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Community Perceptions on Maternal Health Service Provision in Lunga Lunga Sub County in Kwale County-Kenya

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***Abstract*— Maternal and neonatal morbidity and mortality are major public health concerns in most developing countries and in under resourced settings. Provision of safe motherhood is of utmost importance in the reduction of maternal mortality. Increasing the proportion of babies that are delivered in health facilities is an important factor in reducing the health risks to both the mother and the baby. This study explored maternal healthcare choices of expectant mothers in Lunga Lunga Sub County, Kwale County. The objectives of the study were; the identification and description of maternal healthcare providers in the area; the examination of the determinants for maternal healthcare choices; and the exploration of the perceptions and attitudes of the local community towards both formal and informal maternal healthcare providers. This was a community based cross-sectional descriptive study, the study employed community survey for which mothers with children below eight months were purposively sampled. Key informant interviews involving twelve maternal healthcare providers, from popular, professional and folk sectors were also purposively sampled to shed light on services they provide to expectant mothers. The study also used focused group discussion of discussants, who were sampled by region in the area. Information on maternal health care providers in the area, the kind of maternal healthcare services they provided, social support system and the perception of the community towards maternal healthcare providers was collected guided by the Disease Explanatory Model (DEM) proposed by Kleinman (1980). All analysis was done in SPSS version 21.0 for windows. P-value less than 0.05 was considered statistically significant. Results were considered significant at 95% confidence level. Results of the study indicates that, among the 333 mothers who participated in the study, 293(88%) were married and 219(65.8%) were of Islamic religion. Most of the mothers, 266(85.2%) had not completed Primary level of education. Of all the deliveries, 212(64%) were under skilled attendants at the health facilities. Mothers from Shimoni were less likely to deliver at the hospital as compared to those from Vanga, Mwena, Malamba and Mzizima. Controlling for distance from the facility, Mothers education level, Sub location of residence, presence of a health facility in the locality and mothers preference to a particular Maternal health service provider were significant predictors of choice of place of delivery among the study participants ($p<0.05$). In conclusion, the study revealed that utilization of skilled delivery attendance services was still low than expected with a high number of deliveries being attended by unqualified lay persons at home. There was need to strengthen the education infrastructures, implement cost effective and sustainable measures to improve the quality of maternal health services with an aim of promoting safe delivery and hence reducing maternal mortality.**

***Index Terms*— Maternal and neonatal morbidity, Health Service.**

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I. MATERNAL HEALTH

Maternal health remains a challenge in developing countries. The numbers of women dying every year from maternal related causes have remained high in developing countries despite various efforts to bring them down. Globally, over 500,000 women, 99% of them mainly from low-income countries are estimated to die each year from complications arising from pregnancy and childbirth (WHO, 2015). For every maternal death, 30% or more women suffer disabling and humiliating injuries. In addition, almost 9 million children die every year, of which 4 million newborn babies die within the first month of life and 3.3 million babies are born dead (Canavan 2009).

Globally, an estimated 548 000 maternal deaths occurred in 2014, a decline of 47% from levels in 2010. Sub-Saharan Africa (56%) and Southern Asia (29%) accounted for 85% of the global burden (245,000 maternal deaths) in 2014. At the country level, two countries account for a third of global maternal deaths: India at 19% (56,000) and Nigeria at 14% (40,000). The global maternal mortality rate (MMR) in 2014 was 210 maternal deaths per 100 000 live births, down from 400 maternal deaths per 100 000 live births in 2010. The MMR in low-income countries of 240 per 100,000 live births was 15 times higher than in high-income countries with 16 per 100,000 live births. Sub-Saharan Africa had the highest MMR at 500 maternal deaths per 100 000 live births, while Eastern Asia had the lowest among developing regions, at 37 maternal deaths per 100 000 live births. The MMRs of the remaining developing regions, in descending order of maternal deaths per 100 000 live births are Southern Asia 220, Oceania 200, South Eastern Asia 150, Latin America and the Caribbean 80, Northern Africa 78, Western Asia 71 and the Caucasus and Central Asia 46 (WHO, 2015).

In 1994, Kenya was one of the countries that endorsed the resolution of the International Conference on Population and Development (ICPD) in Cairo, Egypt. As a follow up on these recommendations, the government drew up the National Reproductive Health Strategy (NRHS) 2010. The NRHS identified the following as priorities: Access to quality maternal and child care services; utilization of quality and cost effective Mother/Child Health (MCH) services; effective referral systems; clean/safe delivery and emergency obstetric care; adequately equipped health facilities to provide quality

MCH services; effective management of complication of pregnancy; post abortion care and establishment of district audit systems on maternal and perinatal deaths.

According to the government of Kenya's Sessional paper no. 1 of 2010, the National Council on Population and Development (NCPD) in the Ministry of Finance and Planning, set the following demographic targets for Kenya: reduction of maternal mortality rate from 590 per 100,000 births in 2008 to 230 by 2015 and 170 by 2020, and increase the proportion of deliveries attended to by qualified personnel from 45% in 2008 to 90% by the year 2020.

Despite major efforts by the Kenyan government to promote the health and survival of mothers and babies through the provision of adequate Reproductive Health (RH) services and specifically the inauguration of the Safe Motherhood and Child Survival initiative, success still remains elusive. Although significant gains have been achieved in Kenya's health indicators, high maternal morbidity and mortality levels still persist, particularly associated with prolonged and obstructed labour, unsafe abortion, hemorrhage, hypertensive diseases of pregnancy, sepsis, anemia, malaria, STDs and HIV/AIDS (KSPA, 2010). An estimated 488 women per 100,000 live births die as a result of pregnancy related complications, childbirth and sequele in the postnatal period, making maternal death the leading (27%) cause of death among women of reproductive age.

However, there has been a decline in the proportion of births occurring at home from 59% in 2008 to 56% in 2014-15, according to the 2014-15 Kenya Demography Health Survey (KDHS) only 44% of births in Kenya are delivered in a health facility.

The Kenyan Government in 2015 launched the community Health Strategy (CHS) Policies, guidelines and strategy standards that provide mechanisms, procedures and incentives that encourage stakeholders - including public, non-governmental organizations and communities - to work together to improve health service delivery and eliminate exclusion of populations from access to services. The standards also support efforts that promote effective accountability mechanisms that assure implementation of agreed priorities with available resources. They provide an enabling environment for the implementation of community health services. Health service delivery is viewed as a process where CHVs and CHEWs are involved in the sequence of activities and services to achieve improved health status. They work as a team to ensure safe and efficient promotive, preventive and basic curative services at the household in line with the set standards. This is aimed at strengthening the responsive community health structures and increasing cover to ensure all mothers within the household receive essential care and are appropriately referred for obstetric care and health facility delivery

Literature shows that a number of factors have been cited to affect the utilization of maternal health care. Using the demographic and health survey data for Bolivia, Egypt and Kenya, found that the use of maternal health care (delivery services) are influenced by a myriad of social, cultural and economic factors. They found that it was positively and significantly associated with urban residence, education level, household wealth, age and parity.

Objectives of the Study

To explore the perceptions and attitudes of the local community towards both formal and informal maternal healthcare providers in Lunga Lunga Sub County.

Research questions

To realize this objective, the study adopted the following questions to guide the process of investigation:

What perceptions and attitudes does the local community have towards both formal and informal maternal healthcare providers?

II. METHODOLOGY

Research Site Location

The study was conducted in Kwale County of Coast region. Kwale is one of the six Counties of Coast Region and consists of five administrative sub counties namely Matuga, Kinango, Samburu, Msambweni and Lunga Lunga. The study was based in Lunga Lunga, one of the five sub-counties. The Sub County geographical distribution is approximately 2,803.80 Sq. Km with a population of 153,354. It also consists of four (4) Wards namely Pongwe (*comprises Majoreni, Mzizima, Shimoni, Wasini/Mwakiro and Bumbani sub-locations*), Dzombo (*comprises Malamba sub-locations*), Mwereni (*comprises Kasemeni, Kilimangodo and Mwena sub-locations*), Vanga (*comprises jego, Kiwegu, Sega and Vanga sub-locations*)

Lunga Lunga is located in extreme southeastern Kenya, at the international border with the Republic of Tanzania. This location lies approximately 102 kilometers (63 miles), by road, south of the port city of Mombasa, the nearest large city. The coordinates of Lunga Lunga are 4°33'18.0"S, 39°07'23.0"E (Latitude: 4.5550; 39.1231).

This location was chosen because of peculiar mixed attributes on socio-economic and demographic characteristics of its inhabitants though the history of most the people inhabiting the study areas owes allegiance to the Mijikenda ancestry, in which pregnant women are granted leave from their matrimonial home to return to their parental home to deliver. The Sub County is also unique since all the 40 community Units are fully fledged. The main subsistence crops are maize and cassava, with other fruit trees also grown as cash crops. In Lunga Lunga Sub County, there is a Sub County referral hospital and a number of health facilities offering maternal services.

Physiographic and Natural Conditions

The major physical feature in the Sub County is the Indian Ocean, which runs from the part of North Coast Lamu and Malindi to the border of Horo Horo Tanzania in the South west. Along its border with Kinango Sub County, runs several seasonal rivers that drain into the Indian Ocean. The Sub County has few scattered hills namely Kiruku in Mwereni Sub Location, Mrima malamba and Dzombo in Dzombo area (GOK, 2008). The altitude of the Sub County rises from 1,140 meters to 1,350 meters above sea level on the shores of Indian Ocean. The physical features have a bearing on the Sub County development potential. Areas with higher altitude have higher rainfall and are therefore suitable

for agriculture and livestock production. Indian Ocean though salty, have great potential for irrigation, water development and fishing activities. The soils are mainly sandy with a low water retention capacity (GOK, 2008).

Infrastructure

The road network in Lunga Lunga Sub County is still poor. The Sub County has only 45.8 km of tarmac roads out of a total of 544.4 km. The other 498.6-km of roads are either gravel or earth and in some areas impassable during rainy seasons (GOK, 2002). There are impassable narrow roads barring the movement of vehicles to interior places. Also making the roads impassable are thick thickets growing all over the area. The rough terrain in the area may be too hostile to comfortably transport an expectant mother to a health facility. Since there are no enough vehicles, the community heavily relies on motorcycles and bicycles as means of transportation. It becomes a big challenge to transport a mother in labour by these means of transport given the fact that the roads are also hilly. Olungah (2007) observes that a woman would be called upon to do much of the walking after paying dearly for the transportation cost. The area also lacks adequate electricity supply.

Health Infrastructure

The Sub County has a good coverage of biomedical health facilities. There is one Sub County Referral Hospital(Lunga Lunga Sub County Hospital), Two Health centers(Kikoneni and Vanga) and twenty one dispensaries spread across the entire sub counties namely Riziki Medical Clinic, Teens Watch Centre, Mbegani Dispensary, Qatar Medical Clinic, Reachout Centre Trust, Mwangwei Dispensary, Diani Beach Hospital, Perani Private Clinic, Bwiti (Tiomin) Dispensary, Mzizima (CDF) Dispensary, Ngathini Dispensary, St Joseph Maledi Clinic, Kikoneni Health Centre, Shimoni Dispensary, Lunga Lunga Dispensary, Majimoto Dispensary, Mwananyamala (CDF) Dispensary, Mkwiro Dispensary, Wasini Dispensary, Mwangulu Dispensary, Vitsangalaweni Dispensary, Majoreni Dispensary, Mamba Dispensary, Kilimangodo Dispensary, Mrima (Catholic) Dispensary, Godo Dispensary, Lunga Lunga Catholic, Mwanguda, Mwena. Muga (2004) observes that traditional birth attendants (TBAs) are preferred in this area because they always live with them and their mode of payment is flexible.

Research Design

The study employed a community based cross-sectional descriptive study design. The design gives a snapshot of the frequency of the characteristic in the population which is the number of women delivering in hospitals at a point in time.

Study Variables

The variables in this study were; the utilization of health facility for child delivery (place of delivery) among women as the dependent variable and the independent variables as the factors/varied reasons for not delivering in health facilities such as the Socio-demographic, cultural, economic factors, and distance to the health facility.

Population

The population of the study comprised of all mothers of child bearing age and maternal healthcare providers in Lunga Lunga Sub County. The participants had to meet criteria of having lived in the study area for more than two years.

Unit of analysis

A single mother of child bearing age constituted the unit of analysis.

Target Population

This was a community-based study thus carried out at the homesteads. The target population were the women of reproductive age in the Sub County. The study employed community survey for which mothers with children below eight months were selected by purposive random sampling. Key informant interviews involving twelve maternal healthcare providers, from popular, professional and folk sectors were also purposively sampled to shed light on services they provided to expectant mothers.

The study also used focus group discussion of discussants, sampled by region in the area. Information on maternal health care providers in the area, the kind of maternal healthcare services they provide, social support system and the perception of the community towards maternal healthcare providers was collected guided by the Disease Explanatory Model (DEM) proposed by Kleinman (1980).

Sampling Techniques and Sample size

A multi-stage sampling technique was used to select the study subjects. Lunga Lunga Sub County currently has 4 Wards and 13 Sub locations. All the 13 Sub locations were visited for data collection during the study.

The number of households included in each sub-location was determined in proportion with the total number of households found in each sub-location. Finally, based on the sampling frame of each sub-location, mothers who had delivered within eight months were selected from all the sub-locations using purposive random sampling method. A systematic selection was conducted across every *3rd* household with a random start, where the sampling interval calculated by dividing number of households of the selected sub-location by the sample size allocated to the sub-location. In cases where no eligible candidate was identified in a selected household, the interviewer moved to the next household until an eligible respondent is found.

This being a formative study, the sample size reflected the number of women seeking care from the maternal health care choices in Lunga Lunga without reflecting on a size proportional to the general population.

The sample size was determined using the formulae by Fisher et al (1998).

$$N = \frac{Z^2 pq}{d^2}$$

Z = Standard normal deviate (1.96)

p = Proportion of pregnant women delivering in Health facilities in County (32%)

q = 1- p

d = Degree of (precision) accuracy desired (0.05)

$$N = \frac{(1.96)^2 \times 0.32 \times 0.68}{(0.05)^2}$$

= 333 Respondents

333 respondents were interviewed as calculated above.

Simple verification of authenticity of biological mothers was sought. This is because the main purpose of the study was to get a wide variety of proposed solutions to the existing problem of pregnant women not delivering in hospitals.

Therefore, the technique permits the deliberate selection and inclusion of the targeted respondents.

Methods of Data Collection

The research adopted both qualitative and quantitative techniques of data collection. Emphasis was laid on the qualitative method of data collection. The data collection tools were loaded on Kobo collect and android phones were used to collect the data. The data would automatically synchronize on the cloud platform and later downloaded, coded and captured on a database designed in excel sheet. It was later exported to SPSS V.21 for analysis.

Survey questionnaire

The interviewers administered structured questionnaires where respondents gave either answers or views during the study period. To allow for quantification and qualification of the data collected, the questions in the questionnaires were both open and closed ended (Bernard, 1995). 333 structured interviews were conducted to women with children below eight months using this tool (Appendix 1). The questionnaires yielded information on the demographic characteristics of the respondents, their knowledge and awareness of the maternal healthcare care providers in their area and determinants such as the occupation, distance to healthcare provider, the belief surrounding pregnancy and social support system in maternal healthcare seeking behavior in the study area. The questionnaire was also used to get information on where the expectant mothers seek help when faced with pregnancy problem and the perception and attitude they have towards both formal and informal maternal healthcare providers.

Key informant interviews

Key informants are people believed to be knowledgeable on the topic under investigation (Bernard, 1995). The researcher personally conducted in depth interviews with key informants who included three nurses from Lunga Lunga Sub County Hospital, Mwereni Health Center and Vanga health center, five traditional birth attendants and two mature old mothers. These key informants were purposively selected based on their positions and knowledge in maternal health issues. They were important in giving insights into the role played by the maternal healthcare providers in dealing with the problems of pregnancy, healthcare seeking behavior in pregnancy and healthcare delivery. Issues of cultural practices in the community in relation to pregnancy, the accepted healthcare provider to deal with specific problems of pregnancy, the determinants for the use of maternal healthcare provider and the perception the community members have towards both formal and informal maternal healthcare providers.

Focus Group Discussions

Focus group discussion is a special type of group interview in which a small group discusses ideas, information freely and spontaneously among themselves guided by a moderator (Bernard, 1995).

Three separate Focus Group Discussions was conducted with participants as follows: 8 participants consisting of young mothers between ages 15 – 30, 11 participants consisting of mothers between ages 31 – 45, 9 participants consisting of old mature mothers who had long experience with births. The researcher facilitated each focus group and the proceedings tape-recorded and later transcribed. One research assistant took notes during all the focus group discussion. The discussions we anticipated that they will provide rich qualitative information on perceptions and attitudes of the community members towards both formal and informal maternal healthcare providers and determinants for the use of maternal healthcare providers in the area. An FGD guide for Focus Group Discussion with set of instructions was used. This exercise supported in the verification of information obtained from the structured survey questionnaires.

Data Analysis

Data was analyzed using both qualitative and quantitative methods. The results of community Survey were coded and simple frequency tables generated to summarize the information using Microsoft Excel. Qualitative data were analyzed thematically along the lines of set objectives. This involved reading and reviewing field notes after the process of transcription. Key quotations from the data using informants' own words were incorporated to illustrate the main ideas and to give a detailed picture of the existing maternal healthcare providers in the area, determinants for their use and consequences of the perceptions and attitudes towards both informal and formal maternal healthcare providers.

SPSS version 21.0 was used to analyze the data for compilation of the final study report. Data was summarized using descriptive statistics (frequencies, means and standard deviation). Cross tabulations done to establish relationships between factors and utilization of hospital delivery services using a chi-square test. Factors significant at 0.05 threshold were entered in a multiple logistic regression to identify significant predictors of hospital delivery controlling for confounders. Results were considered significant at 95% confidence level.

The results were presented in form of tables, pie charts and graphs. Qualitative data was analyzed by establishing the common themes as the flow.

III. RESULTS

Socio-Demographic Characteristics of the Study Population

A total of 333 mothers consented and responded to the interviews, translating to 100% response rate. Two hundred and twenty two (66.6%) of the mothers were of the youthful age below 29 years old while 293 (88%) were in marriage unions and more than half 219 (65.8%) were from Islamic religion. Among those that had other children apart from the current delivery, 71 (21.3%) reported to have two.

Among the respondents who took part in the study, only 36(10.8%) had attained secondary level of education. The majority 142(42.6%) had acquired upper primary level while 64(19.2%) had acquired lower primary level of education. Eighty (24%) of the respondents had no formal education while only four (1.2%) of the respondent had attained college or university level of education.

Majority 104 (31.2%) of respondents were subsistence farmers and 146 (43.8%) engaged in other forms of

livelihoods, accounting for more than half of the sample size. Small-scale business accounted for 66(19.8%) of the respondents, fish-mongering 1(0.3%) and lastly, teaching accounted for 7(2.1%). The subsistence farmers majorly depend on produce they obtain from their small gardens such as maize, millet, cassava, beans, vegetables and produce from cattle that they keep such as milk and meat. They live a bit far from the ocean and in most cases they sell their produce to ocean dwellers who spend most of their time fishing in the deep sea. They also keep goats and sheep. Besides, they rear chicken that they may sell for money. The subsistence farmers reported that they get an average of Ksh.1, 500 per month. Table 1 illustrates the results

Table 1: Socio demographic Characteristics of Respondents (N=333)

Participants Characteristics		Frequency(n)	Proportion (%)
Sub-Location	Shimoni	2	0.6
	Vanga	57	17.1
	Malamba	90	27.0
	Mwena	93	27.9
	Mzizima	91	27.3
	Total	**333**	**100.0**
Marital Status	Single	20	6.0
	Married	293	88.0
	Divorced	5	1.5
	Separated	10	3.0
	Widowed	5	1.5
	Total	**333**	**100.0**
Age	10-17 years	5	1.5
	18-24 years	117	35.1
	25-29 years	100	30.0
	30-34 Years	61	18.3
	35-39 Years	36	10.8
	40-44 Years	12	3.6
	45-49 Years	2	.6
	Total	**333**	**100.0**
Highest Level of Education	Lower primary	64	19.2
	Upper primary	142	42.6
	Secondary	36	10.8
	University/College	4	1.2
	Madrassa	7	2.1
	None at all	80	24.0
	Total	**333**	**100.0**
Main Occupation	Agriculturalist	104	31.2
	Livestock keeping	7	2.1
	Merchant and trade	4	1.2
	Worker (County Govt)	2	.6
	Teacher	7	2.1
	Self Employed	62	18.6
	Fishing	1	.3
	Others	146	43.8
	Total	**333**	**100.0**
Monthly Earning	0-500	197	59.2

	501-2,500	47	14.1
	2,501-5,000	54	16.2
	5,001-10,000	19	5.7
	Above 10,000	16	4.8
	Total	**333**	**100.0**
Religion	Muslim	219	65.8
	Christian	108	32.4
	Other	6	1.8
	Total	**333**	**100.0**
Parity	1	68	20.4
	2	71	21.3
	3	59	17.7
	4	39	11.7
	5	46	13.8
	6	27	8.1
	7	12	3.6
	8	5	1.5
	9	5	1.5
	10	1	0.3
	Total	**333**	**100.0**

Maternal Healthcare Providers in Lunga Lunga Sub County

The study identified several players as providers of maternal health services in Lunga Lunga. Mothers sought for Maternal Health Care from all of them concurrently thus 195(58.6%) reported to have sought for care from TBAs, 204(61.3%) from CHVs, 102(30.6%) from Traditional healers, 65(19.5%) from Witch doctors, 329(98.8%) from nurses and Doctors and 81(24.3) from Religious leaders. The researcher sought to know the major maternal healthcare facilities in Lunga Lunga Sub- County where expectant mothers seek healthcare services. These included Lunga Lunga Sub County Hospital, Vanga Health Center and Mwereni Health Centre and other 21 dispensaries. Table 4.2 illustrates the results.

Patterns of Maternal Healthcare-Seeking Behaviour

The study found out that it was common for respondents to use almost all maternal health care providers concurrently. On average, over 50% of the respondents reported that they tried one maternal health care provider for a particular problem, but if they did not succeed, they usually sought available alternatives. Table 2 illustrates the results

Table 2: Maternal healthcare service providers in the study area(N=333)

		Frequency	Proportion (%)
Known MHC service providers in the area	TBAs	195	58.6
	CHVs	204	61.3
	Traditional Healers	102	30.6
	Witch Doctors	65	19.5
	Biomedical Personel	329	98.8
	Religious leaders	81	24.3
Presence of a health clinic in the area?	Yes	322	96.7
	No	11	3.3
Alternatives to clinics (where else do you go if you have a pregnancy health problem?)	TBAs	102	30.6
	CHVs	95	28.5
	Traditional Healers	40	12.0
	Witch Doctors	9	2.7
	Chemist	178	53.5

This implies that expectant mothers in the community did not just rely on one particular maternal healthcare provider. In a focus group discussion held with some discussants in Vanga, one of them recounted that there was a mother who had a problem with delivering. She approached her mother-in-law for assistance at home but was not successful. Since there was a TBA around, she made a final decision to go to the TBA who massaged her and after sometimes, she delivered a baby boy

'*There is a time I had serious abdominal discomfort and in labor as well. I really felt serious pain that attracted the attention of my mother- in –law. She tried to support and help but the condition worsened. We decided to seek for help from a TBA within the village, after a few minutes of massage I smoothly delivered a baby boy'* (**HCW1**)

Perceptions and Attitudes towards Maternal Healthcare Providers

When asked where they sought for maternal health care when they developed abdominal pain and experience labour pain, majority of the respondents 289 (86.8%) and 284 (85.3%) confirmed that they sought for MHC from biomedical personnel respectively. Traditional Birth Attendants also received a bigger share of clients seeking for services on abdominal pain and labour pain 29(8.7) and 41(12.3%) respectively. Table 3 illustrates the results

Table 3: Perceptions and attitudes towards Maternal Healthcare providers

		Frequency(n)	Proportion (%)
When you develop abdominal pain which maternal healthcare provider would you approach?	TBAs	29	8.7
	CHVs	8	2.4
	Traditional Healers	4	1.2
	Witch doctors	1	.3
	Biomedical Personnel	289	86.8
When experiencing labour pain which MHC provider do you approach?	TBAs	41	12.3
	CHVs	5	1.5
	Traditional Healers	2	.6
	Biomedical Personnel	284	85.3
Do you like the Informal MCH giver?	Yes	116	34.8
	No	217	65.2
Do you like formal healthcare?	Yes	326	97.9
	No	7	2.1

The findings from the discussion groups revealed that the mothers had unfavorable perceptions towards maternal healthcare providers in the formal health facilities. They said that at home, one delivers in a familiar environment and may be assisted by a person who she understands and who, in turn understands her. Notably, these are mothers-in-law, mothers who have delivered more than three babies, traditional birth attendants or by oneself. In their view, '*someone they know cannot treat them in a bad manner as opposed to someone they do not know*'. (**HCW 2**)

The respondents reported that in the health facility, the environment is strange and filled with strangers who usually treat one the way they desire. The participants in a focus group discussion at Perani village had a view that in the Duruma community, privacy is of great value to opposite sexes for grown-ups. A man should not see a woman who is not his wife when naked and even her husband should not see her when delivering. In their view, this is the opposite of what takes place at the health facility where men also take part in delivering expectant mothers. This they perceive as exposing their privacy to even a man who might marry their daughter so as to be their in-law. The hospital not only predisposed them to tabooed relations but the study also found out that some nurses in the health facility were rude and harsh to pregnant mothers. In a focus group discussion a respondent reported thus said:

"*I am afraid whenever I think of the nurses who assist mothers with delivery at Mwereni health centre, One day I went to deliver my second born there; I met this harsh nurse who did not spare me, saying that at the time of conception she was not invited neither was she there. Therefore, I should stop making noise. At that time I was feeling pain*" (**HCW 3).**

The discussants expressed reservation with formal healthcare facilities, commenting that they hated dying in the hospital the way their relatives have died in the hands of unfamiliar people and environment, holding that instead, they would rather die at home. Even though the country has made significant strides towards safe motherhood and the reduction of infant and maternal mortality, the respondents still had reservations and expressed their fears over passed experiences including their relatives who passed on when delivering their babies in the health facilities. Non the less, there was consensus that the CHVs and the trained TBAs have from time to time, referred and accompanied expectant mothers to the health facility for delivery. This accounts for 326(97.6) who like the formal maternal health care as pre the table above.

Factors influencing the choice of maternal health service providers

Sub location of residence (P= 0.042), Level of education of the mother (P= 0.006), presence of a health facility closer to the respondents (P= 0.002), distance from the nearest health facility (P= 0.004) and mothers like for the Maternal health service provider were independently significantly associated with choice of place of delivery and maternal health service provider ($p<0.05$). Multiple logistic regression model revealed that controlling for distance from the facility, Mothers education level, Sub location of residence, presence of a health facility in the locality and mothers preference to a particular Maternal health service provider were significant predictors of choice of place of delivery among the study participants ($p<0.05$). Those from Shimoni were less likely to deliver at the hospital as compared to those from Vanga, Mwena, Malamba and Mzizima. Chances of delivering at the health facility increased with a control of all the above factors.

Table 4 illustrates the results

Table 4: Multivariate Logistic regression(POB*MCH Socio-Demographics & Determinants)

	Place of Delivery						
Variable Category	**Home**		**Home/Hospital**		**Hospital**		
	No	**(%)**	**No**	**(%)**	**No**	**(%)**	**P-value**
Sub-Location							
Shimoni	1	0%	0	0%	1	0%	
Vanga	2	1%	8	2%	47	14%	
Malamba	23	7%	15	5%	52	16%	0.042
Mwena	20	6%	16	5%	57	17%	
Mzizima	13	4%	22	7%	55	17%	
Highest level of Education							
Lower primary	10	3%	15	5%	38	11%	
Upper primary	24	7%	17	5%	101	30%	
Secondary	2	1%	4	1%	30	9%	0.006
University/College	0	0%	0	0%	4	1%	
Madrassa	2	1%	2	1%	3	1%	
None at all	21	6%	23	7%	36	11%	
Presence of Health clinic							
Yes	57	17%	61	18%	203	61%	
No	2	1%	0	0%	9	3%	0.002
Distance from Health facility							
0-0.5 Km	10	3%	6	2%	21	6%	
0.5-1 Km	18	5%	22	7%	86	26%	
1-3 Km	15	5%	16	5%	55	17%	0.004
3-5 Km	7	2%	15	5%	16	5%	
Above 5 Km	9	3%	2	1%	34	10%	
Like Informal MHC givers							
Yes	28	8%	27	8%	61	18%	0.015
No	31	9%	34	10%	151	45%	

To quantify the strength of relationships between the variables, the researcher used the following model:

$$Y = \alpha + \beta 1X1+\beta 2X2+ \beta 3X3+\varepsilon$$

Where;

Y = The Place of Birth

a = is a constant is a constant and it is the Y value when all the predictor values X1, X2, X3) are zero,

β1X1+β2X2+ β3X3 = Are constants regression coefficients representing the condition of the Place of Birth to the dependent variable. **X1** = Socio-demographic characteristics; **X2** = Determinants of Maternal Health Care Choices; **X3** = Perceptions towards MCH care **ε**= (Extraneous) error term explaining the variability as a result of other factors not accounted for.

IV. DISCUSSION

Perception and attitudes towards formal and informal healthcare

This study found out that a majority of the mothers resorted to traditional informal healthcare during pregnancy and childbirth before being referred and accompanied to the health facility by the TBAs. This is in agreement with studies, which have also shown that expectant mothers in most of the rural areas in Kenya often resort to traditional medicine and traditional birth attendants when faced with pregnancy problems (Olungah, 2006; Nangendo, 2006; Muga, 2004; Okumu and Gachuki, 1996; Mulemi, 1998; Ouko, 1998). In the study area, the subjects perceive informal maternal health care providers, as a group of caregivers who are always ready to assist expectant mothers any time and for that reason they often use the services of TBAs because of closeness and flexible payment in tandem with findings of Nagendo (2006), Olungah (2007) and Maine (2003)

Expectant mothers perceive home as the best place for delivery because it connects the newborn with the community as most of the rituals conducted to welcome the baby are performed at delivery. A familiar person also attends to the expectant mother. Home is also friendly, as most support required by the delivering mother would be given. The informal maternal health providers treat these mothers with a lot of respect and care and only female helpers are allowed to be present at the place of delivery. This is in contrast to the hospital environs (formal maternal healthcare) where no such rituals are done; moreover, male healthcare givers are the frequent visitors to the female wards. This is a breach to the traditional gender taboos associated with maternity care. The hospital is preferred for difficult deliveries as the locals argued that mothers would be given intravenous drips to add them more energy and occasionally they would be transfused in case of excessive bleeding during delivery.

In the study area, some respondents share the same view by reporting that they did not have to see a healthcare provider, since they could deliver and cut the umbilical cord by themselves. Only in a critical condition could they invite their mothers –in-law or traditional birth attendants or co-wives to assist with the cutting of the umbilical cord or any other assistance. In their view, pregnancy and giving birth is a normal occurrence and should not be medicalized as to warrant attention of a caregiver, a view shared also with Tsui *et al. (*1997) and Shostak (1981). This perspective does not go down well with the safe motherhood initiative, which insists, on a skilled care provider during delivery. The Ministry of Health also recommends for a skilled birth attendance at the health facility however, there are scattered health facility with under –staff personnel who barely get adequate equipment and drugs to work efficiently. When over worked, these personnel, especially nurses and midwives may end up mistreating the expectant mothers hence discouraging them from using the formal caregivers. This is a critical issue that the Ministry of Health should consider while insisting on delivery of expectant mothers in a health care facility, by a skilled caregiver.

The community is inclined more to the informal maternal healthcare provider than the formal one because the former offers an environment and arena where social-cultural interaction is inevitable. Any program aimed at improving the maternal health should consider the perception the local community has towards both informal and formal healthcare provider.

V. SUMMARY

Maternal healthcare choices formed the basis of this study, whose objectives included the identification and description of maternal healthcare providers in the area, the examinations of determinants for maternal healthcare choices and the exploration of the perceptions and attitudes towards maternal healthcare providers. Maternal healthcare is crucial to the Duruma community of Lunga Lunga Sub County.

The findings indicate that there are twenty-four modern healthcare facilities, which include Lunga Lunga Sub County Hospital, Vanga Health Centre, Mwereni Health Center and other twenty-one dispensaries across the sub county. These healthcare facilities are however, underutilized for a number of reasons, especially their proximity and insensitivity. The study explored the perception of expectant mothers towards both formal and informal maternal healthcare providers. It was found out that the expectant mothers in the study area perceive the informal maternal healthcare providers as the group of healers who understand their problems better and are ready to provide them with needed assistance. They argued that, as opposed to the harsh healthcare providers alongside strange environment to which they are exposed, informal maternal healthcare providers are friendlier and assist them in the environment in which they are very much familiar.

VI. CONCLUSION

Maternal healthcare as a global problem requires immediate attention to safeguard the life of the mother and the unborn child. Clear knowledge of the existing maternal healthcare providers and the determinants of their choices are crucial to the improvement of healthcare services in any locality. All the maternal healthcare providers in Lunga Lunga Sub County play a pivotal role in addressing the ever rising maternal issues such as abdominal pain, miscarriages, prolonged labour, hemorrhages, unsafe induced abortion and correcting fertility. However, existing misconceptions are a serious hindrance to their relative contributions in this field.

Maternal health issues should be approached holistically, bearing in mind that inclusion of traditional healers, traditional birth attendants, faith healers, mothers-in-law, friends, neighbors and biomedical health practitioners may significantly reduce the high rate of maternal and infant mortalities. It should also be borne in mind that the factors influencing the use of these maternal healthcare providers should be appropriately addressed to facilitate improved maternal healthcare provision in the sub county and other rural localities in the country.

Recommendations

The study makes a number of recommendations.

1. The government, in liaison with the local community and NGOs, should make available accessible, well-equipped health-care facilities and qualified personnel to manage pregnancy problems in the

rural areas in the country.

2. The public health promotion department should sensitize the community on the importance of seeking appropriate and immediate health intervention to safeguard the lives of its members.
3. Expectant mothers should be discouraged from delivering alone at home in the absence of an expert maternal healthcare provider by the CHVs. Members of the social support group should be sensitized to enable them to provide essential advice to expectant mothers on appropriate health-care seeking manners.
4. Health education to the community on the importance of conducting their deliveries in health facilities, where skilled personnel will attend to them should be intensified and made more effective by the Public Health department.

Recommendation on further study

Future studies should be carried out on how best the informal birth attendants and the formal health providers can work in harmony in order to complement the services and encourage locals to patronize formal health facilities. This should help in reducing complications occasioned by lack of adequate maternal healthcare.

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