(59.7)	22(35.5)	1(1.6)	62(100)				
Widowed	3(23.1)	5(38.5)	5(38.5)	0(0.0)	13(100)				
<b>Total</b>	<b>24(5.9)</b>	<b>202(49.6)</b>	<b>180(44.2)</b>	<b>1(0.2)</b>	<b>407(100)</b>				

**\*Significant**

Table 5 showed the relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme LGA. The result revealed that there was a significant relationship between marital status and the choice of delivery place (X<sup>2</sup>- value = 24.12, df = 12, P < 0.05). Therefore, the null hypothesis which states that there is no significant relationship between marital status and the choice of delivery place among antenatal women attending health facilities in Eleme LGA was rejected.

**Hypothesis 2:** There is no significant relationship between parity and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.

**Table 6:** Chi-square table showing the relationship between parity and the choice of delivery place among antenatal women attending health facilities in Eleme LGA

Parity	C h o i c e o f d e l i v e r y p l a c e F ( % )					d f	X <sup>2</sup> -value	P-value	Decision
	H o m e	Healthcare facility	TBA place	Ministry/ Church	Total				
<b>1 - 3</b>	11(5.0)	116(53.0)	91(41.6)	<b>1 ( 0 . 5 )</b>	219(100)	6	7.81	0.25	<b>Accepted</b>
<b>4 - 6</b>	8(5.3)	67(44.7)	75(50.0)	<b>0 ( 0 . 0 )</b>	150(100)				
<b>&gt; 6</b>	5(13.2)	19(50.0)	14(36.8)	<b>0 ( 0 . 0 )</b>	38(100)				
<b>Total</b>	<b>24(5.9)</b>	<b>202(49.6)</b>	<b>180(44.2)</b>	<b>1 ( 0 . 2 )</b>	<b>407(100)</b>				

**\*Not Significant**

Table 6 showed the relationship between parity and the choice of delivery place among antenatal women attending health facilities in Eleme LGA. The result revealed that there was no significant relationship between parity and the choice of delivery place (X<sup>2</sup>- value = 7.81, df = 6, P > 0.05). Therefore, the null hypothesis which states that there is no significant relationship between parity and

the choice of delivery place among antenatal women attending health facilities in Eleme LGA was accepted.

**Hypothesis 3:** There is no significant relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.

**Table 7:** Chi-square table showing the relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme LGA

Age	Choice of delivery place F (%)				Total	df	X <sup>2</sup> -value	P-value	Decision
	Home	Healthcare facility	TBA place	Ministry/ Church					
15-19 years	0(0.0)	1(14.3)	6(85.7)	0(0.0)	7(100)	15	23.53	0.07	Accepted
20-24 years	3(5.8)	35(67.3)	13(25.0)	1(1.9)	52(100)				
25-29 years	6(6.1)	50(50.5)	43(43.4)	0(0.0)	99(100)				
30-34 years	4(5.5)	30(41.1)	39(53.4)	0(0.0)	73(100)				
35-39 years	2(3.2)	31(50.0)	29(46.8)	0(0.0)	62(100)				
≥40 years	9(7.9)	55(48.2)	50(43.9)	0(0.0)	114(100)				
<b>Total</b>	<b>24(5.9)</b>	<b>202(49.6)</b>	<b>180(44.2)</b>	<b>1(0.2)</b>	<b>407(100)</b>				

**\*Not Significant**

Table 7 showed the relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme LGA. The result revealed that there was no significant relationship between age and the choice of delivery place (X<sup>2</sup>- value = 23.53, df = 15, P > 0.05). Therefore, the null hypothesis which states that there is no significant relationship between age and the choice of delivery place among antenatal women attending health facilities in Eleme LGA was accepted.

**Hypothesis 4:** There is no significant relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area.

**Table 8:** Chi-square table showing the relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme LGA

Location	Choice of delivery place F (%)				Total	df	X <sup>2</sup> -value	P-value	Decision
	Home	Healthcare facility	TBA place	Ministry/ church					
Urban	4(3.9)	45(44.1)	53(52.0)	0(0.0)	102(100)	6	4.97	0.54	Accepted
Semi-urban	14(6.9)	106(52.2)	82(40.4)	1(0.5)	203(100)				
Rural	6(5.9)	51(50.0)	45(44.1)	0(0.0)	102(100)				
<b>Total</b>	<b>24(5.9)</b>	<b>202(49.6)</b>	<b>180(44.2)</b>	<b>1(0.2)</b>	<b>407(100)</b>				

**\*Not Significant**

Table 8 showed the relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme LGA. The result revealed that there was no significant relationship between location and the choice of delivery place (X<sup>2</sup>- value = 4.97, df = 6, P > 0.05). Therefore, the null hypothesis which states that there is no significant relationship between location and the choice of delivery place among antenatal women attending health facilities in Eleme LGA was accepted.

### Discussion of Findings

The choice of health care facility for delivery was found more among women who are cohabiting and single. The tested hypothesis revealed that there was a significant relationship between marital status and the choice of delivery place (X<sup>2</sup>- value = 24.12, df = 12, P < 0.05). The finding of this study gives credence to that of Dhakal et al. (2018) which revealed a significant association between occupation of spouse, and choice of place of delivery. The finding of this study is in consonance with other

studies which indicated marital status as one of the numerous demographic factors found to be related to choice of delivery place (Aremu et al., 2011; Moyer & Mustafa, 2013; Yadav & Kesarwani, 2016). The choice of healthcare facility for delivery place was seen more among women with fewer number of children. The tested hypothesis revealed that there was no significant relationship between parity and the choice of delivery place ( $X^2$ - value = 7.81,  $df = 6$ ,  $P > 0.05$ ). The finding of this study gives credence to that of Dhakal et al. (2018) which revealed a significant association between parity, and choice of place of delivery. The finding of this study is in consonance with other studies which indicated parity as one of the numerous demographic factors found to be related to choice of delivery place, particularly low parity (Aremu et al., 2011; Moyer & Mustafa, 2013; Yadav & Kesarwani, 2016). The finding of this study is also in line with that of Fapohunda and Orobato (2013) who substantiated that, high-parity mothers have a tendency to fuel the practice of delivery with unskilled birth attendants or home delivery which are all unsafe delivery approaches and that, as birth order increased, the odds of delivery using skilled attendance dropped precipitously. It was further stated that, a child is less likely to be born under skilled care, with doctors and/or nurses attending, if it was a third or fourth child than if it was a first or second child. The explanation given to this was that, given the high cost of skilled care in Nigeria coupled with the limited resources and several competing responsibilities, including children who have to be clothed and fed, mothers are been compelled to select unskilled care despite their cognizance of associated risks.

The choice of healthcare facility for delivery was seen more among younger women within 20-24 years. The finding of this study is in consonance with other studies which indicated age as one of the numerous demographic factors found to be related to choice of delivery place, particularly younger maternal age (Aremu et al., 2011; Moyer & Mustafa, 2013; Yadav & Kesarwani, 2016). The choice of healthcare facility for delivery place was found more among the women who resided in the semi-urban environs. The tested hypothesis revealed that there was no significant relationship between location and the choice of delivery place ( $X^2$ - value = 4.97,  $df = 6$ ,  $P > 0.05$ ). The findings of the study is in line with that of Shehu et al. (2016) which showed that, the proportion of women who chose to delivered in health facilities was 65% in urban and 4.7% in rural.

### **Conclusion**

Based on the findings of the study, it was concluded that the choice of delivery place among antenatal women attending health facilities in Eleme Local Government Area was determined by socio-demographic factors such as parity, marital status, age and location.

### **Recommendations**

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

1. Health professionals should increase their campaign on maternal health with more emphasis on health facility delivery among women.
2. The State Government in their effort to improve delivery care-seeking behaviour should prioritize factors such as economic activities and income level by maternal healthcare services, particularly delivery economically accessible.
3. Community leaders should discourage early marriage by making it a norm that any female below a marriageable age should not be given for marriage by any parent or family, this will help to mend the age discrepancies among couples that weaken women's decision making power.

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