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Mothers' Interventions towards Reduction of Maternal Mortality in some Selected Rural Communities in Southwestern Nigeria

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Abstract

The high prevalence rate of maternal mortality in sub-Saharan Africa despite innumerable interventions within and without has rendered the phenomenon a startling demographic challenge in the region. While several of these efforts could be considered as 'top-to-bottom approaches', efforts have been devoted to the examination of the individual perspective on these initiatives and actions in order to determine personal responsibility by mothers who are the vulnerable victims. The study therefore assessed mothers' intervention in reduction of maternal mortality in some selected rural communities in Southwerstern Nigeria. A quantitative primary data generated with the aid of structured questionnaire was used in conjunction with focus group discussions. A random sampling size of 218 women in child bearing age (15-49) from four enumeration areas of two local government areas in two states. The result shows that age, religious affiliation and husband's occupation are significantly related to the registration for antenatal care. It also revealed that women who married at older ages, who are currently with higher number of children who are involved in occupational activities, are likely to suffer pregnancy complications.. The research positioned that most pregnancy related problems and maternal death could be summoned by enlightenment of married women and prospective mothers on 'marital antenatalic life'

Keywords
maternal mortality, pregnancy complications, antenatal care, attitude, MDGs

Introduction

The reduction in maternal deaths has become the major preoccupation of the world today and this evident by its frequent appearance in most developmental objectives and its inclusion in Millennium Development Goals (MDGs). Maternal mortality situation in Africa is changing. Only about six countries in Africa, three of which are Ethiopia, Nigeria and the Democratic Republic of Congo, accounted for nearly half of all maternal mortality cases in the world (Peter Heinlein, 2010). While the rate has declined in virtually most countries, it is still rated very high in Nigeria by the world standards (WHO, 2007; Horgan et al, 2010). Also, the great disparity in maternal mortality prevalence and incidence between Nigeria and other advanced nations has made the phenomenon a startling demographic challenge. Several governments within Africa (like others around the globe) have made

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concerted efforts in reducing the trends, patterns and rates of maternal mortality. It has drastically plummeted in several advanced countries and while relative achievements in some Africa nations have been observed for example in Ghana, Egypt, South Africa and Morocco (Horgan et al, 2010). However, its perpetual high incidence in Nigeria is raising concern despite her natural endowed resources and its acclaimed giant of Africa.

Right from 1987, the global initiatives has been intensifying on policy intervention for maternal mortality with the emergence of Safe Motherhood Initiative in the same year 1987 (Horgan, et al 2010). This was directly a response to growing recognition that primary health-care programmes in many developing countries were not adequately focused on maternal health. Another effort was the 1994 International Conference on Population and Development that strengthened international commitment to reproductive health of which reduction in maternal mortality became an integral component. This drive continued until the reduction in maternal mortality was enshrined as one of eight cardinal goals for development in the Millennium Declaration (Millennium Development Goal 5) (Horgan, et al 2010).

Nigeria as a victim of this phenomenon has joined other league of nations advocating for the reduction in maternal mortality. Efforts have been made in the area of health-care services to secure a lasting solution to the maternal and infant mortality ravaging the country. Other actions include but not limited to: advocacy for reproductive rights of women in Nigeria, Safe Motherhood Initiative, Midwives Scheme of the MDGs, that includes training and re-training of nurses and midwives in reproductive health-care and services and, National Programme on Immunisation (NPI) to rescue babies from killer diseases. In addition are the recent initiative by Nigeria first lady on awareness campaign on maternal and child health, stakeholders' sensitisation, model quality health service delivery intervention programmes in some states of the federation in Nigeria and the recently launched of African Union Continental Campaign on Accelerated Reduction of Maternal Mortality in Africa (CARMMA) (Constance, 2009). Also included is the Journalists Alliance for Prevention of Mother-to-Child Transmission of HIV/AIDS and several coalitions in attempt to stop harmful traditional practices like unsafe abortion, female genital cutting, blood births, premature marriages, etc (WHO, 1995; NPC / USAID, 2004; WHO/Hill-2005; USAID, 2009).

Despite all these programmes and provisions, the challenge does not only remain but could be regarded as a demographic affront. Out of every 100,000 women given birth in Nigeria, 1,100 die every year (USAID, 2009). While the rate is as low as 4, 1 and 45 women per 1000,000 in Germany, Ireland, and China respectively, Nigeria is second only to India as countries where the safety of mothers is the lowest in the world (Idu , 2008; USAID, 2009). While several of these efforts could be considered as 'top-to-bottom approaches' at reducing this cankerworm, sparser efforts have been devoted to the examination of the individual perspective on all these initiatives and actions taken. Mortality reduction has not been treated as mothers' personal responsibility, and until then, it might remain a clog in the wheel of economic development and continuity of life. Therefore, the attitude of individual mothers coupled with their intending actions and inactions towards initiatives to reduce maternal deaths should be considered for analytical evaluation. It is expedient to document the roles of mothers (prospective and current) towards programmes designed for maternal deaths reduction in their vicinity? Other pertinent questions requiring answers include: what is the level of mothers' awareness on compulsory antenatal care, what are the socio-demographic correlates of women that experience complication during pregnancy and with the millennium target of 2015, a period less than five years, is it possible for something spectacular to be done? The answer to the above questions would provide opportunity to harness individual's efforts from the grassroots towards this menace. The study will therefore assess mothers' intervention in reduction of maternal mortality in the rural communities of Nigeria. This is to be achieved via the specific objectives which are to assess the individual mother's awareness of likely causes of maternal mortality, assessment of mothers' awareness and attitude towards various programmes designed for reduction of maternal deaths.

Research Methods

Both quantitative and qualitative techniques were used in data collection. Primary source was used with the tool of structured questionnaire in sourcing the data for the quantitative segment. A

sample size of 218 women of child bearing age (15-49) was randomly selected within four enumeration areas (EAs) from Ado-Odo/Ota and Odo-Otin local government areas (LGAs) of Ogun and Osun States respectively. The two states were randomly selected from the South-West geo-political zone of Nigeria. The structured questionnaire features relevant questions on respondents' demographic background, awareness of antenatal care centre, attitude toward ANC, place of delivery of the last baby, health care facility distance, opinion on the centre facilities and complications experienced during the last or current pregnancy.

A total of four focus group discussion (FGDs) were organized amongst the target group to enrich the findings from the quantitative study. Descriptive statistics and regression analysis modelwere adopted for data analysis. The model of regression analysis was adopted because it provides the line of best fit which explains how the typical value of the dependent variable changes when any one of the independent variables is varied assuming other independent variables are held constant. . The survey data were analyzed statistically using statistical package for social sciences (SPSS version 17.0) while information from the focus group discussions were transcribed and analyzed using content analysis.

Results

Socio-Demographic Characteristics of the Respondents

The target population were women of child bearing age. The mean age group of respondents is 32 years indicating that the sample populations are young mothers (table 1). Only 6.9 percent of the respondents claimed to be affiliated with traditional religion, more than half are Christians (59.6%) and Muslim only constitutes 33.5 percent. Fifty -three percent belong to polygamous family type, and divorced/separated wives were only 25.7 percent (Table 1). About 54.1 percent of the respondents are working mothers while 45.9 percent are full time housewives. Occupational classification (as contained in table 1) shows that 9.2 percent are government employees, and 48.6 percent are private workers while 425 are unemployed. Specific field of occupation classification includes, artisan (skilled and unskilled) and farming. The highest level of education attained by majority of the respondents interviewed is secondary level (50.5 percent), primary education accounted for only 21.1 percent and tertiary stands at 19.3 percent. About 9.2 percent have never attended any school (Table 1).

Assessment of respondents' socioeconomic level will not be completed without indicating the waste disposal especially human waste disposal. A cursory observation shows that about 73.9 percent of respondents use pit latrine, 16.5 percent use bush and filed while only 9.6 percent have water closet with manual flushing. Solid wastes are disposable through unapproved open dump sites and these are located around the living areas. Access to 'treated mosquito net' is limited and distance to the closest government health centre is above 5 km as shown in table 1. This is at variance with the maximum distance of 4 km recommended by World Health Organisation (WHO). The implication is that pregnant women could become lethargic while attempting to access the facility for ANC, delivery or for treatment

Attitudes toward Maternal Health and Reproductive Decision making

Majority of respondents considered death as natural phenomenon that has been pre-ordained by divinity and transcends human manipulation or control. The study revealed some pregnancy complications that are common in the study areas and these include ectopic pregnancy, hypertension, diabetes, birthing complications, high blood pressure and pre-eclampsia. Questions were canvassed for the most common, hypertension and high blood pressures were reported as the most common. 50.5 percent and 49.5 percent respectively (table 2). The FGDs also supported this claim as respondents were divided into almost half in all the sessions.

A Trader:

The most common pregnancy complication in this area is high blood pressure. There is no way you will not think when there is no food for your children to eat or when your business is nor moving on well

A civil servant:

Most common pregnancy complications in this area are ectopic pregnancy and hypertension. In some cases it often leads to death, because they will not report the case in time. Even atimes when they reported early it will be with unqualified personnel

FGD participant

We have witnessed pregnancy complications in this village especially prolonged labour this even resulted into death of my neighbour. We could not get vehicle on time and the TBA could not deliver the baby

The awareness of antenatal care (ANC) is fascinating as overwhelming proportion of the respondents admitted knowledge of ANC (92.9%) but less than this number posited that they are unaware that is compulsory for all pregnant women (Table 2). However, the common reasons that hinder registration and attendance of antenatal care is lack of money and chronic traditional belief and practices. Majority of the respondents prefers herbal home (TBA) to others (like clinics or hospitals). The providers of ANC for majority identified are nurses, midwives, doctors and TBAs.

A full housewife:

Most of the women who did not register for anti-natal clinic don't have money to do so. Even when they are saying that there is free health care system in the state you have to pay minimum of N3,000.00 (Three thousand Naira) before you can be allowed to deliver in the government hospitals/health centres.

Coraborating this claim, a nursing sister in one of the health facilities observed that :

Some of women who delivered in herbal home cannot afford the minimum charges of government health centres. While some of them belief in the efficacy of the herbal medicine in preventing pregnancy complications.

Also, while overwhelming majority agreed that malaria and fever are the most common ailments in the community, 10.7% of the respondents revealed cough and cold as common in the area as indicated in table 2. The proportion of respondents that claimed cholera, typhoid and diarrhea are (5.4%, 5.4% and 1.8% respectively (table 2).

The focus group discussions show that contraceptive knowledge is interestingly high but the usage is abysmally low.

A housewife.

We have heard about family planning methods in the radio and in health centres. But we don't use it. It is God that normally helps raising children.

A Petty Trader

Before the modern methods we have our own traditional methods we normal use to prevent pregnancy when you are still nursing baby. It is to prevent having children not like the 'oyinbo' (modern) type.

Awareness ranges from oral pills, condoms to concoction. No single respondents claimed to have ever used injectibles as a form of contraceptives. More than half of the total respondents have never used condom but majority claimed to have adopted concoction as not only a means of preventing pregnancy but a check of sexual diseases. Decision on what contraceptives to use is solely women responsibility while the choice of health centres and cost of treatment are all under the domain of the husband who is apparently the head of household. Some of the excerpts from the discussion include:

"We can't separate ourselves from the tradition", "our fathers used all these things and it was ok with them", "abstinence can't not work because of pressure from husband, either old or young, they (husbands) cannot 'hold' themselves", my husband will not agree to modern family planning", "some concoctions are far better than modern medicine/drugs', "the potency of these herbs are incomparable with 'oyinbo' (modern) medicine", "and from experience we can even prepare it ourselves"

While 30.7 percent of respondents believed in ideal family size of five to six children (as presented in Table 2), about 38.1 percent considered seven and more children as the ideal number. Only 5 percent believed in one to two numbers of children. Overall, 68.8 percent considered five children and above as ideal family size. This general perception of respondents manifest in repeated pregnancies among the respondents. This high ideal family size depicts the rural nature and cultural attachment culminating on high risk pregnancies. The common practice in Yoruba land that married women should be submissive to their husband in fertility related matters and that they secure permission from their husbands before taking major decisions such as limiting fertility through contraceptives or other means was retracted among the respondents. There is a popular proverbial adage which says *"Oko lo lori aya"*, literally translated as " husband is the head of the wife". it was revealed that men still has the power to determine when to have sexual

intercourse sixty two percent (62%) of the respondents responded that their husband would determine when to have sex, both husband and wife would determine when to have sex(22.6%) while 15% percent said that they would determine when t have sex.

Regression Analysis Results

Regression analysis in model I shows that age, religious affiliation of the respondents as well as the educational attainment of the head of the household are negatively related to the registration for antenatal care (ANC) in the study locations (Table 3). This means that the higher the age of the mothers, the less likelihood the wife would register for ANC. The same is true for religious affiliation in this category. However among these variables, age and religious affiliation are significantly related to registration for ANC at p = 0.05 and 0.03 respectfully (Table 3). In addition, respondent's education and occupation as well as husband's occupation shows positive relationship with registration for ANC. The result could imply that the education of husband does not hold weight in the registration of the ANC whereas his occupation constitutes a major determinant in wife's registration for ANC. This could be true because husband occupation or working status could enhance adequate funding of the ANC cost and support. Higher occupational level implies more income that can encourage the wife to seek for medical services. Both wife's and husband's occupation are significantly related to ANC registration at p = 0.03 and 0.002 (table 3). Also, since the F statistics calculated (5.335) is greater than the F tabulated (1.87) the hypothesis that the socio-demographic characteristics of the respondents are significantly related to the registration of ANC is upheld.

The analysis from the Model II revealed that respondents' occupation, family size, age at first marriage and children ever born (CEB) are positively associated with complications experience during pregnancy (table 4). The information revealed that women with higher number of CEB, those that married at older ages and are also involves in occupational activities suffered pregnancy complications in their last pregnancies. The above implies that higher age at first marriage with increasing or higher CEB in addition with involvement in occupational activities engender higher likelihood of experiencing pregnancy complications. Also, respondent's level of education, access to health facilities as well head of household's occupation category are negatively related to experience of pregnancy complications (table 4). Those who have access to health facilities and have attained higher educational level and have husbands that are working might less likely experience pregnancy complications. However, among these variables, respondent and husband occupation, size of the family and access to health facilities are statistically significantly related to the dependent variable (p = 0.001, 0.000, 0.007 and 0.000 respectively).

Discussion and Conclusion

Health care utilization is a factor that needs to be considered in health care delivery system in Nigeria. It was observed that place of residence has been observed as important factors that will influence the use of the health facilities in Nigeria. Most of those in the rural areas may not have access to the health care facilities. It was also observed that there is mal-distribution of these health facilities between urban and rural areas in the country. Also, some categories of health manpower are in short supply in the rural areas. There exists an uncomfortable mix of under-utilization and over-utilization of the skills of health professionals depending on the geographic location and professional category/sub-category involved. Although most of the women are aware of ANC, poverty and traditional belief did not allow them to attend the ANC. Most of the people may lack enabling resources, and because of high rate of illiteracy, they might not perceive the need for health service use, resulting in the use of unscientifically tested traditional medicine, some of which have negative health implications. Caldwell (1990) found out that educated women benefited more from available public health-care services than the uneducated mothers. Also in a study of child nutrition in Philippines, Barrera (1990) found that access to healthcare services benefited children of educated mothers more than children of mothers with less schooling. There is also a marked level of resistance to family planning use in the area because of socio-cultural and economic factors, particularly religious beliefs, low educational levels, poverty, misinformation, and poor spousal communication. Although this problem is widespread nationally, data from the 2008 NDHS show that approval of use of modern contraceptive methods is higher among urban

residents than those in rural areas. The attitude to death is also a major issue where death is seen as a natural occurrence. Maternal death must not be seen as a natural occurrence as popularly believed in the study area. It is a social, economic and developmental problem. It affects individuals, families, communities and nations and represents a formidable barrier to sustainable social and economic emancipation and of course development. Maternal death disrupts families, work, education of children, and progress in the family and cuts short joy from the family, friends and relations. Death of mothers should therefore be regarded as a colossal economic waste and should not be encouraged, influenced and must be stopped. However, the general responsibility should be on everyone. Also, the focus group discussions gave a better understanding of the many problems faced by mothers during pregnancy and in giving birth in the area of study Several of these problems could be resolved by enlightenment of married women and prospective mothers (i.e. young girls) on 'marital antenatalic life' and a change of attitude on personal care and healthy living.

Among the economic implications of this study is that, a lower maternal mortality culminates in improvement in survival rates which increases the number of economically viable young people. This number could be profitably harnessed for sustainable economic growth and development. Again, since mothers represents the future of the country, one of the vital commitments a country can make for future economic and social progress is to address their health needs in a manner that will not jeopardize the economic benefit to the nations as well as the traditional values of the populace. Therefore, appropriate sensitisation among the women folk is extremely necessary before any program or policy is instituted. Traditional belief and attitude are inseparable especially in this part of the world; hence, every initiative that does not take this into cognizance may have less impact on the community.

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Appendix I

Table 1: Demographic characteristics of respondents

Variables	Freq.	Percent
Age Group		
15-19 years	46	21.1
20-24 years	10	4.6
25-29 years	10	4.6
30-34 years	36	16.5
35-39 years	52	23.9
40-44 years	54	24.7
45-49 years	10	4.6
Total	218	100
Religion Affiliations		
Christianity	130	59.6
Islam	73	33.5
Traditional	15	6.9
Total	218	100
Marital Status		
Married (Monogamous)	35	16.1
Married (Polygamous)	116	53.2
Loose Union	56	25.7
Widowed	11	5
Total	218	100
Working Status		
Currently working	118	54.1
Full time housewives (Not	100	45.9
Total	218	100
Occupation		
Government Worker	20	9.2
Private (Own Account)	57	26.1
Private (Employee)	49	22.5
Unemployed	92	42.2
Total	218	100

Variables	Freq.	Percent
Educational Attainment		
No Schooling	20	9.2
School Leaving Certificate	46	21.1
Secondary	110	50.4
Tertiary	42	19.3
Total	218	100
Sewage Disposal		
Pit Latrine	159	73.9
Bush	36	16.5
Water Closet	23	9.6
Total	218	100
Children Ever Born		
1-2 children	169	77.5
3-4 children	12	5.5
5-6 children	18	8.3
7 children & above	19	8.7
Total	218	100
Health facility distance		
Very far/but trekable	63	28.9
Not far/But trekable	15	6.9
Very far /Not trekable	118	54.1
Not far but untrekable	22	10.1
Total	218	100
Centre Distance in Kilometers		
7 km & above	97	44.5
5-6 Km	52	23.9
4-5 km	21	9.6
3-4 km	19	8.7
1-2 km	29	13.3
Total	**218**	**100**

Table 2: Awareness and attitude towards ANC and other initiatives towards for reduction of maternal mortality

Variable	Freq.	Percent
Aware of compulsory antenatal consultation		
Yes	30	13.8
No	188	86.2
Aware of any program of immunization		
Yes	61	28
No	157	72
Aware of campaign against maternal death		
Yes	62	28.4
No	156	71.6
Aware of Safe Motherhood Initiative		
Yes	83	38.1
No	135	61.9
Aware of MDG reduction in maternal & infant death		
Yes	55	25.2
No	163	74.8
Most Common Complications in the community		
Ectopic Pregnancy	100	45.8
Hypertension	60	27.5
Prolonged Labour	48	26.7
Knowledge of ANC centres		
Yes	196	89.9
No	22	10.1
Registered for ANC in last or current pregnancy		
Yes	134	61.5
No	84	38.5
Experienced complications in the last or current pregnancy		
Yes	42	19.3
No	175	80.3

Variable	Freq.	Percent
General attitude towards ANC and other programs		
Favourable	54	24.8
Not favourable	164	75.3
Common illness in the community		
Cholera	14	6.4
Malaria/fever	167	76.6
Cold/Cough	22	10.1
Diarrhea	1	0.5
Typhoid	14	6.4
Preferred Health Facility		
Faith Clinic (Spiritual Leaders, etc)	30	13.8
Medicine Vendors	47	21.6
Traditional Healers	91	41.7
Medical Doctors/Nurses	30	13.8
Indifference	20	9.2
When to have more children		
Husband	98	43.8
Wife	32	14.3
Both	94	42
Total	224	100
Desired family size		
Husband	98	44.2
Wife	31	13.8
Both	94	42
Total	224	100
When to have sex		
Husband	124	62
Wife	45	22.6
Both	31	15.4

Appendix II

Table 3: Regression Analysis (for model I)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.453(a)	0.205	0.166	0.44534

a Predictors: (Constant), Health facility distance, Religion Affiliations, Age of Respondent, Health care Centre, Respondent's Occupation, Social Status, Household Head Occupation, Head of

ANOVA(b)

Model		Sum of	df	Mean	F	Sig.
1	Regression	10.58	10	1.058	5.335	.000(a)
	Residual	41.053	207	0.198		
	Total	51.633	217			

a Predictors: (Constant), Health facility distance, Religion Affiliations, Age of Respondent, Health care Centre, Respondent's Occupation, Social Status, Household Head Occupation, Head of Household Educ Attainment, Working status, Respondent Educational Attainment

b Dependent Variable: Whether registered for ANC in Last / Current pregnancy

Coefficients(a)

Model		Unstandardized		Standardized	t	Sig.
		B	Std.	Beta	B	Std. Error
1	(Constant)	0.911	0.347		2.63	0.009
	Age of	-0.037	0.019	-0.147	-1.931	0.055
	Religion	-0.11	0.053	-0.141	-2.075	0.039
	Health care	-0.055	0.022	-0.168	-2.475	0.014
	Working status	0.228	0.073	0.234	3.112	0.002
	Respondent's	0.07	0.032	0.148	2.18	0.03
	Household Head	0.111	0.036	0.212	3.105	0.002
	Respondent	0.076	0.054	0.142	1.411	0.16
	Head of	-0.087	0.055	-0.156	-1.571	0.118
	Social Status	0.015	0.064	0.016	0.226	0.821
	Health facility	0.026	0.03	0.058	0.869	0.386

a Dependent Variable: Whether registered for ANC in Last / Current pregnancy

Table 4: Regression Analysis (for model I)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.502(a)	0.252	0.228	33.74237

a Predictors: (Constant), Have Access to Health Centres, Respondent Educational Attainment, Age at first marriage, Children Ever born (CEB), Household Head Occupation, Size of family, Respondent's Occupation

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	80743.807	7	11534.83	10.131	.000(a)
	Residual	239094.986	210	1138.548		
	Total	319838.794	217			

a Predictors: (Constant), Have Access to Health Centres, Respondent Educational Attainment, Age at first marriage, Children Ever born (CEB), Household Head Occupation, Size of family, Respondent's Occupation
b Dependent Variable: Complications

Coefficients(a)

Model		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	79.08	17.869		4.426	0
	Respondent's Occupation	7.834	2.315	0.21	3.384	0.001
	Household Head Occupation	-9.786	2.539	-0.238	-3.855	0
	Respondent Educational Attainment	-1.078	2.605	-0.026	-0.414	0.679
	Size of family	3.1	1.142	0.167	2.714	0.007
	Age at first marriage	0.008	0.199	0.002	0.039	0.969
	Children Ever born (CEB)	0.123	0.068	0.111	1.824	0.069
	Have Access to Health Centres	-29.163	5.966	-0.3	-4.888	0

a Dependent Variable: Complications