

## **Emergency Obstetric Care Availability Health Education and Maternal Mortality Reduction in South-South Nigeria**

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**Abstract:** *This study was directed at investigating the relationship between emergency obstetric care health education and reducing maternal mortality as a way of isolating the gap that threaten women at delivery. The study was a part of larger MDGs descriptive research of 894 women using healthcare facilities in South-South Nigeria. Questionnaire was used to solicit data and administered to participants through facility staff. Descriptive statistics and Pearson product moment coefficient was used to analyse the data at 0.05 mean benchmark and 0.05 level of significant respectively. It was found that healthcare facilities at providing emergency obstetrics do exist in south-south Nigeria. There was a significant relationship between emergency obstetric care, health education and maternal mortality reduction in south-south, Nigeria. It was recommended that women education be sustained and improve upon, while healthcare facilities should continuously be improved upon among others.*

**Keywords:** *Emergency obstetric care, MDGs goal 5, maternal mortality, south-south Nigerian, healthcare facilities and service*

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### **I. Introduction**

The concept of maternal mortality reduction implies improving maternal health. Improve maternal health is the millennium development goal 5. This form part of the eight declaration of the world health assembly where 189 countries agreed to adopt the eight goals to permit people all over the world to live socially and economically productive life (MDGS Report, 2010). To improve maternal health, variables at reducing maternal mortality should be identified among these are the availability, accessibility affordability of healthcare services, and emergency obstetric care. Mortality was defined by WHO, (2010) as the death of a women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy from any cause related to or aggravated by pregnancy or its management but not from accident or incidental causes. While obstetrics is defined by the Oxford Concise Medical Dictionary (2003) as “the branch of medical science concerned with the care of women during pregnancy, childbirth, and the period of about six weeks following the birth, when the reproductive organs are recovering”. Along with this “Midwifery” according to the Oxford Concise Medical Dictionary (2003), “the profession of providing assistance and medical care to women undergoing labour and childbirth”. From the foregoing, Obstetrics and Midwifery are practices directed toward successful childbirth. Born out of passion, Adeomi (2012) cited Hillary Clinton’s quotation which states that “every woman who ever she is, wherever she lives, should be able to give birth without the fear she’s going to lose her baby or that her baby will lose his/her mother” (American secretary of state, Hillary Roadem Clinton Health Deck, 2012).

Yet MDGS report (2013) stated that Maternal Mortality Rate (MMR) in Nigeria was 1000 per 100,000 live birth in 1990. According to the same report, by 2008, it dropped to 545 and in 2012, the figure dropped to 350. The MDGS (2013) stated that Nigeria is still 28.6% away from the 2015 target which is estimated to be about 250,100,000 live births. The MMR figure calls for concern and the need to investigate emergency obstetrics as it affects mortality in Nigeria. The south-south Nigeria holds Nigeria economy because of its oil rich land, yet the riverine and difficult terrain has made it difficult to easily access healthcare especially in emergency obstetric healthcare. South-south Nigeria is made up of six states, Edo, Delta, Baylesia, Rivers and Cross River state.

Skilled birth attendants are essential for the delivery of emergency obstetric care (EMOC). These skilled birth attendance include, Nurse/Midwives, obstetricians and gynaecologist and general medical practitioners, obstetric care services are directed at treating obstetrics emergencies such as haemorrhage, sepsis (infection) preeclampsia, prolonged/obstructed labour and complication of abortion. By extension, comprehensive EMOC must include ability to intervene with blood and anaesthesia.

The purpose of this study was to seek a relationship between the practice of emergency obstetrics and the level of maternal mortality in south-south Nigeria. The finding of this study will be significant to health

educators, obstetricians and gynaecologists, pregnant women and women between the age of 15-49 years. It will influence policy formulation and implementation. Pregnancy complications are not timed. It could be in the day or at night and the skilled man power needed to attend emergency obstetrics should always be available; but are the equipment to attend to emergency obstetrics available? These constitute problems why obstetrics emergency need to be investigated in line with mortality occurrences.

A research question and hypothesis may be put forward like this; to what extent do available healthcare facilities provide emergency obstetric care and other gynaecological services which are essential for maternal mortality reduction and there is no significant relationship between availability of emergency obstetric care/service and maternal mortality reduction in south-south, Nigeria.

## **II. Review of Related Literature**

Some literature relating to emergency obstetrics and gynaecology were reviewed. According to Feyi-Waboso (2016) about 75% of pregnancies are carried through without complications. Complications are mostly unpredictable and treatable but only timely interventions can prevent morbidity and mortality. Skilled birth attendance (SABS) are essential for the delivery of emergency obstetric care services (EMOC). In a study, Ijadunola, Fatusi, Orji, Adeyemi, Owolatri, Ojofeitimi, Omideji and Adewui (2007) noted that there were major deficiencies in the supply side of emergency obstetric services and emergency obstetric services were almost non-existence in local government health facilities in western Nigerian. The finding they concluded has complications for interventions for the reduction of maternal mortality in local government areas in Nigeria. Kengnyuy, Hofman and Ven-de-Broek (2009) in their study on emergency obstetrics services noted that although emergency obstetric care (EMOC) is globally accepted as a key strategy to improve maternal health and reduce maternal mortality. Their study identifies barriers to accessing EMOC (such as unavailability of EOC facilities and skilled birth attendants (SBA) and proposed strategies to over come them which could be contributed to achieving MDG 5. Bada (2008) while stating the causes of maternal mortality in Nigeria cited Olusauya and Amiegheme (1988) who attributed the medical factors to the absence of a reliable emergency obstetric care facility in most parts of the rural areas of Nigeria which subjects mothers in labour to all sorts of risks which eventually leads to their death.

Nynago, Multihur, Laabes, Kigbu and Buba (2010) in their study on “skilled attendance: the key challenges to progress in achieving MDSs in north central Nigeria”, they found that the quality skilled attendance was low and basic emergency obstetric care facilities were lacking. WHO (2007) regarded access to quality emergency obstetric care as one of the four pillars or bedrocks to achieving safe pregnancy outcomes.

## **III. Materials and Method**

The descriptive survey design served for this study. According to Egbule and Okoba (1998) because it is concern with the collection of data for the purpose of describing and interpreting existing conditions, the target population consist of 8940 women of child bearing age (15-49 years) who uses the health facilities in the study area for sexual and reproductive healthcare.

Multiple stage sampling technique was used to sample the health facilities. Sampling from states, through local government areas to health facilities, from each sampled health facility, 10% of the participants were withdrawn to participate in the study using simple balloting technique. A total of 894 were sampled to participate in the study. According to Araoye (2003) sample size when studying a given proportion require minimum of 10% for a population of 10,000 and above.

The instrument for the study was structured questionnaire modified four point likert like titled “emergency obstetric care for maternal mortality reduction questionnaire”. It consist of two segments: section A include demographic data and section B, contains statement of emergency obstetric, and health education for mortality reduction. The questionnaire has four response options for a four point likert scale (modified) of strongly agreed (SA) = 4 points, agree (A) = 3 points, disagree (D) = 2 points and strongly disagree (SD) = 1 point. The questionnaire was made up of 10 statement items.

The instrument was validated for face and content validity by three experts in health education who area staff of Delta State University, Abraka. They reviewed the instrument and make useful contributions for the establishment of the face and content validity of the instrument. To obtain the reliability the instrument it was administered to 20 maternal persons of the same characteristics in Ondo state, outside the study area.

The instrument was subjected to Cronbach’s alpha analysis for internal constancy of the statement items, the Cronbach’s alpha value was  $r = .83$ . Since reliability in considered to be a measure of an instruments reproductivity and stability (Field, 2005) the instrument for this study was needed to be very reliable.

An introductory letter and staff identity of been a lecturer in Delta State university, Abraka and that the data was for research purpose only, was issued to the researcher by the research ethics committee of the university for the health facilities to allow the use of their clients/patients. The instrument was administered to the participants through their institution staff. The exercise took a period of eight weeks, June 10<sup>th</sup> – August 6<sup>th</sup>

2014. Data were analysed using mean bench mark of 2.50 and above being accepted or agreed and below that, not accepted or disagreed. Descriptive statistics of frequency count, percentages, means, standard deviation and Pearson's Product Moment Correlation coefficient was used to test the hypotheses at a 0.05 level of significance.

**IV. Findings/Results**

**Table 1: Age of respondents**

Age	Number of respondents N=842	Percentage (%)
15-19	21	2.5
20-24	96	11.4
25-29	204	24.2
30-34	250	29.7
35-39	143	17
40-44	78	9.3
45-49	50	5.9
Total	842	100

From the table on ages of the respondents, it was observed that 29.7% of the women of childbearing age (which is the highest) fall into the range of 30-34years, followed by the class of 25-29years which accounts for 24.2%. The range of 35-39years accounts for 17%. The means that ages 25-39years account for 70.9% of the women of child bearing age who attended the reproductive health facilities in this study. The class of 45-49years account for 5.9% and this may be mainly due to those attending the family planning clinic. Class of 15-19 years accounts for 2.5% which is the lowest, this implies that fewer adolescent pregnancies are attended to in the health facilities sampled.

**Table 2: Frequency count, percentages, means and standard deviation of availability of emergency obstetric care visa-vis maternal mortality reduction**

S/ N	ITEMS	SA (4)	A (3)	D (2)	SD (1)	Mean	SD	Remark
1	The health centre provides antenatal care for pregnant mothers in the community	401	401	28	12	3.41	.66	Agreed
	Percentage (%)	47.60	47.60	3.30	1.40			
2	The health centre conducts safe deliveries for pregnant mothers	315	489	29	9	3.31	.62	Agreed
	Percentage (%)	37.40	58.10	3.40	1.10			
3	The health centre provides post-delivery care	367	433	31	11	3.37	.64	Agreed
	Percentage (%)	43.60	51.4	3.70	1.30			
4	The health centre provides family planning services	455	365	11	11	3.50	.61	Agreed
	Percentage (%)	54.00	43.30	1.30	1.30			
5	The health centre provides treatment for minor Diseases	335	475	20	12	3.34	.64	Agreed
	Percentage (%)	39.80	56.40	2.40	1.40			
	Grand Mean	3.39						
	Criterion Mean	2.50						
	Decision	Healthcare facilities provide emergency obstetric care and other gynaecological services						

Table 2 the analysis of the mean rating of the respondents on availability of emergency obstetric care and other gynaecological services. There were five statements that elucidated information on the perception of the respondents and these included the health centre provides antenatal care for pregnant mothers in the community, the centre conducts safe deliveries for pregnant mothers, the health centre provides post-delivery care, the centre provides family planning services and the centre provides treatment for minor diseases. The respondents agreed with all the items with means of 3.41, 3.31, 3.37, 3.50 and 3.34 respectively. The grand mean was 3.39, when compared with the criterion mean of 2.50, it showed that the health facilities provide emergency obstetric care and other gynaecological services.

**Table 3: Frequency count, percentages, means and standard deviation of health education in emergency obstetric and mortality reduction**

S/N	ITEMS	SA (4)	A (3)	D (2)	SD (1)	Mean	SD	Remark
1	Health Educators in the clinics encourage our delivering under the care of a midwife to reduce maternal	381	414	33	14	3.37	.68	Agreed
		1524	1242	66	14			

	death							
	Percentage (%)	45.20	49.20	3.90	1.60			
2	Family planning methods are taught regularly in the clinics to reduce the risk of maternal death	339	421	66	16	3.28	.71	Agreed
		1356	1263	132	16			
	Percentage (%)	40.30	50.00	7.80	1.90			
3	Health educators are available as to encourage the use of Health centres in all maternal issues to reduce maternal deaths	422	380	19	21	3.42	.69	Agreed
		1688	1140	38	21			
	Percentage (%)	50.10	45.10	2.30	2.50			
	Grand Mean	3.35						
	Criterion Mean	2.50						
	Decision	Health Education/awareness level of respondents is high						

Table 3 shows the mean rating of the quality of health education provided by health facilities. There were three statements that elicited information on the opinion of the respondents on their health education status. These stated that: we are taught to attend ANC to prevent maternal we are instructed to have our babies under the care of midwives to reduce maternal mortality; family planning is taught regularly during clinic attendance; health Educators are available as to encourage the use of health facilities in all maternal issues to reduce maternal mortality. The respondents agreed on all the three items with means of 3.37, 3.28 and 3.42. The grand mean was 3.35, when compared with the criterion mean of 2.50, this showed that the health education or awareness level of the respondents was high.

**Table 4:** Pearson product moment coefficient between emergency obstetric care and maternal mortality

Variables	Mortality rate
Emergency obstetric care/services	R = .10 Sign. = .01 N = 842

Table 4 shows the Pearson product moment correlation coefficient between emergency obstetric care/services provided in the healthcare facilities and mortality rate in South-south Nigeria. It showed a PPMCC of R = .10 that is significant at .01. Thus a significant relationship was found between emergency obstetric care and maternal mortality rate in South-south Nigeria.

### V. Discussion

Health facilities were found to be providing emergency obstetric care and other gynaecological services. Essential Obstetric Care (EOC) is a term used to describe the elements of obstetric care needed for the management of normal and complicated pregnancy, delivery and the post partum period (WHO, 2016). EOC can be basic (BEOBC) for managing minor complicated cases or it can be comprehensive- for managing major emergencies (EMOC). Bada (2008), while stating the causes of maternal mortality in Nigeria, cited Olusanya and Amiegheme (1988) who attributed the medical factors to the absence of a reliable emergency obstetric care (EMOC) facility in most parts of the rural areas of Nigeria which subjects mothers in labour to all sorts of risks, of which eventually leads to their death. EMOC ensures that professional emergency treatment is guaranteed to a woman in labour, and the professional handling of such crisis situations saves 98% out of 100%. So implementation of MDGs would ensure the provision of this care to achieve maternal mortality reduction.

Emergency obstetric care and other gynaecological services were found to be significantly related to maternal mortality rate in South-South Nigeria. This agrees with findings from other studies such as the study by Nyango et al (2010) on "Skilled attendance: the key challenges to progress in achieving MDSs in North Central Nigeria", in which they evaluated the personnel skills and availability of maternal resources which are central to elimination of barriers to delivery of basic emergency obstetric care (EOC) to the community. They noted that the quality of skilled attendance was low and basic EOC facilities were lacking. Although according to Feyi-Waboso (2016), about 75% of pregnancies are carried through without complications. Complications which are mostly unpredictable do occur and are treatable only by timely intervention that can prevent morbidity and mortality through obstetric care service directed at treating obstetric emergencies. Also because of its significance, WHO (2007) regards access to quality emergency obstetric care as one of the four pillars or bedrocks to achieving safe pregnant outcomes. The researcher is therefore of the opinion that some measure of EOC are essential for maternal mortality reduction and are being provided in the facilities the respondents utilise.

## VI. Conclusion

This study has established there is a significant relationship between emergency care and reduction in maternal mortality. That there are healthcare facilities to provide emergency obstetric care and other gynaecological service in south-south, Nigeria. It was found that health education can be an instrument of reducing maternal mortality.

## VII. Recommendations

Arising from the study, it was recommended that:

1. Health education programmes by health educators both at the community and health facilities should be on regular bases as at reducing emergency obstetrics problem directed at reducing maternal mortality.
2. The federal, state and local government levels should be encouraged to improve the infrastructure and basic amenities in the available healthcare facilities to enhance utilization by pregnant women to ensure maternal mortality reduction.
3. Highly skilled professional especially obstetricians and gynaecologists should be available at every reference hospital to which a primary health facility could refer a pregnant women in need of obstetrics immediate attention as at reducing maternal mortality.

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