

# Awareness, practice and factors influencing birth preparedness and complication readiness among women attending antenatal clinic at University of Calabar Teaching hospital (UCTH), Calabar, Cross River state, Nigeria

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## Abstract

**Background:** Birth preparedness involves a collaborative efforts between the couple, family and healthcare professionals to have a successful antepartum, intrapartum and postpartum period.

**Purpose:** This study assessed awareness, practice and factors influencing birth preparedness and complication readiness among women attending antenatal clinic at University of Calabar Teaching Hospital (UCTH), Calabar, Cross River State, Nigeria.

**Methods:** Cross-sectional descriptive survey design was used for the study. A sample size of two hundred and thirty-eight (238) pregnant mothers utilizing maternal and child health service at UCTH, Calabar, random sampling technique was adopted, structured questionnaire was adopted for the instrument. Data collected were analyzed using descriptive charts, frequencies, tables and percentages. The hypothesis was tested for significance at 0.05 level, using Chi-square (X<sup>2</sup>) analysis.

**Results:** The result of the study showed that large proportion (73.5%) respondents have high level awareness of putting intervention in place for abnormal and obstructed Labour, while (26.5%) have low awareness. Majority (50.4%) respondents have high level practice, 39.1% have moderate practice, while 10.5% respondents have low practice. There is a statistical relationship between the level of awareness and practice of birth planned child birth as calculated value of 23.4 is higher than the P-value of 5.99 at 0.05 level of significant at 2 degree of freedom.

**Conclusion:** Adequate awareness and interventions put in place in case of slow progress of labour is an effective way of preventing maternal mortality.

**Keywords:** Chi-square • Birth preparedness and Complication readiness • Retained Placenta

## Introduction

Birth Preparedness and Complication Readiness (BPCR) is a process of planning for normal child birth and putting in place recommended interventions that is require in case of abnormal situation associated with labour this enhance preparation as well as its readiness towards any likely occurrence obstructed labour. This involves a collaborative efforts among

the couple, family members and healthcare professionals to have a good outcome before, during and after child birth period. Birth preparedness is a strategy to promote the timely use of trained health professional during childbirth, booked at hospital close to you with adequate maternal and child health services, setting out money for unexpected outcome during labour, movement to the hospital during onset of labour and unplanned situation that may arise during child birth and having blood donors in case of emergency [1]. Couples who take actions to receive care before the onset of pregnancy and completely attend all maternal and child health services and take

recommended action toward child delivery, the pregnant mothers will receive maternal and care services on time without any period abnormal changes at labour [2]. Obstructed labour preparation raises awareness of abnormal changes during pregnancy and period of delivery, such as abnormal separation of placenta, blurred vision, oedema, protein urea, absent of fetal movement, prolong labour, retained placenta [3].

Pregnancy and childbirth sometime accompanied with unforeseen circumstance which can be life-threatening which most time lead to the death of mothers and neonate, particularly among mothers in low-income nations of the world. The causes of death during childbirth are view from different perspective including inability to identify abnormal changes in pregnancy; inability to report to health professional on time for adequate care, inability to come to hospital on time due to poor road network especially developing nations of the world like Nigeria and inability of health professional to attend to pregnant women on time due to inadequate resource and lack of skilled birth attendant at the point of delivery. Delays in receiving care may result from unprofessional conduct of healthcare professional, inadequate resources and recommended obstetric machines, a lack of healthcare professional and poor skills attendance [4]. These delays should be addressed at individual level, family level, community level, health providers, health facility and policy makers' level to ensure women and newborns receive appropriate, effective and timely care. The role of healthcare professionals is to educate couples attending ante-natal care about the importance of BPCR, the elements of BPCR and the abnormal changes during pregnancy and childbirth as well as anticipate factors that may cause any of the delays, develop a birth plan with the couple, it is therefore the interest of the researcher to assess the awareness, practices and factors influencing birth preparedness and complication readiness among couple attending antenatal clinic in UCTH, Calabar.

## Material and Methodology

Cross-sectional descriptive survey design was used for this study. The setting of this study is University of Calabar Teaching Hospital (UCTH), Calabar. UCTH Calabar facility is located in Calabar municipality of Cross River State, Nigeria. Calabar lies between longitudes 8°18'00"E to 8°24'00"E and latitudes 4°54'00"N to 5°04'00"E. It has an area of 406 km<sup>2</sup> and a population of 371,022 as at 2006 census. University of Calabar Teaching Hospital (UCTH) is used for teaching medical, nursing, medical laboratory science, radiography students and also students from other health related courses. It provides specialist clinical services as well as promotion of scientific evidence-based care through research. The hospital is made up of 25 wards and units and 923 beds [5]. The sample of this study comprised 238 married pregnant mothers utilizing maternal and child health services at UCTH, Calabar. The sample size was calculated using thirty percent (30%) of the population of married pregnant mothers (794) utilizing maternal and child health services at UCTH, Calabar. The sampling technique used to select respondents for this study was a simple random sampling technique. The instrument of data collection is a structured questionnaire which was administered to study participants using face to face method. Data was collected using person to person's administration of questionnaire to the participants. Data were analyzed using inferential and descriptive statistics and presented using frequencies, percentages, tables and descriptive means [6]. The hypothesis was tested using Chi-square analysis.

## Results

Table 1. Socio-Demographic Data.

Variables	Frequency	Percentage (%)	Mean (X)
Age:			
Below 21	34	14.3	35
21 - 30	72	30.3	
31 - 40	88	37	
41 - 50	44	18.4	

Marital status		
Married	175	73.5
Single	44	18.5
Divorced	11	4.6
Widow	8	3.4
Educational Qual.		
Primary education	22	9.3
Secondary education	141	59.2
Tertiary education	75	31.5
Occupation		
Civil servant	88	37
Unemployed	37	15.6
Business/traders	81	34
Artisans	32	13.4
Religion		
Christians	218	91.5
Muslims	6	2.5
African traditional religion	12	5
No of Children		
None	29	12.2
44563	86	36.1
44624	71	29.8
5 & above	52	21.8

The results of Socio-demographic variables presented in Table 1 revealed that most, 88 (37.0%) respondents within the ages of 31 years-40 years; 72 (30.3%) respondents were between 21 years-30 years; 44 (18.4%) respondents were within the ages of 41 years-50 years; while 34 (14.3%) respondents were below 21 years. Regarding the marital status, majority of the respondents, 175 (73.5%) respondents were married, single respondents were 44 (18.5%); divorcees were 11 (4.6%), while 8 (3.4%) respondents were widows [7]. Also, most of the respondents 141 (59.2%) had secondary education. those who had tertiary education were 75 (31.5%), while 22 (9.3%) respondents attended primary education. Eighty-eight 88 (37.0%) respondent were civil servants. 81 (34.0%) were into business and trading, 37 (15.6%) respondents were unemployed, while 32 (13.4%) respondents were artisans. In addition, majority of the respondents, 218 (91.5%) were Christians, 6 (2.5%) were Moslems, while 12 (5.0%) respondents were African traditional religion worshippers. Lastly, most 86 (36.1%) of the respondents had 1 children-2 children, 71 (29.8%) respondents had 3-3 children, 52 (91.5%) respondents had 5 children and above, while 29 (12.2) respondents had had no children yet [8].

**Table 2.** Summary of responses to items on level of birth preparedness and complication readiness among women attending antenatal clinic at UCTH, Calabar.

Statements	Responses				
	Agreed	%	Disagreed	%	Σ (X)
Birth preparedness and complication readiness requires a pregnant woman to know her expected date of delivery.	181	76.1%	57	23.9%	419 1.76

A pregnant woman prepared and ready for birth complication should be aware that labour can start before due date.	176	73.9%	62	26.1%	414	1.74
Pregnant woman should make arrangement for transportation to hospital in case labour starts unexpectedly.	180	75.6%	58	24.4%	418	1.76
Vaginal bleeding and loosing liquor during pregnancy are danger signs that a pregnant woman should be aware of.	172	72.3%	66	27.7%	410	1.72
Swelling of face, ankle and feet are danger signs that a pregnant woman should report to midwives	162	68.1%	76	31.9%	400	1.68
When performing a breast self examination a woman should stand without a top and brazier in front of a mirror, using her right hand to examine her left breast and her left hand to examine her right breast	158	66.4%	80	33.6%	396	1.66

Total mean±(SD) score = 10.3

Decision: Mean (X) ± SD score<1.5=low awareness, while 1.5 & above = high awareness

Results in Table 2 revealed that majority, 181 (76.1%) participants are aware that birth recommended interventions requires a pregnant woman to know her expected date of delivery, but 57 (23.9%) respondents are not aware. One hundred and seventy-six (73.9%) respondents were aware that a pregnant woman prepared and ready for birth complication should be aware that labour can start before the due date, but 62 (26.1%) respondents were not. Also, 180 (75.6%) respondents were aware that pregnant woman should make arrangement for transportation to hospital in case labour starts unexpectedly, but 58 (24.4%) respondents were not aware [9]. Furthermore, 172 (72.3%) respondents were aware that vaginal bleeding and loosing liquor during pregnancy are danger signs that a pregnant woman should not take lightly, but 66 (27.7%) respondents were not. Again, 162 (68.1%) respondents were aware that swelling of face, ankle and feet are danger signs that a pregnant woman should report to midwives, but 76 (31.9%)

respondents were not aware. Lastly, 158 (66.4%) respondents were aware that birth preparedness and complication readiness entails that a pregnant woman saves money in case of emergency, but 80 (33.6%) respondents were not aware. In addition, the table showed that the total mean score obtained by the respondents is 10.3 out of 18.0. The highest mean score per item is 1.76 out of 3.0, and it was obtained on awareness of a woman's expected date of delivery. The lowest mean score per item is 1.66 out of 3.0, and it was obtained on awareness of saving money in case of emergency. This is followed by a mean score of 1.68 which is obtained on awareness of swelling of face, ankle and feet as danger signs that a pregnant woman should report to midwives.

**Table 3.** Factors affecting birth preparedness and complication readiness among couples attending antenatal clinic at UCTH, Calabar.

Statements	Responses				Σ	(X)
	Agreed	%	Disagreed	%		
The nearby health facility is very far from my place of residence making it difficult for me to access antenatal care	167	0.702	71	0.298	405	1.7
Lack of support/ assistance from family members, relative and friends makes it difficult for me to prepare and get ready for birth and complication.	188	0.79	50	0.21	426	1.79
Lack of financial support from my husband prevents me from practicing birth preparedness and complication readiness.	175	0.735	63	0.265	413	1.74
Religious and cultural beliefs make it difficult to practice birth preparedness and complication readiness.	52	0.218	186	0.782	290	1.22
Lack of awareness is a barrier to effective implementation of birth preparedness and complication readiness.	193	0.811	45	0.189	431	1.81
Poor inter-personal relationship between midwives and pregnant women makes it difficult for the women to prepare and get ready for birth and complication.	117	0.492	121	0.508	355	1.49
Total mean ± (SD) score = 9.75						
Decision: Mean (X) ± SD score <1.5=low awareness, while 1.5 & above= high awareness						

Results in Table 3 revealed that majority, 167 (70.2%) of the respondents agreed that the nearby health facility is very far from my place of residence making it difficult for me to access antenatal care, but 71 (29.8%) respondents did not. One hundred and eighty-eight (79.0%) respondents asserted that lack of support and assistance from family members, relative and friends makes it difficult for them to prepare and get ready for birth and complication, but 50 (21.0%) respondents did not. Also, 175 (73.5%) respondents agreed that

lack of financial support from their husband prevents them from practicing birth preparedness and complication readiness, but 63 (26.5%) respondents disagreed. Furthermore, 52 (21.8%) respondents reported that religious and cultural beliefs make it difficult for them to practice birth preparedness and complication readiness, but 63 (26.5%) respondents did not. Also, 193 (81.1%) respondents reported that negative perception about breast cancer is responsible for low awareness and practice of breast self-examination, but 45 (18.9%) respondents did not. Lastly, 117 (49.2%) respondents stated that religious beliefs about diseases like breast cancer affects the level of breast self-examination among women of child bearing age, but 121 (50.8%) respondents did not. In addition, the table revealed that the total mean score obtained by the respondents is 9.75 out of 18.0. The highest mean score per item is 1.81 out of 3.0, and it was obtained on negative perceptions about breast cancer. This is followed by a mean score of 1.79 which is obtained on negative attitude about practice of breast self-examination. The lowest mean score per item is 1.22 out of 3.0, and it was obtained on low education. This is followed by a mean score of 1.49 which is obtained on religious beliefs about breast cancer [10].

**Table 4.** Chi-square (X<sup>2</sup>) analysis of relationship between the level of awareness and practice of birth preparedness and complication readiness among couples attending antenatal clinic at University of Calabar Teaching Hospital (UCTH), Calabar (N=238).

Awareness BPCR	Practice of BPCR			Total	df	Sig.	X <sup>2</sup> Crit	X <sup>2</sup> Cal	Decision
	High	Moderate	Low						
High	85	74	16	175	2	0.05	5.99	23.4	Rejected
Low	35	19	9	63					
Total	120	93	25	238					
Significant at 0.05; df=1, X <sup>2</sup> Crit=5.99; X <sup>2</sup> Cal=23.4									

The result Chi-square (X<sup>2</sup>) analysis in Table 4 revealed that the calculated value of 23.4 is higher than the critical value of 5.99 at 0.05 level of significant with 2 degrees of freedom. This implies that the result is significant; therefore, the null hypothesis which stated that there is no significant relationship between the level of awareness and practice of birth preparedness and complication readiness among couples attending antenatal clinic at University of Calabar Teaching Hospital (UCTH), Calabar was rejected. Hence, the alternate hypothesis that there is a significant relationship between the level of awareness and practice of birth preparedness and complication readiness among couples attending antenatal clinic at University of Calabar Teaching Hospital (UCTH), Calabar was accepted in favour of pregnant women who have high awareness of birth preparedness and complication readiness.

### Discussion

The findings of this study revealed that the level of awareness of birth preparedness and complication readiness among couples attending antenatal clinic at UCTH, Calabar is high. Most (73.5%) respondents have high level awareness of birth preparedness and complication readiness, while (26.5%) have low awareness. Most respondents are aware that a pregnant woman should know her expected date of delivery; labour can start before due date; a pregnant woman should make arrangement for transportation to hospital in case of emergency labour; and the danger signs such as vaginal bleeding and swelling of face and feet. The findings correspond with a previous study on assessment of birth preparedness and complication readiness among pregnant women in Orlu Local Government Area in Imo State, Nigeria. The study revealed that most of the respondents were aware of birth preparedness and complication readiness, with 80% aware of danger signs in pregnancy, and 84.8% prepared items for birth for birth such as transportation and saving money. Similarly, the findings agree with a study in south eastern Nigeria which revealed that 70.6% of the respondents were aware of the concept of birth preparedness and complication readiness. It was also revealed in this study that the level of practice of birth preparedness and complication readiness among couples attending antenatal clinic at UCTH, Calabar is high. Most (50.4%) of the respondents have high level practice, 39.1% have moderate practice, while 10.5% respondents have low practice. Most of the respondents attend antenatal care up to four times, have saved money in case of birth complications, have made arrangement for care of the home during mother's absence, and have identified and arrange for transportation to the hospital when labour begins. The result corresponds with a study which examination of the practice of birth preparedness and complication readiness among pregnant women in rural area in Chhattisgarh, India revealed that majority (73.65%) of the respondents (pregnant women) high level practice of birth preparedness. Most of the respondents have

already identified skilled birth attendant for delivery, while 52.7% of women had already identified blood donors in case of emergency. Similarly, the result corresponds with a study in Sisala East District. Ghana revealed that 58.0% of respondents attended regular antenatal clinic, saved money and made provision for transportation in case of emergency.

The findings of this study further revealed that the factors affecting birth preparedness and complication readiness among couples attending antenatal clinic at UCTH, Calabar include: distance to health facility, lack of adequate support/assistance from family members, relative and friends, lack of financial support from my husbands, lack of awareness of the components of birth preparedness and complication readiness and poor inter-personal relationship between midwives and pregnant women. When pregnant women do not receive adequate support from husbands, friends, and relatives, they may find it difficult to practice birth preparedness and complication readiness. But if they receive adequate support, it will be much easier for them to practice birth preparedness and complication readiness. Also, if pregnant women are aware of the components of birth preparedness and complication readiness, they will make sure to visit antenatal clinic at least four times, save money in case of emergency, and make provision for emergency transportation. The findings correspond with Kaiser Family Foundation (2000), who noted that most parents do not believe that teaching children about safe sex practice could protect the children, rather, it will expose them to sexual behaviour at an early stage. But if parents lack knowledge of safe sex education coupled with negative perception about the practice, providing it to the children will be difficult. This finding also agrees with a facility-based cross-sectional study in Migori Country, Kenya, which revealed that distance to place of delivery and lack of husband and loved ones were militating against practice of birth preparedness and complication readiness. Also, the findings agree with studies in South Eastern Nigeria and in Jimma zone, Southwest Ethiopia, which revealed that distance, husband's occupation and support, attitude of relatives were among the factors that affected birth preparedness and complication readiness.

#### Implication to nursing

The implication of this study to nursing is that it will create awareness and consciousness on awareness, practice and factors influencing birth preparedness and complication readiness. It will also serve as an eye opener to health policy makers, nurse educators and nurses in general to mitigate the factors inhibiting practice of birth preparedness and complication readiness in UCTH, Calabar, Cross River State, and Nigeria as a whole. They will intensify effort target at educating pregnant women during antenatal visits and through the mass media on birth preparedness and complication readiness.

#### Conclusion

In conclusion, although adequate awareness and practice of birth

preparedness and complication readiness is an affective of preventing maternal mortality, the extent to which it is practiced among pregnant women in some places is not as expected. This study had revealed that most pregnant women attending antenatal clinic in UCTH, Calabar have high awareness of birth preparedness and complication readiness. Although the level of practicing birth preparedness is high, but still low among some pregnant women. The factors inhibiting the practice of birth preparedness and complication readiness among couples attending antenatal clinic at UCTH, Calabar include: distance to health facility, lack of adequate support/assistance from family members, relative and friends, lack of financial support from my husbands, lack of awareness of the components of birth preparedness and complication readiness and poor inter-personal relationship between midwives and pregnant women

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