

Factors Associated With Maternal Death among Women of Child Bearing Age on the Community Perspectives; a Case Study of Kisemvule Village in Mkuranga District, Tanzania 2019

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Abstract

Objective: In the world, 303,000 women lose their life due to the complications related to pregnancy and childbirth. Tanzania is ranked 6th and 4th among the countries with high maternal mortality globally and Africa respectively. About 23 women in Tanzania are dying daily due to preventable causes, related to pregnancy and childbirth that is approximately one woman every hour. The objective of this study was assessment of risk factors on community setting associated with maternal death among women of childbearing age.

Results: We enrolled 124 women of childbearing age. The mean age was 17.7. (37%) mentioned preeclampsia as the most risk factor leading to maternal death, 21% reported abortion, 13.7% mentioned anemia, and 12.1% reported postpartum hemorrhage, and 10.5% pregnancy induced hypertension (PIH), 3.2% ante partum hemorrhage and 2.4% early pregnancy. Other risk factors that seemed to cause maternal death included; delay to seek health facility to pregnant mother (8.9%), long distance from health facility to people's residents (57%), poor transport system in the village to reach the present health care facility (4.8%), negligence from health workers was also reported by the women as contributing factor (13.7%), economic condition-poverty (7.3%) absence of emergency blood bank in the health facility(4.8%), and poor nutrients to pregnant mother (3.2%). More studies are needed in the community to explore more on the risk factors among women of different life group.

Keywords: Knowledge, Risk Factors, Maternal Death, Community

Introduction

Maternal health refers to the health of women during pregnancy, childbirth, and the postpartum period [1]. Despite the fact that most maternal deaths are preventable, every day 800 women die from preventable causes related to pregnancy and childbirth [1]. The main direct causes of maternal morbidity and mortality include hemorrhage, infection, high blood pressure, unsafe abortion, and obstructed labor [1]. Almost all maternal deaths (99%) occur in low income countries. In 2013, the MMR was 230 per 100,000 live births in developing countries while in high income countries was 16 per 100,000 live births in developed countries.

A study conducted by Christian et al, in Nepal found that maternal age and parity were contributing risk factors for maternal mortality; maternal age greater than 35 years was associated with a three- to four-fold increase in mortality, whereas increased parity conferred

increasing protection. Jahromi et al, also found that maternal complications increased in women aged 40 years and above whereas Garenne et al, found that the risk factors associated with maternal mortality are parity, lack of antenatal visit, low level of maternal education and marital status.

Causes of maternal deaths are numerous and vary from one place to another depending on prevailing factors. Research conducted by Ramos et al, in Argentina found that the most common causes of maternal death were abortion complications, hemorrhage, and sepsis and hypertensive disorders. The causes were not the same for the southern part of Africa where Kongnyuy et al, found that the leading causes of maternal death in Malawi were postpartum hemorrhage, postpartum sepsis, and HIV/AIDS accounting for direct and indirect maternal causes. The study conducted at Muhimbili national hospital shown the main causes of maternal death to be Hypertensive disorders of pregnancy, post-partum hemorrhage and anaemia are the leading causes of maternal deaths in this institution.

Multiple substandard care factors identified both at individual and health care service levels that contributed to maternal deaths [2].

In the year 2015, the maternal mortality ratio in the country was estimated to be 398 maternal per 100,000 live births. Tanzania is ranked 6th and 4th among the countries with high maternal mortality globally and Africa respectively. About 23 women in Tanzania are dying daily due to preventable causes, related to pregnancy and childbirth that is approximately one woman every hour [3].

In Tanzania, several studies have been conducted to assess risk factors for maternal deaths in which many of them based on clinical setting. The aim of this study was to assess the knowledge of women on the community setting about maternal death, causes and risk factors associated with maternal death.

Methodology

Description of Study Area

Mkuranga is one of the 6 districts of the Pwani Region of Tanzania. It is bordered to the north by Dares Salaam, to the east by the Indian Ocean, to the south by the Rufiji District, and to the west by the Kisarawe District. The Mkuranga District is administratively divided into 18 wards: Bupu, Kimanzichana, Kisiju, Kitomondo, Lukanga, Magawa, Mbezi, Mkamba, Mkuranga, Mwalusembe, Nyamato, Panzuo, Shungubweni, Tambani, Vikindu, Kiparang'anda, Njianne, and Vianzi. The population of mkuranga district according to census done 2012 was 222, 921.

Study Design

During the study both quantitative and qualitative was employed in which under quantitative cross-sectional descriptive study was undertaken to assess the risk factors associated with maternal death among pregnant women and child bearing age women at mkuranga district.

Data Collection

Data was collected through the household and some of the working places like market. Each woman was provided with questionnaire, interview focused group discussion selected woman or volunteered woman was instructed on how to fill the questionnaire. An interview was also involved in the data collection, and then the tools were collected from the respective women as per instructions for analysis. A multistage technique was used in sampling through which four stages were involved Simple random sampling technique was used and the following strategies followed, simple random sampling to obtain one ward from eighteen wards, simple random sampling to obtain suburb in kisemvule village and hence different household and families were involved and 124 women were recruited during the study

Data Analysis

Data collected were coded, entered into computer, cleaned and analyzed using SPSS 16.0 version computer software. Frequency tables and cross tabulations were produced for each of the study variables. Data analysis was carried out by running descriptive statistics and cross tabulations.

Ethical Consideration

Permission to conduct the study at mkurangau district, Pwani region was obtained from the District medical Officer (DMO). All information obtained from the participants were treated

confidentially.

Results

Demographic Information

The mean age of the women under the study was 17.7 years (range: 15 to 49). The age group 20–29 years constituted almost a half of them. Majority had primary education (50%) and were married (56.5%). And about 44(35.5%) women were homemakers as shown in the table 4.1.

Table 1: Demographic Characteristics of the Sample

Demographic Characteristics	Categories	Frequency	Percent (%)
Age group	15-19	13	10.5
	20-24	28	22.6
	25-29	25	20.2
	30-34	16	12.9
	35-39	11	8.9
	40-44	18	14.5
	45-49	13	10.5
level of education	No formal education	35	28.2
	Primary education	59	47.6
	Secondary education	30	24.2
	Married	70	56.5
marital status	Single	33	26.6
	Divorced	21	16.9
	Housewife	44	35.5
Occupation	Peasants	35	28.2
	Employee	25	20.2
	Self employed	10	8.1
	Petty trader	10	8.1

Knowledge on the risk factors associated with maternal death

What type of risk factors you know among the following; Preeclampsia, Pregnancy induced hypertension and Abortion, if any mention

Table 3.2: Knowledge of mothers on the risk factors related to maternal death

Categories	Frequency	Percent (%)
• Preeclampsia	46	37.1
• Pregnancy induced hypertension	13	10.5
• Abortion	26	21.0
• Postpartum hemorrhage	15	12.1
• Antepatum hemorrhage	4	3.2
• Anemia	17	13.7
• Early pregnancy	3	2.4
Total	124	100.0

Most of the women (37%) mentioned preeclampsia as the most risk factor leading to maternal death, 21% reported abortion, 13.7% mentioned anemia, and 12.1% reported postpartum hemorrhage, and 10.5% pregnancy induced hypertension (PIH), 3.2% ante partum hemorrhage and 2.4% early pregnancy. The number of women who at least tried to report the risk factors are the one who have had at least primary education and those of secondary education. But those who have no formal education was hard for them to mention the things that can lead to maternal death regardless of being multipara. This shows that the knowledge about risk factors associated maternal death is still very low as you can see that only 3(2.4%) know that early pregnancy can lead to maternal death and very low percentage shown anemia, abortion as well as PIH.

Table 3: Indirect Risk Factors Related To Maternal Death

Categories	Frequency	Percent (%)
• Delay to seek health facility	11	8.9
• Long distance from health facility	71	57.3
• Poor transport system	6	4.8
• Negligence from health practitioners	17	13.7
• Economic condition	9	7.3
• Absence of emergency blood bank	6	4.8
• Poor nutrients to pregnant mother	4	3.2
Total	124	100.0

Other risk factors that seemed to cause maternal death included; delay to seek health facility to pregnant mother (8.9%), long distance from health facility to people's residents (57.3%), poor transport system in the village to reach the present health care facility (4.8%), negligence from health workers was also reported by the women as contributing factor (13.7%), economic condition-poverty (7.3%) absence of emergency blood bank in the health facility(4.8%), and poor nutrients to pregnant mother (3.2%).

Table 4: Knowledge on the Antenatal Clinic

Number of visit	Frequency	Percent (%)
One time	13	10.5
Two times	9	7.3
Three times	31	25.0
Four times	41	33.1
Five times	10	8.1
More times	10	8.1
Don't attend	10	8.1
Total	124	100.0

The antenatal assessment shown that 13(10.5%) out of 124 attend one visit during their antenatal clinic, 9(7.3%) two times, 31(25%) three times, 41(33.1%) attend four times, 10(8.1%) attend five times, 10(8.1%) attend more times, 10(8.1%) don't attend antenatal clinic. from the assessment some women do not attend clinic during their pregnancy and some do not finish all of their visit as ordered but again some begin late to attend clinic which is risk since knowing the progress of the pregnancy is very important, for this reason we expect all pregnant mother to attend and complete all of the visit so that we reduce the risk of getting some of the complications

during delivery.

Attitude of women among childbearing age on the risk factors related to maternal death.

Table 5: Attitude of Mothers towards Pregnancy related risk factors

Categories	Frequency	Percent(%)
I do not see anything wrong in being pregnant every year or in quick succession	47	37.9
I will readily undergo Caesarean section if need be in order to avoid complications during delivery.	30	24.2
My culture does not see anything wrong having children as early as age 15	45	36.3
I do not think going for antenatal check up is necessary for safe delivery	52	41.9
I accept that prolong labour could result in having unhealthy babies; hence I ensure I register as early as possible when I am pregnant to prevent unforeseen events.	49	39.5
I do not see the need for education as a factor for safe delivery	44	35.5

The Table 4.5 revealed the attitude of mothers towards risk factors related to maternal death here were the responses 'I do not think going for antenatal checkup is necessary, ranked highest by percent score (41.9%) followed by 'I accept that prolong labour could result in having unhealthy babies; hence I ensure I register as early as possible when I am pregnant to prevent unforeseen events (39.5%)' followed by 'My culture does not see anything wrong having children as early age(36.3%), followed by I do not see anything wrong in being pregnant every year or in quick succession(35.5%) followed by 'I will readily undergo Caesarean section if need be in order to avoid complications during delivery'(24.2%).

Discussion

The purpose of this study was to assess knowledge and attitude on the risk factors associated with maternal death among women of child bearing age on the community setting; In the study, it was found that most of women were knowledgeable on the indirect risk factors related to maternal death, which are long distance from health care facility followed by negligence from health practitioners, delay of pregnant mother to seek health care attention, poor transport system, economic condition-poverty, absence of emergency blood bank to pregnant mother soon after delivery, as well as poor nutrients.

Long distance from health facility was the major factor on the community perspectives and it accounts about 57.3% of the other factors, the women reported that it takes long time to reach to health facility since it is too far from their residents, clinically this can lead to maternal death since it delays the intervention to be taken from pregnancy mother especially if there is complication to the pregnancy mother, for that reason she may end up with death, and this has been happening that some of pregnancy mothers die along

the way before or soon after being arrived at the hospital. The study done in Nigeria agrees with the study which documented that distance to healthcare facility is the factor contributing to maternal death, another factors in Nigeria study was cost of transportation, absence of healthcare provider at the health facility, impact of socio-economic characteristics like age, place of residence, level of education and wealth on the utilization of health services [4, 5].

On the direct causes of maternal death only 37.1% of women were knowledgeable on the risk factors related to maternal death, which are preeclampsia followed by abortion, pregnancy induced hypertension, and early pregnancy. Most women were able to mention preeclampsia as the cause of maternal death to pregnant women. These agree with the study done at Muhimbili national hospital, which causes of reviewed maternal deaths. Of the direct causes, preeclampsia/eclampsia was the commonest cause of death in all deceased women, followed by post-partum haemorrhage [2]. Another study done in Rufiji shown that, haemorrhage took the heaviest toll accounting for 28% of deaths, followed by eclampsia (19%) and puerperal sepsis (8%) [5].

The study revealed low knowledge on the antenatal clinic since some women do not attend at all and some attend but do not complete the all visit during their pregnancy. About 8.1% do not attend antenatal clinic, 42.8% do not complete their visit, and only 33.1 complete their visit and only 13.6% of women come early for their first antenatal checkup. The study done by Athanase, agrees with these findings where it revealed that women have inadequate knowledge regarding the importance of coming early for their first antenatal check-up. Their ignorance resulted in late antenatal booking where only 12.4% of the women came for their antenatal booking in the first trimester. This is lower as compared to findings in another study done in Ghana where 63.6% of the women interviewed admitted going for their first antenatal check up in the first trimester. Again the study conducted by Ayotunde in Nigeria shown that 53% of the women had four or more antenatal visits in last pregnancy, 34% made no visit and 13% had less than four antenatal visits.

As a matter of fact, attitude of mothers towards risk factors related to maternal death cannot be over looked. As revealed in this study, majority of mothers of reproductive age had positive attitude towards antenatal care regardless of having low knowledge about the number of visit, others had negative attitude on early pregnancy, child spacing and education on maternal and child health, as it can be helpful in reducing risk factors to maternal death. Study conducted by Tolu, agrees with this findings which accounts that majority of mothers do not see anything wrong in being pregnant every year or in quick succession but again the study contradicts with this study on the effect of early pregnancy, the study reported that mothers had positive attitude on early pregnancy as contributing factor to maternal death [6]. Majority of the pregnant women in the study conducted by Athanase, 2016, 54% reported to have two visit of ANC from their previous pregnancy and about 15.4% only reported to have 4 visits of ANC visits. This observation gives a promising future to attain the Focused Antenatal Care campaign failure to reach a goal of at least 80%.

The factors needed more explanation so that they understand what it means and how they can cause maternal death. But for the government it should improve health services to mother and child health like building nearby hospitals with enough equipments and

worker because they complain of going too far to seek medical attention but also the services should be standard and timely organized [7-14].

Recommendation

- Education provision on maternal death risk factors should be given high priority by the healthcare team so that to reduce maternal death.
- Pregnant mother should be counseled to complete their entire antenatal clinic visit.
- Government should improve health care system in the villages where maternal death is still high; this includes health facilities improvement and qualified workers availability.
- Improvement in availability of adequate blood and blood transfusion services as well ensuring availability of adequate essential equipment and supplies to receive and manage obstetrics emergencies promptly in the hospitals.
- Risk factors such as early marriage should be addressed well to the community and the consequences the victim can get during delivery.
- Community participation in helping pregnant and avoiding other cultural beliefs like using some drugs to enhance labor pain should be avoided.

Limitation of the study

Inability to attain the required sample size was the major limitations of the study. Some women were reluctant to participate in the study and others were feeling shy to participate. But also lack of enough fund that leads a researcher to use only one village to get a sample size for the study.

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