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Awareness, Acceptance and Practice of Birth Preparedness and Complication (S) Readiness in a University Teaching Hospital

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Abstract: ***Background: Birth preparedness is a comprehensive strategy to improve the use of skilled providers at birth and the key interventions to decrease maternal mortality. It is the process of planning for normal birth and anticipating actions needed in case of emergency. This is based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care. Objectives: To assess the awareness, acceptance and practice of birth preparedness and complication readiness among women attending antenatal care in Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria. Methodology: It was a descriptive cross-sectional study conducted from 1st September to 31st October 2017. Data was collected using pre-tested structured questionnaire and analyzed with SPSS version 20. Results: The awareness, acceptance and practice of birth preparedness and complication readiness in this study were good. Majority, 206 (75.7%) of the respondents were aware of the concept of birth preparedness and complication readiness while 244 (89.4%) had good acceptance of the concept. Most, 222 (83.1%) of the respondents were well prepared for birth and its complications. Conclusion: Continuous health education about Birth preparedness and complications readiness should be maintained in order to sustain and improve the women's awareness, acceptance and practice of Birth preparedness and Complications Readiness found in this study.***

Keywords: Birth preparedness, Complications, Knowledge and awareness, Practice, Acceptance

1. Introduction

Birth preparedness and complication readiness is the process of planning for normal birth and anticipating actions needed in case of emergency.[1] This is based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care.[2]It is a comprehensive strategy to improve the use of skilled providers at birth and the key interventions to decrease maternal mortality.[1]

Birth preparedness and complication readiness promotes skilled care for all births and encourages decision making before the onset of labour.[3]Its matrix raises awareness of danger signs, thereby improving problem recognition and reducing delay in deciding to seek care.[3]

The major components of birth preparedness and complications readiness involves knowledge of danger signs, identification of skilled birth attendant; identification of the closest appropriate care facility, plan for transportation to this care facility for delivery and/or obstetric emergencies, save money to pay for care or other resources, identification of a potential compatible blood donor and decision maker in case of emergency.[4,5,6]

The responsibilities for Birth Preparedness and Complication Readiness must be shared among all safe motherhood stakeholders, since co-ordinated effort is needed to reduce the delays that contribute to maternal and newborn deaths.[1] It has been acknowledged that receiving care from a skilled provider is the single most important intervention in safe motherhood but often women are confronted with delays in seeking care.[7]

The principle and practice of birth preparedness and complication readiness in a third world setting where there is prevailing illiteracy, inefficient infrastructure, poor transport system, and unpredictable access to skilled care provider has the potential of reducing the existing high maternal and neonatal morbidity and mortality rates.[3]

Despite the great potential of birth preparedness and complication readiness in reducing maternal and newborn deaths, the successes of this strategy are not well known in most of Sub-Saharan Africa.[12] Several previous studies have shown that most women were not adequately prepared for birth and or its complications.[2,4,5,6,8,9]

The objectives of this study therefore are to ascertain the awareness of danger signs, determine the awareness and acceptance of birth preparedness and complication readiness in reducing maternal and perinatal morbidity and mortality among the study group, and to ascertain the practice of birth preparedness and complication readiness among the study population.

2. Methods and Materials

It was a facility based prospective cross-sectional study conducted from 1st September to 31st October 2017 among pregnant women attending antenatal care in Usmanu Danfodiyo Teaching Hospital, Sokoto, North-western Nigeria. The inclusion criteria were pregnant women attending antenatal care in the facility, who consented for the study and were at least 20 weeks of gestation. The exclusion criteria were women who did not give consent or were seriously ill.

The sample size was calculated using Lasile Kish formula ($n = Z^2pq/d^2$) for estimating simple proportion based on report of a similar study in which a proportion of 77.6% was used as percentage of pregnant women who were aware of birth

preparedness and complication readiness (BPCR).[8] A 95% confidence interval and a sample error of 0.05 were used. Allowance of 10% was made for attrition and/or incomplete filling of the questionnaire

The data was collected using structured questionnaire adapted from the safe motherhood questionnaire which was developed by the maternal and neonatal health program of JHPIEGO, an affiliate of John Hopkins University, Baltimore, Maryland, USA.[10] The adapted questionnaire was modified and contextualized to fit the local situation and the research objectives. The questionnaire was then pre-tested.

The data was analyzed using SPSS version 20. Associations between relevant variables were explored with Chi-square test. The level of statistical significance was set at $p < 0.05$. Ethical approval for the study was from the Hospital Ethics Committee.

Key Variables

The awareness of danger signs was assessed using a total of 13 key danger signs during pregnancy, labour and puerperium. A respondent was considered to have poor, fair and good awareness of the danger signs if she recognized 4 or less, 5-8 and 9-13 danger signs respectively.

The acceptance of birth preparedness and complication readiness was assessed based on the acceptance

1) To identify the preferred place of deliver/skilled birth attendant
2) To save money for birth and its complication(s)
3) To make arrangement for transportation to the preferred place of delivery
4) To identify a compatible blood donor

The acceptance to determine the preferred place of delivery/skilled birth attendant carries 2 points while the rest three carry a point each with a total score of 5. Respondents with score of 3 and above was adjudged to have good acceptance while those with score of 2 and less were adjudged to have poor acceptance of birth preparedness and complication readiness.

The preparedness for birth and its complications was assessed using

1) Willingness of respondent to seek for treatment when she experiences the danger signs
2) Identification of the preferred place of delivery with skilled birth attendant in place
3) Having made transportation arrangement to the preferred place of delivery
4) Having saved money for delivery and/or its complications
5) Identification of compatible blood donors

Identification of the preferred place of delivery with skilled birth attendant in place carries a score of 2 while each of the other parameters carries 1 point making a total of 6.

Respondents with score of 4 and above were prepared for birth and its complication whereas those with score of 3 or below were not prepared.

3. Results

Of the 294 questionnaires distributed, 273 were returned completely filled giving a response rate of 92.8%. The mean age was 28.5 ± 5.8 years while the range was 18-48 years. Majority of the respondents (38.8%) were in the age group 25-29 years. Most of the respondents were Hausa/Fulani (45.5%) and Muslims (54.9%). Majority of the respondents (94.2%) were married and 65.9% had tertiary education while 34% (93 of 273) were civil servants. (Table 1).Majority (57.9%) of the respondents were multipara. The highest parity was nine.

Table 1: Sociodemographic characteristics of respondents

Characteristic	Frequency	Percentage
Age (Years)		
<20	14	5.1
20-24	44	16.1
25-29	106	38.8
30-34	76	27.8
≥35	33	12.1
Tribe		
Hausa/Fulani	124	45.4
Igbo	77	28.2
Yoruba	29	10.6
Others	43	15.8
Religion		
Islam	150	54.9
Christianity	123	45.1
Marital Status		
Married	259	94.9
Single	6	2.2
Separated	2	0.7
Divorcee	4	1.5
Widow	2	0.7
Educational Status		
No formal education	17	6.2
Primary	5	1.8
Secondary	71	26
Tertiary	180	65.9
Occupation		
Not employed/House wives	88	32.2
Civil servants	93	34
Business women	70	25.6
Petty traders	4	1.5
Student	15	5.5
Others	3	1.2

The most commonly identified danger sign was vaginal bleeding (89.7%) while the least identified danger sign was prolonged labour (28.9%).

Table 2: Awareness of danger signs during pregnancy, labour and puerperium

Danger signs	Frequency	Percentage
Fever	157	57.5
Vaginal bleeding	245	89.7
PROM	129	47.3
Severe Headache	165	60.4
Blurring of vision	140	51.3
Difficulty in breathing	156	57.1
Convulsion	178	65.2
Loss of consciousness	167	61.2
Severe weakness	163	59.7
Reduced fetal movement	167	61.2
Prolonged labour	79	28.9
Retained placenta	181	66.3
Offensive vagina discharge	162	59.3

Majority of the respondents (51.6%) had good awareness of the danger signs.

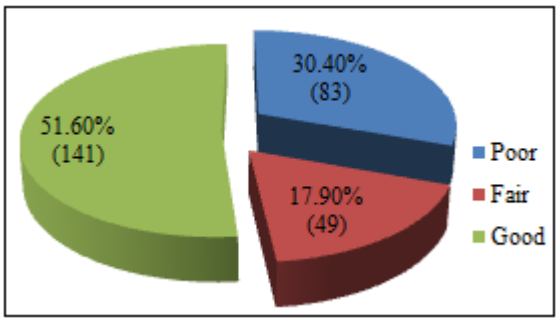

Figure 1: Level of awareness of danger signs

Most of the respondents (75.5%) were aware of Birth preparedness and Complication Readiness. Majority of the respondents (89.4%) had good acceptance of Birth preparedness and complication readiness

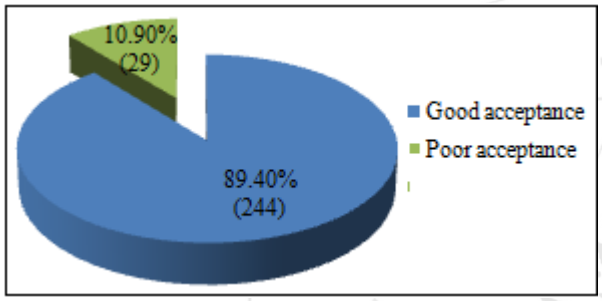

Figure 2: Acceptance of birth preparedness and complications readiness.

Most of the respondents (57.9%) did not identify compatible blood donor(s), however, majority (81.3%) were well prepared for birth and/or its complications. (Figure 3).

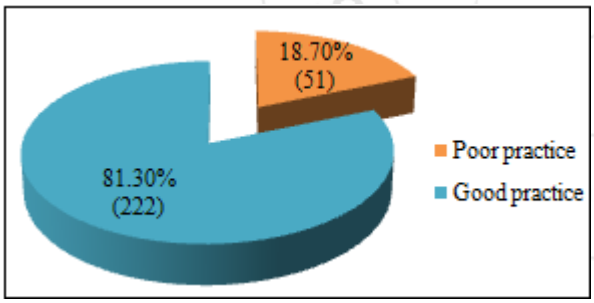

Figure 3: Level of practice of birth preparedness and complications readiness

4. Discussion

Of the 294 questionnaires distributed, 273 were returned completely filled giving a response rate of 92.9%. This is similar to findings from other studies.[1, 3, 4, 8 and 9]

Most of the respondents (38.8%) were in the age group of 25-29 years with a mean age of 28.5 ± 5.3 years. This is similar to the mean ages of 26.1 ± 6.4 years from Kano[11]and 26.5 ± 5.0 years from South-west Ethopia[12] but less than 31.2 ± 4.2 years from Lagos[3] and 31.6 ± 1.86 years from Calabar.[3] This could be due to the fact that early marriage is common in Northern Nigeria where the study was conducted compared to the southern parts of the country.

Most of the respondents (45.4%) were of the Hausa/Fulani ethnic group and 54.9% were Muslims. This was not surprising as the study was conducted in North-western Nigeria. Majority of the women (94.9%) were married and this is in tandem with findings from similar studies.[1,3,10,11,13]

Most, (57.7%) were multiparae. This agrees with findings from Kano (46.8%)[11]and Calabar (60.8%)[9] but is contrary to the findings in Ethiopia where majority (29.1%) were primigravidae.[13]

Majority of the respondents (65.9%) had tertiary education which was comparable to findings in Lagos,[14] but different from the findings of 14.8% from Calabar[3], Burkina Faso[15] and 17.7% from Delhi, India.[16]

The most commonly identified danger sign (89.7%) in the study was vaginal bleeding. This is similar to findings in other studies.[1,4,7,17,18,19] The least identified danger sign was prolonged labour which was similar to the finding in Ghana.[18] Majority of the respondents (51.6%) had good knowledge of the danger signs during pregnancy, labour and the puerperium while 17.9% had fair knowledge of the danger signs. This may not be unconnected to the fact that the study was carried out among women attending antenatal care in UDUTH, Sokoto where health education is given every day in English language and in Hausa the local dialect during the antenatal care.

The awareness of the concept of Birth preparedness and complications readiness in this study was 75.5%. This is comparable to the findings from of 70.6% from Cross-River,[13] 78.2% from Benin-City[20], 79.1% from Port-Harcourt,[21] 74.3% from Ghana[18] but more than 32.7% from Calabar[3]and 46.4% from Ethiopia.[1]

The acceptance of Birth preparedness and complications readinessin this study was good (89.4%). This is in contrast to the finding in Ogbomoso where 53% of the respondents were unfavorably disposed towards Birth preparedness and complications readiness.[9]

Majority of the respondents (81.3%) were well prepared for birth and its complications in this study as was also reported in Osogbo(82.1%) [4]and Edo87.4%,[22] but higher than 60.4% reported in Kano,[11] and far higher than 40.3% in Ogbomoso[9], 31.3% in Calabar[3], 41.1% in Ethopia[8], and 47.8% in India.[6] The reason for this high practice of Birth preparedness and complications readiness in this study may be due to the fact that the study was conducted among women attending ANC in a tertiary center where the women received birth preparedness and complication readiness counseling during their ante-natal care visits.

The least practiced component of the Birth preparedness and complications readiness in this study was identification of compatible blood donors while the respondents' spouses were the most identified compatible blood donors in this research. Only 42.1%% of the respondents in this research identified compatible donors. This is similar to the findings

from previous studies in which only minimal proportions of the respondents made arrangement for blood donors.[4,8,13,23] Majority of those who had not identified compatible blood donors in this study believed they will not require the blood. This contradicts respondents' awareness of haemorrhage being the most common danger sign identified in this study; naturally, one would expect making arrangements for compatible blood donors to be one of the topmost priorities.

5. Conclusion / Recommendations

The awareness, acceptance and practice of Birth preparedness and Complications Readiness were high in this study however, identification of compactible blood donors was poor. There is need to create more awareness as regards the importance of making arrangements for compatible blood donors during the antenatal period.

Continuous health education about Birth preparedness and complications readiness should be maintained in order to sustain and improve the women's awareness, acceptance and practice of Birth preparedness and Complications Readiness found in this study.

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