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. 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.

In Nigeria, maternal mortality rates have remained very high with current figures being as high as 545 per 100,000.

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

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. 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. Therefore, the involvement of fathers could be the difference between a healthy birth and a maternal death. 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.

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. 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.

A number of studies have been carried out on the role of men in reproductive health in various parts of Nigeria 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 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.

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. 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.

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 sampling assuming that the estimated proportion of men with knowledge of danger signs in pregnancy is 92.2%. 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)|

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 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)|

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) |
| Heamorrhage/heavy bleeding                  | 30(11.6)  | 229(88.4) |
| Obstructed /prolonged labour                | 26(10.0)  | 233(90.0) |
| Cant list any danger sign                   | 47(18.1)  | 212(81.9) |
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 danger 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)                | 0.754                  |
| 40-49            | 60 (96.8)                | 2 (3.2)                |                        |
| ≥50              | 54 (87.1)                | 8 (12.9)               |                        |
| **Occupation**   |                         |                        |                        |
| Trader           | 50 (92.6)                | 4 (7.4)                |                        |
| Civil servant    | 19 (90.5)                | 2 (9.5)                | 0.577                  |
| 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)                |                        |
| 3-4              | 77 (90.6)                | 8 (9.4)                | 0.536                  |
| 5+               | 74 (94.9)                | 4 (5.1)                |                        |
| **Education**    |                         |                        |                        |
| Secondary and below | 196 (92.5)             | 16 (7.5)               |                        |
| 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. 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. 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.

Evidence has shown that knowledge of danger signs in pregnancy can be a pointer to the level of utilization of maternal health services. 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, 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 sign but differed from the situation amongst men in India where only 21.1% of them knew of at least one danger sign.

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. 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.

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. 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. 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. 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. 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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