Greener Journal of Medical Sciences
Vol. 3 (1), pp. 001-007, January 2013
ISSN: 2276-7797; ICV: 5.98

DOI Link: http://doi.org/10.15580/GJMS.2013.1.011313380
http://gjournals.org/GJMS

The Concept of Birth Preparedness in the Niger Delta of Nigeria

[1]*IBRAHIM Isa Ayuba, [2]OWOEYE Gani I.O. and [3]WAGBATSOMA V.

[1]*Department of Obstetrics and Gynaecology, College of Health Sciences, Niger Delta University, Amassoma, Bayelsa State, Nigeria.
[2]Department of community medicine, College of Health Sciences, Niger Delta University, Amassoma, Bayelsa State, Nigeria.
[3]Department of community medicine, University of Benin, Edo State, Nigeria.

ARTICLE INFO

Article No.: *011313380*
Type: *Research*
DOI: *10.15580/GJMS.2013.1.011313380*

Submitted: *13/01/2013*
Accepted: *20/01/2013*
Published: *28/01/2013*

Corresponding Author
Ibrahim Isa Ayuba
E-mail: *isa.ibrahim680@ gmail.com*
Phone: *+234 07031819695*

Keywords:
birth plan, awareness, factors, Niger delta

ABSTRACT

Majority of maternal deaths occur during labour and delivery, mostly as a result of delays; in recognizing danger signs, in deciding to seek care , in reaching the health facility, hence birth-preparedness which encourages preparation and decision making before labour reduces all levels of delay and promotes skilled care during labour and delivery. This study aims to determine the level of birth preparedness and the factors associated with it. This cross-sectional, multicentre descriptive study was conducted in Benin Central Hospital and University of Benin Teaching Hospital Benin City, Edo State, Nigeria. Data were collected with the aid of an interviewer -administered structured Questionnaires. 38% of the respondents revealed some level of awareness of birth preparedness however, there was a statistically significant difference in the source of information, level of education and the expression of danger signs (all p value <0.005) among these group of women. Most (40.4%) embraced birth preparedness because it allows for ease of delivery, child spacing (28.1%) and to avoid complications (23.7%). majority of respondents in UBTH plan to achieve these goals by savings (92.1%), which is statistically different from those respondents from CHB (z =3.59; p = 0.000).

INTRODUCTION

One of the important measures of the quality of obstetric care is the maternal mortality ratio (MMR), which is defined as maternal deaths per 100,000 live births over a given period and it varies from approximately 10 in developed countries to approximately 1,000 in least developed (Hill et al., 2001; Buekens, 2001).

Maternal mortality remains a major public health challenge in the developing countries, and the little progress made towards the achievement of millennium development goals especially the goal of achieving three-quarter reduction in maternal mortality ratio by 2015 can essentially be attributed to the little achievements of low and middle income countries in this regard (Hill et al., 2007; Shah, 2007).

A major strategy that can reduce the maternal mortality ratio is making a birth plan or birth preparedness. This is defined as a set of knowledge, behaviours and actions undertaken by women, families, communities, health care providers and facilities to enhance the survival of women and newborns during pregnancy, childbirth and the postpartum period. It is the advance planning and preparation for delivery in order to improve maternal health outcomes, however, the application of this concept is varied and there is no single agreed upon definition (Fishel, 2001; Roxana and Barco; 2004).

In higher-resource countries the focus is mainly on the woman's psychological and physical comfort (birth plan) while those in lower-resource countries emphasizes on measures to ensure a birth with appropriate attendant and preparation for emergencies (birth preparedness and complication readiness) (WHO, 2006). Birth preparedness involves not only the pregnant woman but also her family, community and available health staff. The support and involvement of these persons can be critical in ensuring that a woman can adequately prepare for delivery and carry out a birth plan (Fishel, 2001).

The elements of birth preparedness includes: knowing danger signs, planning for birth attendants and birth location, arranging transportation, identifying a blood donor and saving money in case of an obstetrics complication and attending antenatal clinic. Pregnant women should have a written plan for birth and for dealing with unexpected adverse events that may occur in pregnancy, delivery or immediate postpartum period. This plan can be written in the birth preparedness card and reviewed with a skilled attendant at each antenatal assessment (WHO, 2006; Moran et al., 2006).

The birth preparedness card is a sample card designed to help mothers and families prepare for birth. It contains information on the expected date of delivery, place of delivery, birth attendant, transport arrangement, saving for birth cost, list of possible complications, antenatal visit, postnatal visit, etc. Programs in Egypt, Bangladesh and other countries have developed birth preparedness card and some others have developed guides to using the card and record keeping (http:///www.drguide, 2004).

Activities to improve birth preparedness and complication readiness at household and community levels have been a standard component of programs in some countries to improve maternal survival. These programs involve community mobilization, community education, transport and financing schemes between women who need skilled care and health workers who can provide it. Some communities and social mobilization groups have promoted birth preparedness cards as one method of increasing timely use of skilled care and women groups assisted in the distribution of the birth preparedness cards to households(Moran et al., 2006).There exist also the concept of birth preparedness plus for HIV positive mothers, which have added elements to the already existing standard elements of birth preparedness(http://www.changeproject.org, 2008)

Birth preparedness and complication readiness have been recognized by WHO and other agencies, to be a useful and practical intervention with several advantage such as: motivating women to plan to have skilled provider at delivery; encouraging family members to identify their roles in ensuring successful deliveries; encouraging communities to participate in the care of pregnant women; and also call on the health providers and facilities to prepare to attend birth and treat complications by way of improving on staffing, retraining of staffs, providing enabling environment and policies (Roxana and Barco, 2004).

In Nigeria birth preparedness was only launched in 2005 by the Federal Ministry of Health (Shiffman and Okonofua, 2007). This study aim to assess the practice, attitude and factors associated with birth preparedness and complication readiness in the Niger Delta.

MATERIALS AND METHODS

This cross-sectional, multicentre descriptive study was carried out in Benin Central Hospital and University of Benin Teaching Hospital (UBTH) both in Benin City Edo Statebetween 1st October 2008 and 30th September 2009. Informed oral consent was sought and obtained from 300 participants before inclusion in the study. After due explanation of the study and necessary clarifications of issues raised, the field assistants distributed the questionnaires to the women surveyed. The women were assured of confidentiality and that their names will not be published in the report.

The sampling method we used was systematic random sampling with every third client being interviewed. We got the appointment list for each day of the week and calculated the sample fraction. Data were collected using a pre-tested semi -structured interviewer administered questionnaire which adapted to the local situations. The number of study participants was determined using probability proportionate-to-population size allocation methods. The information obtained were

coded and transferred onto a profoma already designed for the study.

Variables relating to the socio- demographic characteristics of the respondents, birth preparedness, pregnancy planning, knowledge of danger signs in pregnancy and labour, plans for savings , transportation ,blood donor, and place of delivery were obtained. Statistical analysis was performed with Statistical Package for Social Sciences (SPSS version 10) where nominal data were compared using the chi square test (x^2) and the difference between means determined by the students t- test with the level of significance set at $\alpha = 0.05$. Approval for this work was given by the Ethical Committee of the Department of community health, University of Benin teaching Hospital.

RESULTS

A total of 300 women were enrolled for this study, 150 respondents from each facility. Table 1 reveals the socio-demographic information from respondents in both the Central Hospital Benin (CHB) and the University of Benin teaching Hospital (UBTH) where there was no statistically significant difference in the age distribution ($t = 1.90$; $p = 0.58$; $\alpha = 0.05$), the religion ($x^2 = 4.624$; $df = 2$; $p = 0.099$), tribe ($x^2 = 10.378$; $df = 7$; $p = 0.168$) and marital status ($x^2 = 1.003$; $df = 2$; $p = 0.606$) of the respondents. Majorities were between 26 years to 30 years (48.3%), Christian (96.7%), of the Bini tribe (47.3%) and married (98.4%). There was however a statistically significant difference in the level of education of respondents between both facilities ($x^2 = 90.521$; $df = 3$; $p = 0.0.000$), where majority of those attending ANC at the CHB had secondary level education (60.7%) while majority of the women attending ANC at UBTH had tertiary level of education (68.7%).

Although there was generally poor awareness about birth preparedness in both facilities (62%), there was no statistically significant difference in awareness of birth preparedness ($x^2 = 1.712$; $df = 1$; $p = 0.191$) (Table 2). However, there was a statistically significant difference in the source of information ($x^2 = 27.143$; $df = 3$; $p = 0.000$), and the expression of danger signs ($x^2 = 21.367$; $df = 2$; $p = 0.000$) among the 38% of the total respondents who demonstrated awareness about birth preparedness (Table 2).

When requested to give their expression of danger signs in pregnancy, there was a statistically significant difference ($x^2 = 21.367$; $df = 2$; $p = 0.000$) in the response obtained from the women in both facilities. Majority (74.6%) of the respondents who demonstrated awareness in UBTH were able to mention specific danger signs while majority of the respondents who demonstrated awareness in CHB simply expressed danger signs as "wrong things happening during pregnancy.

There was no statistically significant difference ($x^2 = 3.042$; $df = 3$; $p = 0.385$) in the reasons given by the respondents for birth preparation. (Table3). However the specific plan for pregnancy elicited various responses (Table 4). Majority (92.1%) of the respondents who demonstrated awareness in UBTH save money showing a statistically significant difference from the respondents who demonstrated awareness in CHB ($z = 3.59$; $p = 0.000$).

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

CHARACTERISTIC	CENTRAL HOSPITA L Freq (%)	U.B.T.H Freq (%)	TOTAL (%)
AGE (years)			
16 – 20	3 (2.0)	0 (0)	3 (1.0)
21 - 25	24 (16.0)	17 (11.3)	41 (13.7)
26 – 30	74 (49.3)	71 (47.3)	145 (48.3)
31 – 35	33 (22.0)	44 (29.3)	77 (35.7)
36 – 40	14 (9.3)	16 (10.7)	30 (10.0)
41 – 45	2 (1.3)	2 (1.3)	4 (1.3)
TOTAL	**150 (50)**	**150 (50)**	**300 (100)**
Mean (x)	$\bar{x}_1 = (29.7 \pm 4.7)$	$\bar{x}_2 = 30.7 (\pm 4.4)$	
	t = 1.90 p = 0.058	**df = 298**	
RELIGION			
Christian	148 (98.7)	142 (94.7)	290 (96.7)
Muslim	1 (0.7)	7 (4.7)	8 (2.7)
ATR	1 (0.7)	1 (0.7)	2 (0.6)
TOTAL	**150 (50)**	**150 (50)**	**300 (100)**
	$x^2 = 4.624$ p = 0.099	**df = 2**	
TRIBE			
Bini	68 (45.3)	74 (49.3)	142 (47.3)
Ishan	31 (20.7)	20 (13.3)	51 (17.0)
Owan	7 (4.7)	13 (8.7)	20 (6.7)
Etsakor	7 (4.7)	13 (8.7)	20 (6.7)
Delta	20 (13.3)	13 (8.7)	33 (11.0)
	2 (1.3)	13 (8.7)	

Yoruba	14 (9.3)	6 (4.0)	8 (2.7)
Igbo	1 (0.7)	10 (6.7)	24 (8.0)
Others	**150 (50)**	1 (0.7)	2 (0.6)
TOTAL	**x^2 =10.378 p = 0.168**	**150 (50)**	**300 (100)**
		df = 7	
EDUCATION			
	34 (22.6)		
Primary	91 (60.7)	11 (7.3)	45 (15.0)
Secondary	25 (16.7)	35 (23.3)	126 (42.0)
Tertiary	0 (0)	103 (68.7)	128 (42.7)
No Formal Education	**150 (50)**	1 (0.7)	1 (0.3)
	x^2 = 90.521 p = 0.000	**150 (50)**	**300 (100)**
TOTAL		**df = 3**	
	147 (98.0)		295 (98.4)
MARITAL STATUS	2 (1.3)	148 (98.7)	4 (1.3)
	1 (0.7)	2 (1.3)	1 (0.3)
Married	**150 (50)**	0 (0)	**300 (100)**
Single	**x^2 = 1.003 p = 0.606**	**150 (50)**	
Divorced		**df = 2**	
TOTAL			

TABLE 2: AWARENESS & KNOWLEDGE OF RESPONDENTS ON BIRTH PREPAREDNESS

	CENTRAL HOSPITAL Freq (%)	**U.B.T.H Freq (%)**	**TOTAL (%)**
AWARENESS			
Yes	**51 (34.0)**	**63 (42.0)**	**114 (38.0)**
No	**99 (66.0)**	**87 (58.0)**	**186 (62.0)**
TOTAL (%)	**150 (50)**	**150 (50)**	**300 (100)**
	x^2 = 1.712 p = 0.191	**df = 1**	
SOURCE OF INFORMATION (only for those who demonstrated awareness)			
Media	**9 (17.7)**	**3 (4.8)**	**12 (10.5)**
Health personnel	**22 (43.1)**	**47 (74.6)**	**69 (60.6)**
Books	**2 (3.9)**	**10 (15.8)**	**12 (10.5)**
Friends/family	**18 (35.3)**	**3 (4.8)**	**21 (18.4)**
TOTAL (%)	**51 (44.7)**	**63 (55.3)**	**114 (100)**
	x^2 = 27.143 p = 0.000	**df = 3**	
KNOWLEDGE (only for those who demonstrated awareness)			
Correct	**41 (80.4)**	**59 (93.7)**	**100 (87.7)**
Expression	**10 (19.6)**	**4 (6.3)**	**14 (12.3)**
No Response			
TOTAL (%)	**51 (44.7)**	**63 (55.3)**	**114 (100)**
	x^2 = 3.451 p = 0.063	**df = 1**	
EXPRESSION OF DANGER SIGNS (only for those who demonstrated awareness)			

Wrong things happening during pregnancy	**25 (49.0)**	**12 (19.1)**	**37 (32.5)**
Specific signs mentioned	**16 (31.4)**	**47 (74.6)**	**63 (55.3)**
No Response	**10 (19.6)**	**4 (6.3)**	**14 (12.2)**
TOTAL (%)	**51 (44.7)**	**63 (55.3)**	**114 (100)**
	x^2 = 21.367 p = 0.000	**df = 2**	

TABLE 3: REASONS GIVEN FOR BIRTH PREPERATION (only for those who demonstrated awareness)

REASONS	**CENTRAL HOSPITAL Freq (%)**	**U.B.T.H Freq (%)**	**TOTAL (%)**
To avoid complications	**11 (21.6)**	**16 (25.4)**	**27 (23.7)**
For easy delivery	**24 (47.0)**	**22 (34.9)**	**46 (40.4)**
Child spacing	**11 (21.6)**	**21 (33.3)**	**32 (28.1)**
No Response	**5 (9.8)**	**4 (6.4)**	**9 (7.8)**
TOTAL (%)	**51 (44.7)**	**63 (55.3)**	**114 (100)**
	x^2 = 3.042 p = 0.385	**df = 3**	

TABLE 4: RESPONDENTS' PLAN FOR PREGNANCY (only for those who demonstrated awareness) (N = 114)

PLAN	**CENTRAL HOSPITAL (n = 51) Freq (%)**	**U.B.T.H (n = 63) Freq (%)**	**z- score**	**P**
Saving Money	32 (62.8)	58 (92.1)	3.59	0.000
Prayer	36 (70.6)	44 (69.8)	0.00	1.000
Contraception (Pre or Post conception)	11 (21.6)	5 (7.9)	1.82	0.068
No Response	5 (9.8)	3 (4.8)	0.67	0.503

DISCUSSION

The level of education of the respondents was positively associated with the knowledge of birth preparedness and danger signs in both hospitals. This may be explained by the fact that there is the possibility that education exposes to lots of information. This is similar to findings from a similar study in this country (John et al., 2011).

Only 38% of the respondents revealed some level of awareness of birth preparedness. This is lower

than 70.6 % reported from a similar study from another region in this country (John et al., 2011).

The awareness of birth preparedness was better in UBTH than central because UBTH respondents were more educated and 39.3% of them correctly explained the meaning of the term as against 27.3% central hospital. Their commonest source of information was from health personnel / hospital (14.7% central; 31. 3% UBTH).

Only 42% of the respondents are aware of the term "danger signs" which was higher among respondents from UBTH (58%) than central hospital (26%), out of which only 14% gave specific examples of danger signs and 3.3% could not offer explanation. The findings in this study were lower than the observation among Kenya women where 67% of the pregnant women knew one danger sign and 6.9% knew more than three danger signs (Mutiso et al., 2008)

Although communities' beliefs and norms generally support putting aside money for delivery, in practice families find it difficult to save funds due to poverty (WHO, 2006). Many people in developing countries live on less than a United State dollar per day, which is hardly sufficient for them to feed and clothe themselves, let alone put aside money for the possibility of obstetric emergencies (Roxana and Barco, 2004). As a result when complications arise, considerable life threatening delays occur as families try to mobilize funds and reach a facility where it is available. It therefore means that the economic strength of people will affect the level of preparedness. However, the attitude to savings was good in both hospitals (95.3% central hospital, 98.7% UBTH). The practice of saving was slightly higher among UBTH respondents. The findings in both hospitals were higher than what were observed in Kenya and Burkina Faso (Moran et al., 2006; Mutiso et al., 2008).

CONCLUSION

Our study revealed that the knowledge of birth preparedness and danger signs was poor. Education had a strong influenced on this knowledge**;** hence Health workers should be knowledgeable about the concept of birth preparedness. Education of pregnant Women and their families about the concept of birth preparedness should be made compulsory in our health facilities in view of the poor level of awareness as demonstrated in this study.

REFERENCES

Hill k AbouZahr C and Ward law T (2001). "Estimates of maternal mortality for 1995," *Bulletin of the World Health Organization*. 79 (3): 182–193.

Buekens P (2001). "Is estimating maternal mortality useful?" *Bulletin of the World Health Organization*. 79(3): 179.

Hill K, Thomas K, AbouZahr C, Walker N, Say L, Inoue M and Suzuki E (2007). Maternal Mortality Working Group: Estimates of maternal mortality worldwide between 1990 and 2005: an assessment of available data. *Lancet*, 370(9595):1311-1319.

Shah IH and Say L (2007). Maternal mortality and maternity care from 1990 to 2005: uneven but important gains. *Reprod. Health Matters*. 15(30):17-27.

Fishel JD (2001). Birth Preparedness for safe Motherhood interventions: Issues in Measurement. Baltimore, M.D: JHPIEGO.

http://alpha.confex.com/alpha/129am/techprogram/paper_30192.htm accessed on 16/12/2008.

Roxana C and Barco D (eds) (2004). Monitoring birth preparedness and complication readiness. Tools and indicators for maternal and newborn health. Baltimore M.D. JHPIEGO, p1-7.

WHO (2006).Standard For Maternal and Neonatal Care. Birth and Emergency Preparedness in antenatal care. Integrated Management of Pregnancy and Childbirth (impact), 2006.

http://www.who.int/making-pregnancy-safer/publication/standard/en/index.html accessed on 16/02/09

Moran A, Sangi G, Dineen R, Rawlins B, Yameogo M and Baya B (2006). Birth- preparedness for Maternal Health: findings from Koupela District, Burkina Faso, Journal of Health, Population and Nutritional.vol 24(4): 486 – 497.

Making-pregnancy-safer/publication/standard/en/index.html accessed on 16/02/09 Birth preparedness: A Community-Developed Birth Preparedness Intervention in Western Kenya.

http://www.changeproject.org/technical/maternalhealthnutrition/mstoolkit/bp_kenya/overview_bp.htm accessed on 16/12/08

10. Standard of practice for integrated MCH/ RH services. Clean and Safe Home Birth. Ministry of Health and Population. Arab Republic of Egypt, Basic Essential Obstetric Care: Protocols for Physicians, Cairo, 2004 http:///www.drguide.mohp.gov.eg/newsite/E-learning/CD10/Chapter%20l.pdp accessed on 16/02/09.

Shiffman J and Okonofua F (2007). The State of Political Priority for Safe Motherhood in Nigeria: BJOG. 114: 127- 133.

John EE, Kufre JE, Patience O, Thomas UA, Christopher UI and Aniekan JE (2011). Awareness of Birth Preparedness and Complication Readiness inSoutheastern Nigeria, International Scholarly Research Network ISRN Obstetrics and Gynecology. Article ID 560641, 6 pages doi:10.5402/2011/560641.

Mutiso S, Qureshi Z and Kinuthia J (2008). Birth Preparedness among antenatal clients. East African Medical Journal, vol 85 (6): 275- 283.

Cite this Article: Ibrahim Isa Ayuba, Owoeye Gani I.O. and Wagbatsoma V (2013). The Concept of Birth Preparedness in the Niger Delta of Nigeria**.** Greener Journal of Medical Sciences, 3(1): 001-007, http://doi.org/10.15580/GJMS.2013.1.011313380**.**