

MALE KNOWLEDGE OF DANGER SIGNS OF OBSTETRIC COMPLICATIONS IN AN URBAN CITY IN SOUTH WEST NIGERIA

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ABSTRACT

Background: Knowledge of danger signs in pregnancy can be regarded as one of the ways to eliminate the first level of delay as a factor influencing maternal mortality. The role of men as decision makers cannot be overlooked in this regard. The aim of this study was to determine men's knowledge of danger signs in pregnancy and their role in pregnancy related decision making.

Methods: A cross sectional survey was conducted among 259 men aged 15-65 years in selected communities in Ibadan, Oyo State by multistage sampling. A semi-structured pretested questionnaire was used to obtain information on socio-demographic characteristics, attitude and practices concerning antenatal care, knowledge of danger signs in pregnancy and decision to seek hospital care. Knowledge of danger signs was the main outcome measure categorized into poor and good based on a score of ≤ 6 and > 6 . Data were analyzed using descriptive statistics and bivariate analysis with level of significance set at 5%.

Results: Mean age of respondents was 40.4 ± 11.4 years. Almost half had at least secondary education (47.5%) and were mainly artisans by occupation (59.8%), while 18.1% could not mention any danger sign. Majority had poor knowledge about danger signs in pregnancy (60.6%). There was no significant difference in knowledge of respondents within different age groups, by occupation, number of children and from different educational levels.

Conclusion: Poor knowledge of obstetric danger signs was evident among these men. Programmes targeted at providing education about danger signs in pregnancy for men are recommended.

Keywords: Danger Signs in Pregnancy, Obstetric Complications, Male Knowledge

INTRODUCTION

Maternal mortality in sub-Saharan Africa has been unacceptably high over the years despite the various attempts which have been made to address this.^{1,2} Reduction in maternal mortality by three quarters has been earmarked the target required to achieve the fifth Millennium Development Goal (MDG) by the year 2015. Between 1990 and 2008, there had been a 34% decline in maternal mortality but despite this, the average annual percentage decline in the global maternal mortality ratio was 2.3 per cent short of the 5.5 per cent annual decline necessary to meet the MDG target.³ In Nigeria, maternal mortality rates have remained very high with current figures being as high as 545 per 100,000.⁴

Factors responsible for maternal mortality have been identified to include direct and indirect causes as well as various levels of delay.⁵ These levels of delay have

considerable bearing on maternal health outcomes. The failure to recognize complications, sociocultural barriers to seeking care as well as human resource and health facility constraints play major roles in contributing to these levels of delay.

Maternal death is often as a result of an interplay of many of these factors. Pregnant women in low and middle income countries including Nigeria are particularly vulnerable as a result of their socioeconomic and cultural status in society. In addition to this, the autonomy of pregnant women to access health care is usually affected by social dynamics that determine the extent of this autonomy.⁶

With the preponderant patriarchal nature of the Nigerian society, the decision for a pregnant woman to access maternal care services many times rests on

the shoulders of her husband; a fact that had been documented several decades ago and is still of relevance now.^{7,8} The implications of male gender supremacy can be far reaching and affect when, where or even whether a pregnant woman is allowed to seek care.⁸ Therefore, the involvement of fathers could be the difference between a healthy birth and a maternal death.⁹ Male partner involvement could also have a strong bearing on the timeliness of such care and the eventual outcome. The support of men in the health care seeking behaviour of their pregnant partners such as attendance at antenatal and postnatal clinics is one of the ways by which maternal deaths can be avoided.¹⁰

Antenatal care visits provide an opportunity to inform women about the danger signs and symptoms for which assistance should be sought from a health care provider without delay. Research has shown that knowledge of danger signs in pregnancy by pregnant women themselves is low resulting in a reduced tendency to seek skilled attendance at birth and referral in case of complication.¹¹ Women and their partners need to be informed about danger signs during pregnancy and delivery and they should be counselled to seek assistance with minimum delay. The low level of knowledge of dangers signs of pregnancy identified among both men and women in developing countries can be adjudged to be a contributory factor to the first level of delay which plays a role in the high levels of maternal mortality observed in many of such countries.^{8,12}

A number of studies have been carried out on the role of men in reproductive health in various parts of Nigeria,^{8,13,14} but comparatively little research has focused on the awareness of men in southwest Nigeria about danger signs in pregnancy as well as their participation in pregnancy care by their own admission. This is particularly important in the context of the fact that these men have the highest literacy rate in any language among the six geopolitical zones of the country as well as the patriarchal nature of the nation as a whole.¹⁵

As a result of the strong influence men wield in determining women's health seeking behavior, the documentation of this would be useful in designing effective strategies for the reduction of maternal mortality. The objective of this study therefore is to document men's awareness of danger signs in pregnancy and their role in pregnancy related decision making.

MATERIALS AND METHODS

This cross sectional study was carried out in Ibadan, the capital of Oyo State, employing quantitative

techniques. Oyo State is an inland state in south western Nigeria with its capital city being Ibadan. It is bounded in the north by Kwara State, in the east by Osun State and in the south by Ogun State and the west partly by Ogun State and partly by the Republic of Benin. It has a population of about 4.5 million people.¹⁶ The State is homogeneous comprising mainly of the people of the Yoruba ethnic group. This notwithstanding, there are sub-ethnic groups with varying distinct dialects.¹⁶

A modified cluster sampling technique involving three stages was carried out to obtain the unit of enquiry in the order as follows:

Stage 1: A sampling frame of all the eleven local government areas in Ibadan was obtained and two local government areas were selected by simple random sampling, i.e. balloting

Stage 2: Two communities from each of the 22 wards that make up the two selected local government areas were selected by simple random sampling.

Stage 3: Fathers aged 15-65 in the communities selected were then randomly selected. Random selection was achieved by tossing a coin with heads indicating a start to the left and tails a start to the right from the centre of the community which was determined during community entry while interacting with the community leaders. Once that was determined, every consecutive household was approached and fathers found in these households were interviewed. An average of six fathers were interviewed from each of the 44 communities that were selected.

The study population consisted of men aged 15-65 years who had at least one child that was less than three years of age. A minimum sample size of 114 was calculated using the Leslie Kish formula for survey sampling¹⁷ assuming that the estimated proportion of men with knowledge of danger signs in pregnancy is 92.2%.¹⁸ A total sample size of 259 was utilized.

Data were collected between December 2008 and March 2009 by trained research assistants. A semi-structured pretested interviewer administered questionnaire was used to obtain information on socio-demographic characteristics, attitude and practices concerning antenatal care, knowledge of danger signs in pregnancy and decision to seek hospital care. Danger signs assessed were the presence of anaemia, haemorrhage, abnormal lie, foul smelling vaginal discharge, headaches/fits and cessation of fetal movement. Knowledge of danger signs was scored with two points awarded for each danger sign correctly identified out of a total of six signs. An overall score of six and below was categorized as poor knowledge

while scores above six were classified as good knowledge.

Approval for the study was obtained from the Oyo State Ministry of Health. In addition, the purpose of the study was explained to respondents and their consent obtained after which the questionnaire was administered.

Questionnaires were checked for completeness before computer entry and managed using the Statistical Package for the Social Sciences version 16 with analysis being with the use of descriptive statistics and bivariate analysis. Level of significance was set at 5%.

RESULTS

A total of 259 men were interviewed. The mean age of the respondents was 40.4 ± 11.4 years. Almost half of the respondents had at least secondary education (47.5%) and were mainly artisans by occupation (59.8%). (Table 1)

Table 1: Sociodemographic characteristics of respondents

Variables	n(%)
Age	
15-24	6(2.3)
25-34	88(34.0)
35-44	77(29.7)
≥ 45	88(34.0)
Ethnic group	
Yoruba	242(93.4)
Ibo	3(1.2)
Hausa	6(2.3)
Others	8(3.1)
Religion	
Christianity	109(42.1)
Islam	148(57.1)
Traditional	2(0.8)
Marital status	
Married	257(99.2)
Not married (Divorced, Widowed)	2(0.8)
Level of education	
No schooling	13(5.0)
Primary	76(29.3)
Secondary	123(47.5)
Post-secondary	39(15.1)
Post graduate	8(3.1)
Occupation	
Artisan	155(59.8)
Trader/business	54(20.8)
Civil servant	21(8.1)
Others	29(11.2)

Table 2: Respondents perception of issues relating to antenatal care

Variables	n(%)
Importance of antenatal care	
Yes	257(99.2)
No	2(0.8)
Reasons why antenatal care is thought to be important (positive responses)	
To avoid death of pregnant woman/baby	18(6.9)
For safety of baby and mother	101(39.0)
For good care and problem free delivery	125(48.3)
Staff at antenatal care clinics are in a position to handle complications that may arise	13(5.0)
Don't know	2(0.8)
Commencement of antenatal care	
First trimester	163(62.9)
Second trimester	87(33.6)
Third trimester	1(0.4)
Don't know	8(3.1)
Who decides wife's attendance at antenatal care	
Respondent	190(73.4)
Wife herself	44(17.0)
Couple	16(6.2)
Relatives/friends	9(3.5)

Almost all of the respondents were of the opinion that antenatal care was important (99.2%) and most of them adjudged this importance to the good care and problem free delivery it would ensure for women (48.3%). Majority of respondents (62.9%) believed that antenatal care should commence in the first trimester of pregnancy and almost three-quarters of the respondents said they were solely responsible for deciding whether or not their wives would receive antenatal care (73.4%). (Table 2)

Table 3: Respondents knowledge of danger signs in pregnancy

Variable	Yes n (%)	No n(%)
Hypertension	113(43.6)	146(56.4)
Anaemia/pallor	77(29.7)	182(70.3)
Cessation of fetal movement	51(19.7)	208(80.3)
Abnormal lie	56(21.6)	203(78.4)
Sepsis/foul smelling discharge	33(12.7)	226(87.3)
Haemorrhage/heavy bleeding	30(11.6)	229(88.4)
Obstructed /prolonged labour	26(10.0)	233(90.0)
Can't list any danger sign	47(18.1)	212(81.9)

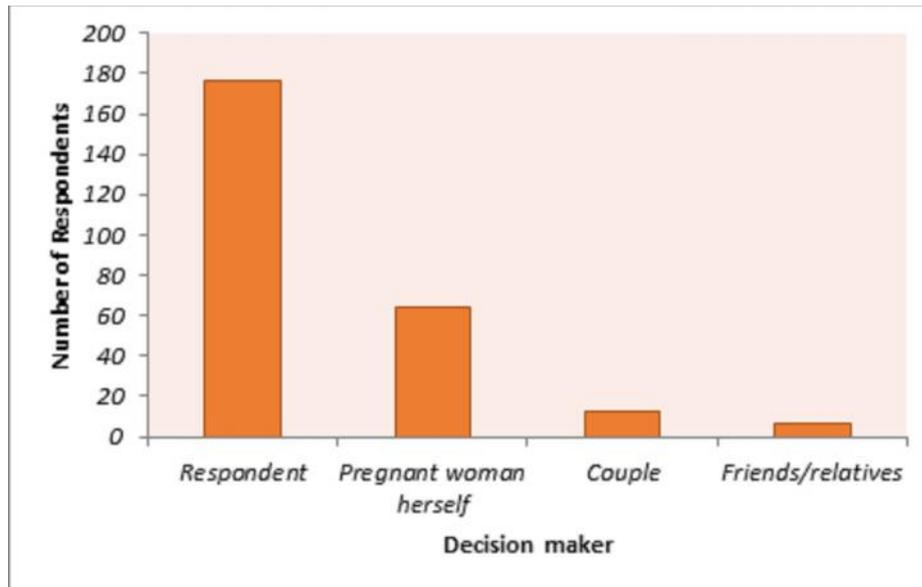


Figure 1: Decision maker for wife to seek hospital care when ill while pregnant

Less than a quarter of respondents regarded obstructed labour (10.0%), haemorrhage(11.6%), sepsis (12.7%), cessation of foetal movement (19.7%), and abnormal lie (21.6%) as danger signs in pregnancy while less than half of the respondents regarded hypertension(43.6%) and anaemia (29.7%) as dangers signs, Less than a fifth (18.1%) of the respondents could not mention any danger sign. (Table 3) Overall, almost two thirds of

respondents had poor knowledge about danger signs in pregnancy (60.6%) In situations where the respondents' pregnant wife needs to seek hospital care, 68.0%(176) of respondents said that decision would be made by the respondent himself and only 4.6%(12) of them reported that it would be a joint decision. (Figure 1)

Table 4: Relationship between some socio-demographic characteristics and knowledge of danger signs in pregnancy

Variable	Knowledge of danger signs in pregnancy		P value (Fishers exact)
	Poor knowledge n (%)	Good knowledge n (%)	
Age group			
15-29	33 (89.2)	4 (10.8)	0.125
30-39	93 (94.9)	5 (5.1)	
40-49	60 (96.8)	2 (3.2)	
≥50	54 (87.1)	8 (12.9)	
Occupation			
Trader	50 (92.6)	4 (7.4)	0.754
Civil servant	19 (90.5)	2 (9.5)	
Artisan	158 (92.4)	13 (7.6)	
Others	13 (100.0)	0 (0.0)	
Number of children			
0-2	89 (92.7)	7 (7.3)	0.577
3-4	77 (90.6)	8 (9.4)	
5+	74 (94.9)	4 (5.1)	
Education			
Secondary and below	196 (92.5)	16 (7.5)	0.536
Post-secondary	44 (93.6)	3 (6.4)	

As shown in Table 4, there was no significant difference in knowledge category of respondents within different age groups, by occupation, number of children and from different educational levels.

DISCUSSION

This study focused on the level of awareness of danger signs in pregnancy among men. The study revealed that almost all of the respondents believed that antenatal care was important. Various reasons were given for this opinion including: that it was necessary to ensure a problem free delivery and for the safety of the mother and baby. This finding is very crucial because the antenatal period clearly presents opportunities for reaching pregnant women with a number of interventions that may be vital to their health and well-being and that of their infants.¹⁹ Therefore, it is essential that their partners are aware of this so they can provide adequate support for women to attend antenatal care clinics. Other Nigerian men have also expressed similar sentiments, with majority of them stating that antenatal care is required in order to ensure care for the pregnant woman and her unborn baby.²⁰ This finding was similar to that found among men in India where the majority of them felt antenatal care was important with up to 62.7% of them saying this was to find out if the pregnancy was normal and for 59.8% of them to determine if there were any problems with the pregnancy.²¹

Evidence has shown that knowledge of danger signs in pregnancy can be a pointer to the level of utilization of maternal health services.²² Even in situations where they may have limited knowledge about reproductive health issues as well as poor knowledge of pregnancy danger signs, studies have shown that men are the key decision makers for women's choice of health care services,^{21,23} a fact that was corroborated in our study. Many of the men were aware of at least one of the signs listed as being a danger sign in pregnancy (81.9%) which was similar to what has been observed among men in Kenya where 92.2% of them displayed knowledge of at least one danger sign¹⁸ but differed from the situation amongst men in India where only 21.1% of them knew of at least one danger sign.²¹ Previous research within Nigeria has shown that men have poor knowledge of danger signs of pregnancy with only 15.4% and 33.2% of them identifying cessation of foetal movement and loss of consciousness as danger signs respectively.⁸

Majority of the respondents in our study did not perceive anaemia, cessation of foetal movement, foul smelling discharge, heavy bleeding or obstructed labour to be danger signs of obstetric complications. Inability to recognize signs of obstetric complications serves

as a barrier to making a decision to access health care and hence is one of the factors responsible for the first level of delay that contributes to maternal mortality.²⁴

Interestingly, studies have found that there is a bearing on the knowledge of danger signs in relation to number of children as reported by women which suggests that the actual experience of passing through the process of childbirth is what serves to sensitize the women to the danger signs that may occur.²⁵ Anecdotal information suggests that the greater the number of children men have, the more likely it would be that they would be able to identify danger signs in pregnancy as a result of better 'experience' they could be said to possess. However, this was not the case in this study as there was no significant difference in knowledge of danger signs in relation to the number of children of the respondents.

Educational attainment did not have a significant bearing on whether respondents had good knowledge of danger signs or not. This is comparable to what obtained among men in Kenya.¹⁸ The corollary of this is that being educated is not enough to make a difference in knowledge with regards to danger signs in pregnancy. The influence that male peer educators may possess when educating other men might be an option to be explored as recent research has shown.²⁶ Majority of the respondents in this study reported that they were responsible for making the decision as to whether their wife should seek hospital care or not. A similar scenario is observed among men in Uganda where the patriarchal nature of the society has a strong influence on delivery options.²⁷ These findings would suggest that a male appreciation of the positive maternal and child health outcomes that could be derived from health facility based deliveries could be put to good use. It could serve to encourage the men to make reproductive health decisions that favour attendance at antenatal care as well as facility based delivery in order to ensure the presence of skilled attendants at delivery among other health benefits. This in turn would be instrumental in reducing maternal mortality in these settings.

CONCLUSION

Despite the fact that the decision for their spouse to seek health care while pregnant rested majorly with them, knowledge of danger signs in pregnancy was identified to be poor among this group of men. Age, occupation, education and number of children had no bearing on their knowledge.

We acknowledge the limitation that our results may not be generalizable since our sample size was limited

as was the geographical location in which the study took place. In addition to this, the scope of our study was limited to major danger signs and did not ask about the knowledge of all the possible danger signs that could occur in pregnancy. In spite of this, our findings have implications for the design of safe motherhood programs. Interventions that address the poor knowledge of danger signs in pregnancy among men particularly given their role in decision making within the home would be of value. This would possibly reduce the first level of delay that is a major factor influencing maternal mortality and are advocated.

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REFERENCES

1. **Buor D**, Bream K. An analysis of the determinants of maternal mortality in sub-Saharan Africa. *J Womens Health*. 2004; 13(8): 926–938.
2. **Ronsman C**, Graham WJ. Maternal mortality: who, when, where, and why. *The Lancet*. 2006; 368(9542): 1189–1200.
3. UN. The Millenium Development Goal Report. 2010. United Nations, Addendum 2.
4. NPC. National Population Commission [Nigeria] and ICF Macro. 2009. Nigeria Demographic and Health Survey 2008. Abuja.
5. **Thaddeus S**, Maine D. Too far to walk: maternal mortality in context. *Soc Sci Med*. 1994; 38(8): 1091–110.
6. **Mullany BC**, Hindin MJ, Becker S. Can women's autonomy impede male involvement in pregnancy health in Katmandu, Nepal? *Soc Sci Med*. 2005; 61(9): 1993–2006.
7. **Murphy M.**, Baba TM. (1981). Rural dwellers and health care in northern Nigeria. *Soc Sci Med*. 1981; 15A (3/1).
8. **Iliyasu Z**, Abubakar IS, Galadanci HS, Aliyu MH. Birth Preparedness, Complication Readiness and Fathers' Participation in Maternity Care in a Northern Nigerian Community. *Afr J Reprod Health*. 2010; 14(1), 21–32.
9. **Carter M**. Husbands and maternal health matters in rural Guatemala: wives' reports on their spouses' involvement in pregnancy and birth. *Soc Sci Med*. 2002; 55(3), 437–450.
10. **Odimewu C**, Adewuyi A, Odebiyi, T. *et al*. Men's role in emergency obstetric care in Osun State of Nigeria. *Afr J Reprod Health*, 2005; 9(3): 59–71. [cited November 15, 2013] Available from <http://www.ncbi.nlm.nih.gov/pubmed/16623190>
11. **Pembe AB**, Urassa DP, Carlstedt A *et al*. Rural Tanzanian women's awareness of danger signs of obstetric complications. *BMC pregnancy and childbirth*. 2009; 9(1):12. [cited November 15, 2013] Available from <http://www.biomedcentral.com/1471-2393/9/12>
12. **Kabakyenga JK.**, Östergren PO, Turyakira E, Pettersson KO. Knowledge of obstetric danger signs and birth preparedness practices among women in rural Uganda. *Reproductive health*. 2011; 8 33. [cited November 23, 2013] Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3231972/>
13. **Ezeh, AC**. The influence of spouses over each other's contraceptive attitudes in Ghana. *Stud Family Plann*. 24(3), 163–174.
14. **Feyisetan, BJ**, Oyediran AK, Ishola, GP. Role of Men in Family Planning in Imo State of Nigeria. A Publication of Population Research Fund Management Unit, Nigerian Institute of Social and Economic Research. 1998; 66.
15. National Bureau of Statistics. The National Literacy Survey. June 2010 [cited June 29, 2014] Available from <http://nigerianstat.gov.ng/pages/download/43>.
16. The Official Website of Oyo State. The People. [cited June 29, 2014] Available from <http://www.oyostate.gov.ng/about-oyo-state/the-people/>
17. **Kish L**, ed. Survey Sampling. John Wiley and Sons, Inc: New York; 1965
18. **Dunn A**, Haque S, Innes M. Rural Kenyan men's awareness of danger signs of obstetric complications. *Pan Afr Med J*. 2011; 10: 39. [cited November 23, 2013] Available from <http://www.panafrican-med-journal.com/content/article/10/39/full/>
19. **Any SE**, Hydera A, Jaiteh L. E. Antenatal care in The Gambia: missed opportunity for information, education and communication. *BMC Pregnancy Childbirth*. 2008; 8: 9. [cited November 26, 2013] Available from <http://www.biomedcentral.com/1471-2393/8/9>
20. **Olugbenga-Bello AI**, Asekun-Olarinmoye EO, Adewole AO *et al*. Perception, attitude and involvement of men in maternal health care in a Nigerian community. *J Public Health Epidemiol*. 2013; 5(6), 262–270. [cited June 29, 2014] Available from http://www.academicjournals.org/article/article/1379689263_Adenike%20et%20al.pdf
21. **Varkey LC**, Mishra A, Das A *et al*. Involving Men in Maternity Care in India. 2004. Washington DC: Population Council
22. **Alam AY**, Qureshi AA, Adil MM, Ali H. Comparative study of knowledge, attitude and

- practices among antenatal care facilities utilizing and non-utilizing women. *J Pak Med Assoc.* 2005; 55(2): 53–56.
23. **Mangeni JN**, Mwangi A, Mbugua S, Mukthar V: Male Involvement in Maternal Health Care as a Determinant of Utilization of Skilled Birth Attendants in Kenya. In *DHS Working Papers*. Edited by International I. Calverton, Maryland, USA; 2013. [cited November 26, 2013] Available from <http://www.measuredhs.com/pubs/pdf/WP93/WP93.pdf>
24. **Nour NM**. An introduction to maternal mortality. *Reviews in obstetrics and gynecology.* 2008; 1(2), 77–81. [cited November 28, 2013] Available from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2505173/>
25. **Pembe AB**, Urassa DP, Carlstedt A *et al.* Rural Tanzanian women's awareness of danger signs of obstetric complications. *BMC Pregnancy Childbirth.* 2009; 9(1), 12. [cited November 28, 2013] Available from <http://ccforum.com/1471-2393/9/12>
26. **Kadomoto N**, Iwasa H, Takahashi M *et al.* Ifugao males, learning and teaching for the improvement of maternal and child health status in the Philippines: an evaluation of a program. *BMC public health.* 2011; 11: 280. [cited November 30, 2013] Available from <http://www.biomedcentral.com/1471-2458/11/280>
27. **Amooti-Kaguna B**, Nuwaha F. Factors influencing choice of delivery sites in Rakai district of Uganda. *Soc Sci Med.* 2000; 50(2): 203–213.