

## Short Report

# Awareness and perception of maternal mortality among women in a semi-urban community in the Niger Delta of Nigeria

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## Abstract

**Background:** Maternal mortality rates are very high in Nigeria. Increased level of awareness and perception will reduce maternal mortality rates.

**Objective:** The study was aimed at assessing the awareness and perception of maternal mortality among women in the reproductive age group at Ogonu community in Warri South Local Government Area of Delta State.

**Methodology:** This was a descriptive cross-sectional study that was carried out in Ogonu town in Delta State. A simple random sampling technique was used to select 400 women, who gave consent to be enrolled in the study. They were assisted in filling a semi-structured questionnaire containing questions on awareness and perception of maternal mortality among women in the community.

Information generated was recorded on a data collection sheet designed for the study. The coded data were fed into the computer using the SPSS program to determine the mean values and frequencies.

**Results:** A total of 400 questionnaires were distributed; of these, 349 were completely filled and returned. The mean age of the study subjects was  $31.6 \pm 7.7$  years. Among these subjects, 54.7% were married, while 32.7%, 28.7% and 26.5% had tertiary, secondary and primary education, respectively. The study revealed that 96.3% of the subjects felt that death can occur from pregnancy-related problems, while 69.1% were aware of maternal mortality. Majority of the subjects agreed that one or more forms of delay could be responsible for their death.

This study shows that a good proportion of subjects was aware of maternal mortality and also had a good perception of it.

**Conclusion:** Efforts should be directed towards educating women about the risk of delivering in homes of traditional birth attendants, maternity homes and health centers, and the concept of early referral of women to the hospital should be reinforced. Providing information to women on prevention of maternal mortality and community participation and mobilization will help prevent maternal mortality to some extent in Nigeria.

**Keywords:** Awareness, maternal mortality, perception, semi-urban women

## Résumé

**Arrière-plan:** Statistiques de mortalité maternelle de est très élevé au Nigeria. Augmentation du niveau de sensibilisation et de la perception réduira la mortalité maternelle.

**Objectif:** L'étude visait à évaluer la connaissance et la perception de complications obstétriques chez les femmes dans le groupe d'âge reproductif à la Communauté Ogonu dans le zone de gouvernement local du Warri d'état de Delta.

**Méthodologie:** C'était un descriptif cross étude transversale qui a été effectuée dans la ville de Ogonu en état de Delta. Une technique d'échantillonnage aléatoire simple a été utilisée pour sélectionner les 400 femmes qui ont donné de consentement à la l'étude. Ils ont aidé à remplir un questionnaire semi-structurés contenant questions sur la sensibilisation et la perception de la mortalité maternelle chez les femmes dans le Communauté.

Des informations générées a été enregistrées sur une fiche de collecte de données conçue pour l'étude. Les données codées ont été intégrées dans l'ordinateur à l'aide de la SPSS programme visant à déterminer les valeurs moyennes et fréquences.

**Résultats:** Un total de 400 questionnaires ont été distribués avec 349 complètement rempli et retourné. Le âge moyen était de  $31.6 \pm 7.7$  ans. Cinquante quatre point sept pour cent des sujets étaient marié lors de 32, 7%, 28% et 26, 5% avaient tertiaire, secondaire et primaire l'éducation respectivement. Quatre-vingt six point trois pour cent ont convenu que la mort peut dans problème connexe de grossesse se produit alors que 69.1% étaient conscients d'une maternelle mortalité. Majorité des sujets d'accord pour dire qu'un ou plusieurs forme de retard pourrait être responsable de leur mort.

Cette étude montre qu'une bonne proportion des sujets étaient au courant d'et a également une bonne perception de la maternelle mortalité.

**Conclusion:** Efforts devraient être dirigés vers l'éducation à la santé des femmes à risque de livraison à domicile des accoucheuses traditionnelles, maternités et de la santé Il convient de renforcer les centres et renvoi au début de la femme à l'hôpital. Information des femmes sur la prévention de la mortalité maternelle et de la Communauté participation et la mobilisation contribuera à éviter la mortalité maternelle à certains dans quelle mesure au Nigeria.

**Mots clés:** Prise de conscience, perception, semi urbaines femmes, la mortalité maternelle

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## Introduction

The neglected tragedy of maternal mortality has been described as the health scandal of our time.<sup>[1]</sup> For women of reproductive age, complications of pregnancy and childbirth are the leading causes of maternal mortality, disease and disability, accounting for at least 18% of the global burden of disease in this age group.<sup>[1]</sup> World Health Organization (WHO) and the United Nations Children Education Fund (UNICEF) estimate that there are well over 600,000 maternal deaths worldwide annually, with 99% of these maternal deaths occurring in the developing countries.<sup>[2]</sup>

Globally, 1 woman dies every minute from complication related to childbirth.<sup>[2]</sup> For every maternal death, 15-20 other women suffer severe disabilities that significantly jeopardize their reproductive health and socioeconomic status.<sup>[3]</sup> Estimates as high as 1000-2000 per 100,000 live births are commonly reported in Nigeria.<sup>[4,5]</sup>

It is estimated that 75% of maternal deaths are direct obstetric deaths due to obstetric complications such as hemorrhage, sepsis, hypertensive disorder, unsafe abortion and obstructed labor.<sup>[5,6]</sup> Other non-obstetric causes include anemia, sickle cell disease and cardiac diseases. Nonmedical factors include socioeconomic factors (illiteracy, poverty, ignorance, poor nutrition and poor use of available maternal services), cultural factors, religious factors, poor transport and telecommunication and biological factors (age and parity differential).<sup>[5]</sup> These, apart from lack of provision of emergency obstetric care, also play important roles in maternal mortality. Sociocultural factors have been highlighted as significant contributors to maternal mortality in Sub-Saharan Africa.<sup>[7]</sup> Okolocha *et al.* concluded that for a fuller understanding of maternal morbidity and

mortality, it is important to consider factors outside the hospital and formal medical practice.<sup>[7]</sup>

A study in Konduga, Bornu State of Nigeria, showed that their community members had a good understanding of obstetric complications leading to maternal death.<sup>[8]</sup>

Another study among the Annang in southeastern Nigeria showed that most of the participants felt hospitals generally connote sickness and were places reserved for sick people only. The most common causes of maternal death highlighted by the participants were spiritual attack from enemies and punishment by the gods for infidelity.<sup>[9]</sup>

Awareness and perception among the community members of the causes of maternal deaths will influence their decision to seek help in the face of an emergency. Pregnancy and delivery are regarded as natural processes, and complications may not be a sufficient reason for concern.

Nigerian women's recognition of the correct causes of maternal mortality will greatly improve their health-seeking behavior and therefore could reduce our present alarming rates of maternal mortality. The objective of this study was to determine the awareness and perception of maternal mortality among women in Ogonu town in Delta State of Nigeria. No such study has been done in this region. It is against this background that this study was conceived.

## Materials and Methods

This was a descriptive cross-sectional study that was carried out in Ogonu town in Delta State. A simple random sampling technique was used to select 400 women, who gave consent to be enrolled

in the study. They were assisted in filling a semi-structured questionnaire containing questions on awareness and perception of maternal mortality in the community.

Information generated was recorded on a data collection sheet designed for the study. The coded data were fed into the computer using the SPSS program to determine the mean values and frequencies.

Approval of the ethical review committee was obtained before the study was carried out.

## Results

A total of 400 questionnaires were distributed; of these, 349 completely filled and analyzable questionnaires were returned, giving a response rate of 87.3%.

Table 1, below, shows that the majority (44.1%) of the subjects were in the age group 25-34 years. The mean age was  $31.6 \pm 7.7$  years. Among these subjects, 54.7% were married, while 32.7%, 28.7% and 26.5% had tertiary, secondary and primary education, respectively, and 11.2% had no education.

Table 2 shows that 96.3% of the subjects felt that death can occur from pregnancy-related problems, while 85.4% stated that excessive vaginal bleeding is a possible cause of death. Two hundred seventy-two (77.9%) of the subjects were of the opinion that lack of money is a cause of death. The study revealed that 69.1% of the subjects knew of at least one

maternal death in the family, and excessive bleeding was the commonest cause (79.7%). Majority of the subjects agreed that one or more forms of delay could be responsible for their death, with delay caused by hospital staff being the most frequently mentioned (74.8%).

General hospital was the facility mentioned by most (57.4%) as providing emergency obstetric care, followed by teaching hospitals (54.4%), private hospitals (53.0%), maternity homes (18.9%) and traditional birth attendants (5.2%).

## Discussion

The study shows, in general, women in this community have a high degree of awareness and perception of maternal mortality, as 96.3% of the subjects opined that pregnancy-related complications can lead to death. This may not be unrelated to the fact that 61.4% of the subjects had tertiary and secondary education. Similar observations have been noted in previous studies.<sup>[7,8]</sup> Surprisingly, this high level of awareness even among some sections of the populace does not translate to reduced maternal mortality rates, as Nigeria still has one of the worst statistics in the world with regard to maternal mortality.

Obstetric hemorrhage was the commonest cause of maternal mortality mentioned by subjects (85.4%); and out of the 69.1% that were aware of a maternal death in their families, obstetric hemorrhage (79.7%) was the most frequent reason given for death. The recognition that obstetric hemorrhage is the commonest cause of maternal mortality at the community level mirrors the popular research findings that in Nigeria and worldwide, obstetric hemorrhage is the commonest cause of maternal mortality.<sup>[2,3,5,10]</sup> Okolocha *et al.* found that women in southern Nigeria had fairly good knowledge of obstetric hemorrhage as a cause of maternal mortality but yet their attitudes, practices and situations kept them away from, or delayed the decision to seek, modern obstetric care.<sup>[7]</sup> Causes such as infidelity, witchcraft/evil forces and disobedience surprisingly constituted 8.3% of the causes of death mentioned by the subjects. This may be due to the fact that majority of the study population were educated. This finding contradicts the finding of a similar study from the southeast geopolitical zone of Nigeria, where spiritual attack from enemies and punishment by the gods for infidelity were perceived as frequent causes of maternal mortality.<sup>[9]</sup> The three types of delays were also suggested by most of the subjects as contributing factors to maternal mortality. Majority of the subjects were of the opinion that delay by hospital staff was more crucial. Delay as cause of maternal death has been noted in previous studies also.<sup>[5,8,11]</sup>

**Table 1: Socio-demographic status of the study subjects**

Parameter	Frequency n = 349	Percentage
Age		
15-24	56	16.0
25-34	154	44.1
35-45	124	35.5
> 45	3	0.85
No response	12	3.4
Marital status		
Married	191	54.7
Single	85	24.4
Separated	13	3.7
Widowed	13	3.7
Divorced	12	3.4
Cohabiting	19	5.4
No response	16	4.6
Education		
No education	39	11.2
Primary	93	26.6
Secondary	100	28.7
Tertiary	114	32.7
No response	3	0.85

**Table 2: Awareness and perception of maternal mortality**

Parameter	Yes (%)	No (%)	Don't know (%)	Total n
Death can occur from pregnancy-related problems	336 (96.3)	4 (1.1)	9 (2.6)	349
Possible causes of death				
Excessive bleeding	298 (85.4)	0	0	
High blood pressure/Eclampsia	68 (19.5)	0	0	
Infection of the womb	14 (4.0)	0	0	
Obstructed labor	4 (1.1)	0	0	
Infidelity	10 (2.9)	0	0	
Witchcraft/evil forces	14 (4.0)	0	0	
Disobedience	5 (1.4)	0	0	
Lack of money	272 (77.9)	5 (1.4)	72 (6.3)	
Awareness of any maternal mortality in the family	241 (69.1)	24 (6.9)	84 (24.1)	
Perceived cause of death of a family member				
Excessive bleeding	192 (79.7)	0	0	
Eclampsia	34 (14.1)	0	0	
Infection	15 (6.2)	0	0	
Total	241			
Recognition of delays as causes of deaths				
Delay in taking a decision to reach the hospital	255 (73.1)	66 (18.9)	28 (8.0)	
Delay in transportation	173 (49.6)	97 (27.8)	79 (22.6)	
Delay caused by hospital staff	261 (74.8)	22 (6.3)	66 (18.9)	

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In agreement with Harrison's opinion that poverty and low socioeconomic status is a significant contributor to maternal mortality in Nigeria,<sup>[5]</sup> lack of money was suggested by the majority of the respondents as contributing to maternal mortality.

There is no teaching hospital in the state at the moment. This may be the reason why most women (57.4%) believe that referrals should go to the general hospitals for emergency obstetric care. Some of the respondents had a different opinion — that private hospitals, maternity homes and traditional birth attendants are providers of emergency obstetric care. Choosing private hospitals and maternity homes may be due to the long waiting periods experienced by patients in government hospitals in Nigeria, while opting for traditional birth attendants may be due to the inherent belief system or poverty of those doing so. Emergency obstetric care is lacking in many hospitals and maternity homes in Nigeria, and this could be the most critical singular factor contributing to maternal deaths.<sup>[5,11]</sup>

In order to reduce the horrifying high rate of maternal mortality in Nigeria, health education programs on prevention of maternal deaths and morbidities targeted at the populace, especially the women, need to be improved. The men should not be left out since they take most of the decisions in families. Contents of such health education messages should include early recognition of danger signs

of maternal mortality, dispelling harmful cultural beliefs, registering early for antenatal care and prompt presentation at the hospital when in labor.

Efforts should be directed towards educating women about the risk of delivering in homes of traditional birth attendants, maternity homes and health centers, and the concept of early referral of women to the hospital should be reinforced. Also, the socioeconomic status of the populace, especially the women, should be improved. This can be achieved by educating the girl child, providing employment for women and implementation of Nigeria's gender policy.

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