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WOMEN'S PERSISTENT UTILISATION OF UNSKILLED BIRTH ATTENDANTS IN KAKAMEGA COUNTY, KENYA
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WOMEN'S PERSISTENT UTILISATION OF UNSKILLED BIRTH ATTENDANTS IN KAKAMEGA COUNTY, KENYA

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ABSTRACT

Background: **Minority of births in sub-Saharan Africa are conducted by skilled birth attendants. Having the highest world maternal mortality ratios and most deaths being associated with lack of trained supervision at delivery. Changing delivery practices is a major priority in this region.**
Objective: **To determine the factors that contribute to persistent utilisation of unskilled birth attendance by women in Kakamega County.**
Design: **A descriptive cross-sectional study .**
Setting: **Kakamega County, Kenya**
Subjects: **Post-natal mothers with children aged less than six months who delivered without skilled attendance.**
Results: **Antenatal attendance rate of 92.7% while proportion of skilled birth attendance was at 48.6%. The following factors were found to influence utilisation of UBAs in the** *Study area:* **age (X2=8.65, df=3, P= 0.013), occupation (X2=10.04, df=3, P=0.006), religion (X2=19.73, df=5, P=0.0001), monthly income (X2=7.59, df=2, P=0.002), marital status (X2=10.10424, df=2, P=0.005) and education level (X2=9.472, df=4, P=0.002). Negative attitude of healthcare providers, socio-cultural practices and insecurity also enhanced utilisation of unskilled birth attendance.**
Conclusion: **Birth preparedness should be advocated for every pregnant woman and health facilities to address the discrepancy between antenatal attendance and delivery by skilled birth attendance. We hope that the information generated from this study will be used by the policy makers leading to appropriate interventions or strategies which will reduce the number of home deliveries and maternal deaths.**

INTRODUCTION

Globally utilisation of skilled birth attendance is at 70%, in Africa it is at 50% (1). In Kenya it is at 61% (2). Several initiatives have been taken to reduce maternal deaths and improve maternal health, including the Nairobi Safe Motherhood Conference of 1987 (3). The Nairobi conference led to the establishment of the Safe Motherhood Initiative (SMI). The specific components of this initiative include: provision of antenatal care (ANC), skilled assistance for normal deliveries, appropriate referral for women with obstetric complications, post-natal care, family planning and other reproductive health services. Maternal health is further emphasized in the International Conference on population and Development (ICPD) in 1994 (4). Finally, maternal health is reinforced in the United Nations Millennium Summit of 2000, when it was included as one of the Millennium Development Goals (MDGs). The goal, which has the aim to improve maternal health, includes two targets: reduce maternal mortality ratio by three quarters between 1990 and 2015 and achieve universal access to reproductive health by 2015. The MDGs are now to be realised by the Sustainable Development Goals (SDGs) of which SDG 3 is to ensure healthy lives and promote well-being profile at all ages including reducing maternal mortalities to less than 70/100,000 live births by the year 2030 (5). Proportion of births attended by skilled birth attendants (SBAs) and coverage of ANC are the two main indicators to measure these targets (6). The presence of an SBA at delivery, either at home or at a health facility has been strongly emphasized in all the international initiatives on maternal health.

In 2013, an estimated 289, 000 women died worldwide, down from 523,000 in 1990 which amounts to a 45% drop (7). Despite the drop, approximately 800 women die every day from

preventable causes related to pregnancy and childbirth (8). Women in sub-Saharan Africa still face limited access to skilled delivery, especially in the rural areas (9). Maternal mortality is higher in women living in rural areas and among poorer communities and most could have been prevented. Skilled care before, during and after childbirth can save the lives of women and newborn babies. The high number of maternal deaths in some areas of the world reflects inequities in access to health services, and highlights the gap between rich and poor. Almost all deaths, 99% occur in developing countries. More than half of these deaths occur in sub-Saharan Africa. Many developing nations lack adequate health care and family planning, and women have minimal access to skilled labor and emergency care (10).

The maternal and newborn morbidity and mortality rates in Kenya are unacceptably high. While global maternal deaths were to cut almost by half between 1990 and 2010, Kenya's maternal mortality ratio declined only slightly during the same period, going from 400 per 100,000 births in 1990 to 360 per 100,000 births in 2010. Every two hours in Kenya, a woman dies during pregnancy or childbirth (11).

According to KDHS 2014, 61% of pregnant women are delivered by a skilled birth attendant while a significant proportion deliver at home under the care of unskilled persons such as the Traditional Birth Attendants who are unable to address any of the 5 major causes of maternal mortality. Skilled delivery in Kakamega County is at 48.6% (2). The target set by Kenya Sessional Paper No 1 is to increase skilled attendance at delivery from 44% in 2003 to 90% by the year 2015. The Government of Kenya launched a Maternal and Newborn Health (MNH) Road Map in August 2010 (UNDP, 2012). The RMNCAH investment framework will help achieve maternal health SDGs by improving coverage of skilled birth attendance to 87% by 2020 (12). The goal is to accelerate the reduction of maternal and newborn morbidity and mortality towards the achievement of the SDGs by ensuring healthy lives and promoting wellbeing at all levels including global reduction of MMR to less than 70/100,000 live births by 2030 (7).

MATERIALS AND METHODS

Study Design: This was a descriptive cross-sectional study. The study design employed both quantitative approaches through the use of an interviewer- administered questionnaire and qualitative approaches through the use of Focused Group Discussions (FGDs).

Dependent Variable: *Assistance at delivery*: The study targeted post-natal mothers with children aged six months and below who did not deliver with assistance of a skilled attendant with the aim of establishing strategies that can scale up utilisation of skilled birth attendance. This was achieved through interviews and FGDs.

Independent Variables: Based on Andersen's behavioral model on the use of health services, independent variables were demographic, socio-cultural and knowledge factors of the respondents. Health system factors acted as intervening or mediating variables since they have the potential to hinder utilisation of skilled attendance at delivery.

Study Area: Kakamega County, located in the Western part of Kenya, about 400 kilometers from Nairobi, the capital city of Kenya. The county has a total population of 1,823,108, with a female population of 943,760 and covers an area of 3,244.9 km^2. The population density is 572 people per km^2. 52% of the County's population lives below the poverty line meaning that people affected cannot afford basic necessities like food, shelter, and clothing (KCFS, 2012). Four (4) sub counties of the twelve in Kakamega County were randomly selected. Kakamega County is generally rural and the people are poor, largely relying on agriculture. The cash crop is mainly sugarcane and food crops include maize, beans, groundnuts, sweet potatoes, cassava, millet, and peas. Most people are Christians of the catholic faith.

The Crude Birth Rate in the County is 49 per 1, 000, and the Crude Death Rate (CDR) is 13 per 1000. The maternal mortality ratio is 800 deaths per 100,000 live births, far worse than the national rate of 400 deaths per 100,000 live births. The neonatal mortality rate stands at 49 deaths per 1000 live births. Utilisation of skilled birth attendance is at 48.6%. Women of the reproductive age comprise of 22% of the female population which is 207,627. Estimated births are at 4.4% of the population for women in the reproductive age hence the target population will be 9,136.

Study Population: The study population comprised of post-natal mothers in Kakamega County (study area) who had delivered at home within the last six months preceding the study and residing in the study area as well as key informants.

Inclusion Criteria: Post-natal mothers residing in the randomly selected Sub Counties within the last six months, delivered at home in the last six months preceding the study and willing to participate in the study formed the study respondents.

Exclusion Criteria: Women who were ill or with sick children and women who did not consent to the study were excluded.

Sampling Techniques: Stratified sampling was used in this study. This helped to select four sub-counties from the twelve in the County, then random sampling for sub-locations in each selected sub county, followed by random sampling of villages in each selected sub-location. Snowball sampling was used to identify women that delivered without skilled birth attendance within the preceding 6 months. All

these women were approached for recruitment as participants in the study. Purposive sampling was used to select 8 key informants comprising of a CHV and CHEW from each of the four randomly selected Sub-Counties and a group of 8 mothers to participate in the FGD, selection of mothers was based on those who had more than three home deliveries. These two groups were typical individuals from the spectrum in which the study was interested, they were key in providing the required information.

Sample Size Determination: The target population size is less than 10,000 thus the formula below was used to determine the sample size.

$$n = \frac{z^2pq}{d^2}$$

n= the desired sample size

z= the standard normal deviate, which corresponds to 95% confidence level (1.96).

p= the proportion in the target population estimated to have the particular characteristic being studied. In this study, p was the proportion of women who do not utilise skilled birth attendance which was estimated at 51.4%. Hence P was 0.514.

q= 1.0- p

d= degree of accuracy desired, usually set at 0.05

$\frac{1.96^2 \times 0.514 \times 0.486}{0.05^2} = 383.9$. Hence the sample size was 384.

Adjusting for a smaller sample size and reducing the sampling error margin, the second formula was used as follows:

nf= the desired sample size (when the population is less than 10,000)

N= the estimate of the target population size

$$nf = \frac{n}{[1+(n/N)]}$$

$$nf = \frac{384}{[1+(384/9136)]} = 368.51093$$ Hence the sample size was 369

One focused group discussion comprising of eight mothers, two from each Sub County representing the four randomly selected Sub Counties for the mothers in the study population who did not take part in answering the questionnaire and had delivered at home three times or more was conducted. Two key informants per Sub County in the four selected sub counties which totaled to 8 were interviewed comprising Community Health Volunteers and Community Health Extension Workers.

Research Instruments: Questionnaires were formulated to collect demographic data, socio-economic factors, cultural factors, health system factors, and decision making abilities of the respondents regarding utilisation of SBAs. This was guided by the conceptual framework and the study objectives. Interview guide was used to collect information on each key informant. The research instruments were prepared in English.

Pretesting of Study Tools: Pre-testing of the research tools was conducted in Vihiga County, which is an equivalent of Kakamega County, of which 10% of the sample size was selected for pretesting. Vihiga County has similar population and number of health facilities. This helped in testing difficulty in understanding the questions. Unclear items were reviewed, reconstructed and adjustments made to the final questionnaire.

Validity: Validity of the research instruments was ensured through the use of a well-designed and pre-tested questionnaire together with the research assistants. The questionnaires were designed in relation to the conceptual framework and the research objectives. Data was checked for completeness and accuracy every day they are submitted, any blanks, misplacement of information and number of questionnaires per day. Questionnaires were numbered in a sequential order before going to the field and confirmed on coming back.

Reliability: Reliability of the instrument, observer, and subject variation was evaluated through cognitive testing with participants drawn from the study population. Questionnaires were adapted based on the outcome of the cognitive interview.

Variation was reduced by using standardized questionnaires which were asked through structured interviews to avoid placing respondent's own interpretation on the questions, appropriate selection of interviewers, intensive training periods for all observers and interviewers through repeat measurements on subjects similar to those who were measured in the study, and supervision as well as periodic checks on the work of interviewers.

Data Collection Techniques: Data collection was carried out by research assistants who were CHEWs as they understood the community and the research area more. Both structured and unstructured interviews were used. In structured interviews, a list of questions were asked and the answers recorded on a standardized schedule and the data expressed numerically. The researcher employed an interview guide to collect information from the key informants pertaining uptake of services, human resource, home and hospital deliveries. FGDs were used to get the overall picture of the persistent utilisation of UBAs. Open ended questions in the FGD allowed for participants' free expression of their feelings, while the face-to-face encounters also allowed for probing and clarifications of any difficult questions. Group interview had 8 participants led by a moderator with an FGD guide. Qualitative data was recorded in a narrative form

Data Analysis and Presentation: Data analysis

was performed using SPSS v. 20.0, a statistical computer package. Chi square (X^2) test was used to assess differentials existing between various characteristics of respondents. Cross tabulation was used to measure association between the study variables. Odds ratio to test relationship between the dependent and independent variables under study. 95% confidence intervals (C.I) were calculated to assess the relationship between the independent and dependent variables under study. P-values of less than 0.05 were considered statistically significant.

Both quantitative and qualitative methods of analysis were to analyze data. Descriptive statistics namely frequencies, percentages and means were used. Results were presented in the form of bar graphs, tables, frequencies and percentages. Qualitative data was described, summarized and interpreted for each key informant and FGD. It was edited for grammar and in line with the interview guide. Similar responses were coded. Data with similar information were summarized together under the same theme, cleaned and interpreted. It was then reported descriptively paying attention to the issues and matters mentioned by the majority of the informants and capturing any unique experiences reported.

Ethical Considerations: Ethical approval was sought from Kenyatta University Ethics and Research Committee. Permission to carry out this study was sought from The National Commission for Science and Technology, Ministry of Education Science and Technology, Ministry of Interior and Co-ordination of National Government and area chiefs. Informed consent was sort from the participating respondents and participation in the study was voluntary and all participating respondents were free to withdraw at any time without penalty and loss of privileges. Anonymity, confidentiality was safeguarded. All community entry protocols were observed from the Sub County Commissioners to the respondents at the household level.

RESULTS

The total number of mothers interviewed was 369. They were interviewed on their age, marital status, education level, religion, occupation, monthly income and age at first birth. The mean age of respondents was 22 ± 4.1 years ranging from 15 to 49 years age group. In the range of 15-49 years age group, majority of the women were aged 20-29 years at 55.6% (205) followed by 27.9% (103) in the 30-39 age group. Respondents aged 15-19 years were 13.6% (50) while those aged 40-49 years were 3.0% (11). Majority of the women, 72.1% (266) had acquired primary level of education with reduced numbers at tertiary level of education at 1.9% (7). The respondents who had acquired secondary level of education were 15.4% (57), those with no form of education were 6.2% (23) while those with preschool education were at 4.3% (16). Majority of the respondents were married, 82.4% (304), 14.1% (52) were single while 3.5% (13) had separated with their husbands. Respondents practicing the Protestant faith were 58.8% (217) while 22% (81) belonged to the catholic faith. Muslims were 9.8% (36) of the total respondents and traditionalists were 0.3% (1). Majority of the respondents were unemployed at 67.2% (248), those who were employed were 3.3% (12), self-employed were 24.1% (89) and casual laborers were 5.4% (20).

Majority of the women had their first child before the age of 20 years, 66.4% (64.2%) followed by 20-29 age group 31.7% (117). Only 0.8% (3) of the respondents had their first child after the age of 30 years. 12 respondents did not know their age at first birth. The median age at first birth was 17 ± 2.3 years. The mean number of children by the respondents was 3 (Table 1).

Table 1
Socio-Demographic Characteristics of the Respondents

Independent variables	Frequency n= 369	Percentage (%)
Age of respondents	Mean age = 22±4.1	
15-19	50	13.6
20-29	205	55.6
30-39	103	27.9
40-49	11	3.0
Marital Status		
Married	304	82.4
Single	52	14.1
Divorced	13	3.5
Education Level		
None	23	6.2
Pre-school	16	4.3
Primary	266	72.1
Secondary	57	15.4
Tertiary (college/university)	7	1.9
Religion		
Protestant	217	58.8
Adventist	11	3.0
Catholic	81	22.0
Muslim	36	9.8
Traditionalist	1	0.3
Others	23	6.2
Occupation		
Employed	12	3.3
Self employed	89	24.1
Not employed	248	67.2
Casual laborer	20	5.4
Monthly income		
• <5,000	277	75.06
• 6,000 - 10,000	15	4.06
• >10,000	4	1.08
• None	73	19.8
	Mean income = Ksh.5,220	
Age at First Birth		
• 15-19 years	237	64.2
• 20-29 years	117	31.7
• >30 years	03	0.81
• Unknown	12	3.3

The respondents resided in rural settings. Majority, 75.06% (277) of the respondents' monthly income was less than Kshs.5000, 4.06% (15) of respondents earning between Kshs. 5000- 10,000, 1.08% (4) of the respondents earning more than Kshs.10,000 per month as they had no gainful employment. In addition, about 19.8% (73) of the respondents had no source of income (Figure 1).

The respondents were interviewed on various aspects on the level of knowledge on pregnancy, labor and delivery, these included antenatal care services offered to the respondents, knowledge on danger signs during pregnancy, labor and delivery, knowledge on EDD, importance of Individual Birth Plan (IBP) and importance of hospital delivery.

Respondents Level of Knowledge on Pregnancy

Various aspects of antenatal care were interviewed on to assess whether the respondents had knowledge. These included services offered at ANC, knowledge on danger signs during pregnancy, knowledge on EDD, importance of Individual Birth Plan (IBP) and importance of hospital delivery.

Majority 92.7% (342) of the respondents had attended ANC in the last pregnancy and they had knowledge on the services and information provided by the health care providers at ANC which included EDD, Iron and folate supplementation to prevent anaemia 85.7% (293), 82.2% (281) had knowledge about IPT and LLITN to prevent malaria/ anaemia and healthy nutrition 52.6% (180). Counselling and health promotion on EMTCT of HIV/AIDS was at 46.8% (160) tetanus toxoid 68.4% (237), ANC profile 49.4% (169), rest and hygiene 43.9% (150), newborn care 41.2% (141) and Health promotion on family planning and deworming were rated low 34.8% (119) and 31.6% (108) respectively (Table 2).

Figure 1
Monthly income of the respondents

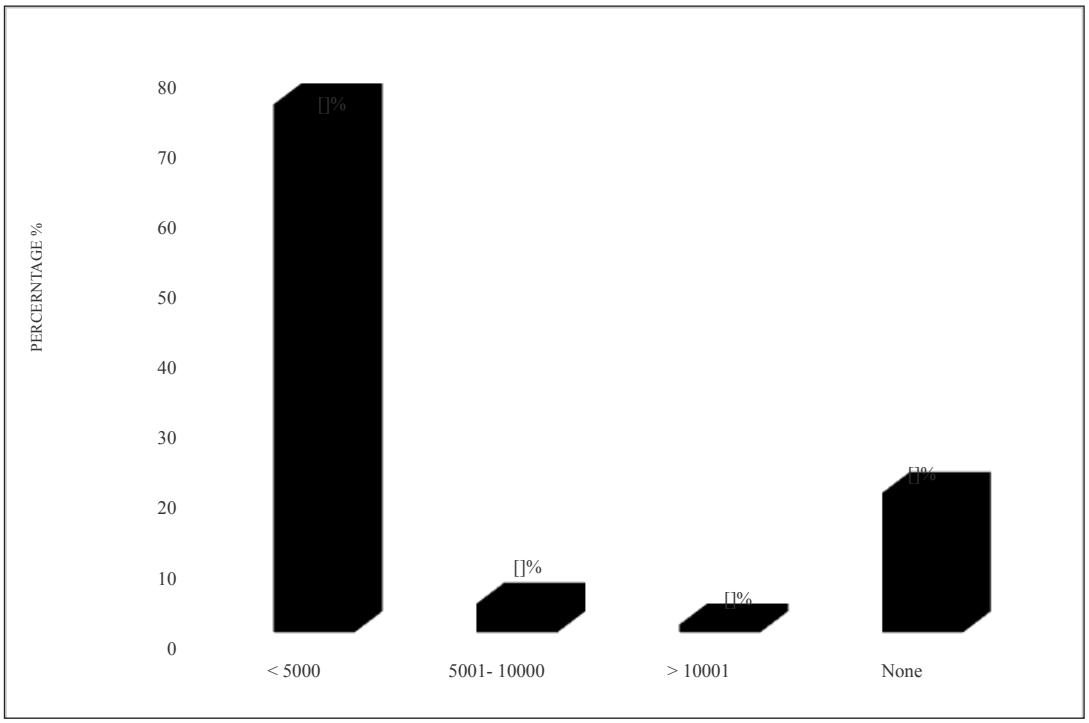

Table 2
Respondents Knowledge on Services and Information Provided at ANC Clinic.

Knowledge on Services and Information provided at ANC

Services and Information Provided at ANC	Frequency (N=342)	Percentage (%)
Health Nutrition	180	52.6
EMTCT of HIV / AIDS	160	46.8
Tetanus Toxoid	237	68.4
IFAs	293	85.7
IPT & LLITN	281	82.2
Deworming	108	31.6
Family Planning	119	34.8
Newborn Care	141	41.2
Rest and Hygiene	150	43.9
ANC Profile	169	49.4
Told EDD	319	93.3

Higher number of respondents reported to have knowledge on danger signs during pregnancy at 80.5% (297). Among the respondents who had knowledge on danger signs during pregnancy, vaginal bleeding was the commonly known danger sign at 58.2% (173). Other danger signs during delivery known to respondents were malaria in pregnancy at 18.2% (54), lower abdominal pain at 31.6% (94), reduced fetal movements at 5.7% (17), difficulty in breathing at 3.4% (10), high blood pressure at 1.7% (5), severe headache at 35.7% (106), jaundice at 5.4% (16) and anemia at 11.4% (34) (Table 3).

Table 3
Respondents Knowledge on Danger Signs During Pregnancy

Danger signs	**Number of Respondents who mentioned them**	**Percentage (%)**
Malaria in pregnancy	54	18.2
Lower abdominal pain	94	31.6
Reduced fetal movement	17	5.7
Difficulty in breathing	10	3.4
Vaginal bleeding	173	58.2
High Blood Pressure	5	1.7
Severe headache	106	35.7
Jaundice	16	5.4
Anaemia	34	11.4

Findings on IBP indicated that majority of the respondents 87% (321) had some idea on individual birth plan with all of them pointing out the need for a decision maker in case of an emergency or choice of place of delivery. There was inadequate knowledge on other aspects of the individual birth plan that included preparation of mother-baby package 26.6% (98), identification of place of delivery 32% (118), setting aside money in preparation for delivery or emergency 29.5% (109), identification of a birth partner/companion 5.96% (22) and preparation of a transport plan 23.3% (86).

The study showed that the most influential decision makers during emergency cases or choosing an appropriate place for labor and delivery were husbands at 64.2% (237), followed by self 21.4% (79), mother in law 13.6% (50) and others (relative, CHV,TBA) at 0.8% (3) (Table 4).

during labour and delivery, they prefer squatting on the floor which is not allowed in hospital and that is why they prefer delivering at home.

Another CHEW reported that some TBAs hold onto the mothers when they go to them early for labour and delivery instead of referring them to hospital immediately. Their aim being to wait till it is at night so that they can conduct the delivery and give an excuse that it was late in the night. They do this for a fee from the mothers.

Key informants stressed on the importance of sensitizing community members on Individual birth plan and active male involvement on issues to do with pregnancy, labour and delivery as a strategy in scaling up utilisation of skilled birth attendance. *"We would like them to have individual birth plans. I know there are some cultural issues involved that make them not adhere to it such as one cannot prepare for a baby who is not yet born as this could lead to intrauterine fetal death.*

Table 4
Respondents Knowledge on Birth Preparedness and Decision Maker on Choice of Place of Delivery.

Individual Birth Plan	Frequency	Percentage (%)
Identification of a decision maker	321	87
Identification of place of delivery	118	32
Setting aside money in preparation for delivery	109	29.5
Preparation of a Transport plan	86	23.3
Identification of a Birth partner/companion	22	5.96
Preparation of mother-baby package	98	26.6
Decision Maker on Choice of Place of Delivery	**Frequency**	**Percentage (%)**
Husband	237	64.2
Self	79	21.4
Mother in law	50	13.6
Others (relative, CHV, TBA)	3	0.8

The key informants reported that there was poor adherence to the Individual Birth Plan. Most of them did not prepare for delivery especially buying baby's clothes saying that clothes can never be bought before the baby is born: *"usikate kanzu kabla mtoto hajaja."* CHV Mumias West Sub County. *Mmmm as other participants seconded* this point. Buying clothes before the baby is born may lead to intrauterine fetal death. This makes them to shy away from hospital since the health workers become harsh when they go to hospital for delivery without baby items. They also do not like the position of lying on hospital beds

These myths and beliefs can be done away with through continuous Behavior Change Communication. Partners should also be actively involved through formation of father to father support groups. This can improve utilisation of skilled birth attendance." CHEW from Matungu Sub County.

In addition the Community Health Volunteers reported that husbands and significant others do not want to hear anything to do with hospital services. Some said they stopped utilizing government services in their homes long time ago. Government officers go to them with health messages then make them to

sign forms for payment but they never get the money and they feel like they are using their names to enrich themselves. Matungu Sub County CHVs said, *"Most of these women respect their husbands and therefore must listen to the voices of their husbands. Some women's faith does not allow them to utilise modern medicine and hence they can never go to hospital for delivery or any other service. They believe that prayer conquers it all. It can even reduce complications during labour and delivery and this leads to maternal and newborn deaths."*

Antenatal care attendance was high in the study area with majority 92.7% (342) of the respondents interviewed reporting to have attended at least one ANC clinic during their most recent pregnancy. Only 7.3% (27) of the study respondents reported not to have attended ANC clinic. This coincides with the adequate level of knowledge on danger signs during pregnancy and knowledge on EDD. In this study, 43% (147) of the respondents reported having made at least four antenatal care visits during their most recent pregnancy while 57% (195) made less than four ANC visits. ANC (Table5).

Consequently, it was noted that *"old women in the communities, commonly called nyanyas, tell mothers that they have experience in giving birth. They even used to give birth in the bush and nothing used to happen."* This makes women to buy that and hence delivering in their homes. Also, women in the FGDs said their husbands do not want them to go to hospital because they are going to expose their HIV status and they do not want their status to be known. One of the CHEWs said that men fear being tested for HIV/AIDS and hence do not advocate for their wives to go to a health facility for services. Some may escort their wives to the facility than remain outside the gate for fear of being tested. Since they are the decision makers, they opt for home delivery.

Knowledge of Respondents on Danger Signs after Delivery: Twenty tow per cent (81) of the respondents had knowledge on danger signs after delivery with retained placenta being the most common known danger sign at 46.9% (38). Other danger signs included anemia 34.6% (28), birth asphyxia 33.3% (0) (Table 6).

Table 5
Respondents ANC Characteristics that Determined Knowledge

Independent Variables	Frequency (N=369) No	Percentage (%)
Antenatal Attendance		
• Attended ANC	342	92.7
• Not attended ANC	27	7.3
No. of ANC visits in pregnancy		
• < 4		
• 4 ANC Visits	195	57
	147	43

20.9% (77) of the respondents had knowledge on danger signs during labour and delivery hence a declining trend on the level of awareness on danger signs during labour and delivery. Among those who had knowledge on danger signs during labour and delivery, prolonged/obstructed labour was most known to the respondents at 57.1% (44). The level of knowledge on other danger signs were as follows, anemia 39% (30), obstetric hemorrhage 31.2 (24), malpresentation 10.4% (8), suspected maternal oliguria 9% (7), pre-eclampsia/eclampsia 3.9% (3), respiratory distress 3.9% (3), hypovolemic shock 1.3% (1), unconsciousness 1.3% (1) and jaundice 0% (27), Severe vaginal/cervical tear 27.2% (22), post-partum hemorrhage 14.8% (12), retained placental segments 11.1% (9), hypovolemic shock 9.9% (8), sepsis/severe systemic infection 3.7% (3), infection 2.5% (2), puerperal sepsis 2.5% (2) and sore nipples 8.6% (7) (Table 7).

*"Our parents delivered at home and never got any complications. Infact it is those who go hospital for delivery that experience complications after delivery. My neighbor delivered in hospital two years ago and is having backache to date."*FGD Participant from Mumias West Sub County.

Table 6
Respondents Knowledge on Danger Signs During Labour and Delivery

Danger Signs During Labour and Delivery as mentioned by Respondents	Number of Respondents	Percentage (%)
Suspected maternal oliguria	7	9
Obstetric haemorrhage	24	31.2
Prolonged/obstructed labour	44	57.1
Malpresentation	8	10.4
Pre-eclampsia/Eclampsia	3	3.9
Jaundice	0	0
Respiratory distress	3	3.9
Hypovolaemic shock	1	1.3
Anaemia	30	39
Unconciousness	1	1.3

Respondents Knowledge on Danger Signs after Delivery

Danger Signs after Delivery as Mentioned by Respondents	Number of Respondents	Percentage (%)
	12	
Postpartum haemorhage	38	14.8
Retained Placenta	27	46.9
Birth Asphyxia	22	33.3
Severe vaginal/cervical tear	3	27.2
Septic/severe systemic infection	2	3.7
Puerperial sepsis	8	2.5
Hypovolaemic shock	7	9.9
Sore nipples	9	8.6
Retained placental segments	28	11.1
Anaemia		34.6

Socio-Cultural Factors Propelling women towards Seeking Unskilled Birth Attendance during Delivery:

The study identified factors that propel women towards utilisation of unskilled birth attendance during delivery. One of the factors was the support from partners/ significant others. Majority of the respondents reported to have received support from partner or significant others 88.9% (328) while 11.1% (41) reported to have not received any support from partner or significant others.

On marital status, 96.7% (294) of the respondents who were married received support from partner while 3.3% (10) received support from significant others. Among the respondents who were single 74.85% (41) received support from significant others.

Divorced respondents did not receive any support from significant others. On educational level, 82.6% (19) of respondents who had no form of education received support from partner while 17.4% (4) received support from significant others. Respondents with primary level of education received support from partners at 87.97% (234) and those who received support from significant others was at 12.03% (32). All respondents with secondary and tertiary levels of education received support from partner at 100% (6) (Table 4.8).

Key informants reported that TBAs do not allow women to go to a healthy facility since they prefer to help the women deliver as a source of income. CHEWs reported that some TBAs hold onto the mothers when they go to them early for labour and delivery instead of referring them to hospital immediately. Their aim being to wait till it is at night so that they can conduct the delivery and give an excuse that it was late in the night. They do this for a fee from the mothers.

A CHV from Navakholo Sub County said that there are some communities where it is believed that the placenta must be buried at home. *"The placenta is believed to be the main body and by burying it outside, it means that the child was brought home without her body and this is bad omen and may affect the growth of the child hence giving preference to home delivery."*

The issue of initiating breastfeeding within one hour after delivery also curtails mothers from utilizing skilled birth attendance. *"I had an issue with a mother who came to deliver in my health facility with the mother in-law and they had some herbs (manyasi), after attending to the mother and baby, I told her to start breastfeeding but she was adamant. The mother in law stood there quiet not even attempting to encourage the mother to breastfeed. I decided to ask if there was a problem and she frankly told me that she had some herbs that the mother must bath with before breastfeeding the baby and this is a family ritual. This is one of those things that make them to deliver at home."* CHEW from Matungu Sub County.

Table 7
Factors Influencing Receipt of Support from the Community by the Respondents

Respondents who Received Support	
Yes (%)	No (%)
328 (89%)	41 (11.1%)

Source of Support According to Marital Status and Education Level		
	Partners (%)	Significant Others (%)
MARITAL STATUS:		
Married	294 (96.7%)	10 (3.3%)
Single	00	41 (74.85%)
Divorced	00	00
EDUCATION LEVEL (Respondents):		
None	19 (82.6%)	04 (17.4%)
Pre-school	16 (100%)	00
Primary	234 (87.97%)	32 (12.03%)
Secondary	52 (96.3%)	02 (3.7)
Tertiary	06 (100%)	00
Other	01 (100%)	00

Participants were interviewed on the distance to the nearest health facility, their rating of health facility staff in terms of service delivery, availability of service, availability of 24 hour service and availability of human resource, equipment and supplies. Most of the clients resided within 5-10 km radius 68.8% (254) to the health facility, 26.3% (97) resided below 5 km radius to the nearest health facility while 3.3% (12) resided at a radius between 10-25km radius and 1.6% (6) resided at a radius exceeding 25 km to the nearest health facility. The perception of health facility staff by the respondents was mostly bad 43.6% (161), closely followed by good perception 37.9% (140). Those who did know the attitude of staff were 18.42% (68) (Table 8). A CHEW reported that community members say that distance to the health facilities is long and this makes mothers to deliver at home. Mothers do not check their EDD from the mother child booklet and hence when due they delay visiting a health facility. This was confirmed by CHEW from Navakholo Sub County, who stated that they delay coming to hospital when labour commences and end up delivering at home or on the road. When asked to justify they say they forgot the date of delivery, they did not know if it was labour, distance to the health facility is too long or it was at night and it is risky since they may be attacked by robbers.

Awareness by respondents on availability of maternity services at the nearest health facility were as follows, 45.8% (169) said services were not available while 36.04% (133) said services were not available and 18.15% (67) did not know if services were available. Most respondents said that the nearest health facility did not provide 24 hour service 66.9% (247), while 26.3% (97) said there was 24 hour service and 6.8% (25) did not know if the nearest health facility provided 24 hour service. Respondents were aware that the nearest health facility had adequate human resource, equipment and supplies 80.2% (296), 3.5% (13) said there were no adequate equipment and supplies and 15.17% (56) did not know if the nearest health facility had adequate human resource, equipment and supplies (Table 9).

Table 8
Respondents' Information on Health System factors Hindering Utilisation of Skilled Attendance during Delivery.

Variable	Distribution of study group (N=369)	Percentage (%)
Distance to health facility		
• <5km	97	26.3
• 5-10km	254	68.8
• 10-25km	12	3.3
• >25km	6	1.6
Perception of health facility staff by the respondents		
• Good	140	37.9
• Bad	161	43.6
• Don't know	68	18.42
Availability of service		
• Yes	133	36.04
• No	169	45.8
• Don't know	67	18.15
Availability of 24 hour service		
• Yes	97	26.3
• No	247	66.9
• Don't know	25	6.8
Availability of equipment and supplies		
• Yes	296	80.2
• No	13	3.5
• Don't know	56	15.17

A CHV reported that some mothers preferred Traditional Birth Attendants since they can help them much better than a doctor. They are always there and very tender. *"Hospital staff are very harsh, some of them beat mothers and that is why they prefer going to a mkunga, health facilities do not also offer 24 hour service and some health workers are quick to refer mothers for caesarian section."* CHV from Lurambi Sub County. Also, poor attitude amongst health providers contributes to poor utilisation of skilled birth attendance. Most mothers in the FGD said that health workers are very harsh to them and this keeps them off health facilities. The attitude of women towards health providers is another hindrance for women to go to deliver from hospital. FGD participant said that she wanted to deliver in hospital but a friend told her that the nurses are very harsh and that they even beat patients. *"They just look at you while suffering and no one cares. The way other women have been treated scares us. When one delays to give birth they take her for operation. When a mother disturbs during labour, she is taken for operation. We also fear male doctors when they help us to deliver since it is shameful. Laughter from participants. These things make us to prefer delivering at home."* FGD participant. Most participants also said that they deliver at home because labour usually commences at night and they cannot get means to hospital since their husbands do not support them. They say that they have low income so do not have money to take them for hospital delivery.

They sometimes fear expenses. *"People used to tell me that if you go to deliver in hospital then you have to sell your land so as to clear the hospital bill. The doctors want to take us for operation even when we can deliver normally so that we pay a lot of money and so I cannot deliver in the health facility."* FGD participant.

Most FGD participants showed optimism by saying that they will start delivering in hospital since they are now realising the importance of skilled birth attendance. One participant said that when one gives birth in hospital, she goes back home safe and clean. *"Giving birth at home has made us suffer a lot because sometimes mkunga would be far then you get an old woman to assist with delivery. This long woman had long nails used for cutting the perineum and the baby's umbilical cord. This was very painful. After 3 days you can't even walk and cannot do anything. One just feels rotten inside. Those old ladies just leave blood to rot from inside but when you deliver in hospital excess blood is pressed from the abdomen."* FGD participant.

Respondents were interviewed on strategies that could be used to scale up utilisation of skilled birth attendance and their responses indicated that improvement of staff attitude would go a long way in scaling up utilisation of skilled birth attendance (96.5%) followed by increasing human resource for health (84%). It was also established that reduction of waiting time for health services increased uptake of skilled birth attendance services (79.5%), male/partner involvement (62.05%), strengthening of community-facility referral system (56.09%) and enhancing 24-hour service provision in health facilities at 48.5% (Table 4.10).

Table 9
Strategies for Scaling up Utilisation of Skilled Birth Attendance from Respondents

Strategy	Frequency	Percentage (%)
Improvement of staff attitude	356	96.5
Reduction of waiting time for health services	283	79.5
Enhancing 24-hour service in health facilities	179	48.5
Strengthening of Community-facility referral system	207	56.09
Male/partner involvement	225	62.05
Increasing human resource for health	309	84

Key informants stressed on the importance of sensitizing community members on Individual birth plan and active male involvement on issues to do with pregnancy, labour and delivery as a strategy in scaling up utilisation of skilled birth attendance. *"We would like them to have individual birth plans. I know there are some*

cultural issues involved that make the not adhere to it such as one cannot prepare for a baby who is not yet born as this could lead to intrauterine fetal death. These myths and beliefs can be done away with through continuous Behavior Change Communication. Partners should also be actively involved through formation of father to father support groups. This can improve utilisation of skilled birth attendance." CHEW from Matungu Sub County. Active involvement of CORPs could go a long way in impacting on scaling up utilisation of skilled birth attendance. This should be in conjunction with reorienting TBAs on new roles as birth companions and referral agents as well as active involvement of CHVs through Community Health Strategy in promoting maternal and newborn health. They should also have contact details to the nearest health facilities so that they could contact them in case of an emergency that could need an ambulance. *"Early identification of pregnant women in the communities and giving them health messages on the importance of early ANC attendance, hospital delivery as well identification of danger signs in pregnancy, labour and delivery could help them utilise skilled birth attendance."* CHEW from Lurambi Sub County.

Women in the FGDs said that more health workers should be deployed in the health facilities so that there is adequate 24 hour service. *"We want more doctors to be added as they are few. If we come to the facility after 5pm and over the weekends and we don't find doctors, where will you go? This distracts our plans. That is why we prefer giving birth at home to avoid this hustle."* FGD participant.

Positive attitude by health care providers towards patients should be reinforced and adhered to through close monitoring by the Ministry of Health leadership and this could help in scaling up utilisation of skilled birth attendance. *"When you go to a hospital in labour the nurses just look at you. Some of them are very abusive and beat patients. When you ask for assistance they just ignore you. They look down upon sick people. I remember when I went to deliver my second baby, I used to tell the nurse that the baby is coming but she kept on telling me that I am being stubborn only to end up delivering alone. I got a big tear and the baby did not cry well. What hurts me most is that the baby has a mental problem."* FGD participant.

Chi-square was used to assess differentials existing between various characteristics of respondents. The distribution of age groups as socio-demographic factors determining knowledge on danger signs during delivery was significantly different (X^2=8.65, df=3, P=0.013). Knowledge on danger signs during delivery was statistically different depending on the occupation of the respondents (X^2=10.4, df=3, P=0.006). There was a significant difference between distribution of ANC attendance and knowledge on danger signs during delivery (X^2=4.62, df=1, P=0.032) Distribution of monthly income on knowledge on danger signs during labour and delivery was significantly different (X^2= 7.59, df=2, P=0.002). Religion showed significant association with knowledge on danger signs during delivery (X^2=19.73, df=5, P=<0.0001). There was a significant association between education level and knowledge on danger signs during labour and delivery (X^2=9.472, df=4, P=0.002). Marital status was significantly distributed against the outcome (X^2=10.424, df=2, P=0.005) (Table10).

Table 10
Socio-Demographic Factors against Knowledge on Danger Signs During Delivery

Independent Variables	Knowledge on danger signs at delivery n (%)	No Knowledge on danger signs at delivery n (%)	X^2 (df) P value
Age:			
15-19	11(28.2)	39(71.8)	
20-29	41(20)	164(80)	
30-39	23(22.3)	80(77.7)	X^2=8.65 (3)
40-49	2 (22.2)	9(77.8)	P= 0.013
Occupation:			
Employed	2(20)	10(80.0)	
Self employed	20(22.47)	69(77.53)	
Not employed	50 (20.2)	198(79.8)	X^2=10.4 (3)
Casual laborer	5(25)	15(75)	P=0.006
ANC attendance:			
Yes	74(21.6)	268(78.4)	X^2= 4.62 (1)
No	2(7.4)	25(92.6)	P=0.032
Monthly income:			
<5,000	71(25.6)	206(74.4)	
6,000-10,000	4(26.6)	11(73.4)	
>10,000	1(33.3)	3(66.7)	X^2= 7.59 (3)
None	5(6.8)	68 (93.2)	P=0.002
Religion:			
Protestant	53(24.4)	164(75.6)	
Adventist	1(9.0)	10(91)	
Catholic	13(10.5)	68(89.5)	
Muslim	10(27.7)	26(72.3)	
Traditionalist	0(0)	1(100)	X^2 =19.73 (5)
Others	0(0)	23(100)	P=<0.0001
Education level:			
None	2(8.7)	21(91.3)	
Pre-school	3(18.8)	13(81.2)	
Primary	59(22.1)	207(77.9)	
Secondary	13(19.4)	44(80.6)	X^2=9.472 (4)
Tertiary	6(85.7)	1(14.3)	P = 0.002
Marital Status			
Married	70(22.8)	237(77.2)	X^2=10.424 (2)
Single	15(26.3)	42(73.7)	P= 0.005
Divorced	0(0)	5(100)	

Bivariate analysis was used to measure the relationship between socio-demographic factors and knowledge on danger signs during delivery. The aim being to measure the strength of their relationship ranging from absolute value 1 to 0. The stronger the relationship the closer the value was to 1.

There was a significant relationship between mothers' age and knowledge of danger signs during delivery (OR=0.470, 95% CI: 2.35-7.08, P=0.0001). Older women aged 40-49 years were 0.470 times less likely to have knowledge on danger signs during delivery as compared to those aged 15-19 years old. Respondents who were not employed were 0.06 times less likely to know the danger signs during delivery compared to those who were self employed (OR= 0.06, 95% CI: 0.505-1.768, P= 0.029). Respondents who did not attend ANC were 0.171 times less likely to have knowledge on danger signs during delivery compared to those who attended antenatal clinic (OR=0.171, 95% CI: 0.756-1.814, P=0.001). Respondents earning a monthly income >10,000 were 2.5 times more likely to have knowledge on danger signs during delivery compared to those with a monthly income >10,000 (OR=2.5, 95% CI: 0.203-1.656, P=0.018).

There was a significant relationship between religion and knowledge on danger signs during delivery (OR=4.26, 95% CI: 1.1-3.477, P=0.02). Religion increases the chances of knowledge on danger signs during delivery. Respondents from the Islam faith were 4.26 times more likely to have knowledge on danger signs during delivery compared to those of the Catholic faith (OR=4.26, 95% CI: 1.1-3.477, P=0.02). Women with tertiary level of education were 3.054 times more likely to have knowledge on danger signs during delivery compared to those who had pre school level of education (OR=3.054, 95% CI: 0.298-0.849, P=0.010) (Table 12).

Table 11
Socio-Demographic Factors Determining Knowledge on Danger Signs During Delivery.

Bivariate Analysis						
Independent Variables	Knowledge on Danger Signs at Delivery n (%)	No knowledge on Danger igns at Delivery n (%)	OR	P value	95.0% CI for EXP (B) Lower bound	Upper bound
Age:						
15-19	11(28.2)	39(71.8)	ref			
20-29	41(20)	164(80)	0.488	0.08	0.187	0.274
30-39	23(22.3)	80(77.7)	4.08	<0.0001*	2.35	7.08
40-49	2 (22.2)	9(77.8)	0.470	0.99	0.252	0.876
Occupation:						
Employed	2(20)	10(80.0)	ref			
Self employed	20(22.47)	69(77.53)	2.79	0.029*	0.505	1.768
Not employed	50 (20.2)	198(79.8)	1.34	0.695	0.233	0.890
Casual laborer	5(25)	15(75)	0.06	0.133	0.476	1.813
ANC attendance:						
Yes	74(21.6)	268(78.4)	ref			
No	2(7.4)	25(92.6)	0.171	0.001*	0.756	1.814
Monthly income:						
<5,000	71(25.6)	206(74.4)	Ref			
6,000-10,000	4(26.6)	11(73.4)	1.63	0.327	0.229	2.845
>10,000	1(33.3)	3(66.7)	1.34	0.018*	0.203	1.656
None	5(6.8)	68 (93.2)	2.5			
Religion:						
Protestant	53(24.4)	164(75.6)	ref			
Adventist	1(9.0)	10(91)	3.347	0.269	0.386	3.8737
Catholic	13(10.5)	68(89.5)	1.96	0.02*	1.1	3.477
Muslim	10(27.7)	26(72.3)	4.26	0.009*	1.438	3.911
Traditionalist	0(0)	1(100)	0.00	1.000	0.000	0.000
Others	0(0)	23(100)	0.00	1.000	0.000	0.000
Education level:						
None	2(8.7)	21(91.3)	ref			
Pre-school	3(18.8)	13(81.2)	2.37	0.010*	0.298	0.849
Primary	59(22.1)	207(77.9)	1.79	0.229	0.505	1.768
Secondary	13(19.4)	44(80.6)	2.5	0.05*	1.002	5.905
Tertiary	6(85.7)	1(14.3)	3.054	0.003*	0.937	4.791

p values is statistically significant (p<0.05)

DISCUSSION

Skilled attendance at birth is one of the actions that improve women's and newborns' chances of survival during pregnancy and childbirth in low-income countries. Yet in many regions the proportion of women who do so is low as they face a number of obstacles in seeking professional medical help at childbirth. The major reason for encouraging skilled birth attendance is that it can lead to women being referred for professional medical help if they experience complications during pregnancy or birth. This chapter deals with the discussion of findings from the study.

A number of socio-demographic, cultural, economic and health system factors were found to significantly influence the use of unskilled birth attendance. They included age, religion, occupation, decision maker and attitude towards health staff.

Women aged 20-29 years utilised unskilled birth attendance more compared to women aged 15-19 years who were less likely to deliver under unskilled birth attendance. Married women were more likely to utilise unskilled birth attendance. This was ultimately linked to the decision maker on choice of delivery place. It was found that husbands had a great influence in deciding on where a woman will go for delivery compared to the mother in law who is less likely to make the decision. This finding compares well to a study done by WHO which states that women need permission in seeking care during pregnancy, childbirth and postpartum period (10). In Kakamega County levels of education decrease as we go up the education ladder. Most mothers in the study had acquired primary education which was attributed to the free primary education. Women with formal education have their own different perspectives on the use of skilled care at birth and have the knowledge to make informed decisions. The findings coincides well with a study that found out that women's education or literacy levels are strongly associated with use of reproductive health and maternal health services (13). Poor, rural women are more likely to have lower education and are less likely to make use of available services. Poor women with low socio- economic status in the family tend to delay decision making when complications arise (8). Pregnancy and motherhood is in many cultures perceived to be a natural phenomenon, not requiring intervention (14). Ignorance and cultural beliefs enhance utilisation of unskilled birth attendance. Most mothers in the study were not aware of the danger signs during labour and delivery and this made them not to go for skilled birth attendance.

The results of this study found out that most women in Kakamega County resided at a radius of 5-10km to the nearest health facility and there was adequate transportation due to the availability of motor bikes and adequate terrain. This study disagrees with the findings of a study carried out in Nepal, which found out that distance and inadequate transportation to health facilities posed major barriers to SBA utilisation (15). The poor utilisation of skilled birth attendance despite there being adequate transportation could be due to insecurity especially at night which makes mothers not to get means of transport to a halth facility when labour pains commence at night, negative attitude of health care providers could also be making mothers not to go to the nearest health facilities as well as cultural beliefs which make mothers shun health facilities. The study also established that age at first birth had an influence on utilisation of unskilled birth attendance. Women who had the first birth at 15-19 years old had a higher parity and were more likely to utilise unskilled birth attendance. This compares well with the study done by WHO that stated that mothers with first birth at teenage age have existing risk factors, including higher parity, were more likely to select unsafe/unskilled delivery practices (1). This was also confirmed by a study carried out in Ethiopia which showed that women who had the first pregnancy while in teenage had more children and were more likely to utilise unskilled birth attendance compared to those who had the first child at the age of 25 years (16).

The study also found out that Protestants are more likely to utilise unskilled birth attendance compared to the muslims and catholics. This could be due to the doctrines being preached to the people such as one should not go to hospital but wait upon God to take care of everything. Unemployed women were more likely to utilise unskilled birth attendance as compared to those who were employed. This could be attributed to not being able to have money for birth preparation. Many mothers were living below poverty line at £0.5 per day which cannot even meet the daily basic needs. Similar findings have been reported by WHO. Rural residents were indigenenous hence high poverty levels and low access to information contributed to the low utilisation of SBAs. Low rates of deliveries by skilled attendants in rural and remote areas have been reported by previous reserachers (13).

Focused antenatal care is a timely, friendly, simple and safe service to a pregnant woman with the aim of achieving good outcome for the mother and baby and prevent any complications that may occur in pregnancy, labour, delivery and post partum. The objectives of focused antenatal care are early detection and treatment of problems, prevention of complications using safe, simple and cost effective interventions, birth preparedness and complication readiness, health promotion using health messages, counseling and provision of care by a skilled attendant.

In this study antenatal attendance was high

hence comparing well with the results of the KDHS 2014 (2). Respondents who made more than four ANC visits in their recent pregnancy were fewer compared to the findings of KDHS 2014 where more rural women reported to have attended more than four antenatal visits. Those who attended ANC in the first trimester were few compared to KDHS 2014 where more women had attended ANC in the first trimester. The low antenatal attendance in the first trimester is attributed to cultural beliefs such as one should wait for the pregnancy to show before attending ANC. Low coverage of 4th ANC is attributed to lack of knowledge on the importance of attending four focused antenatal visits. World Health Organization recommends that women should attend four comprehensive personalized visits one of which the first visit ought to be in the first trimester before 16 weeks gestation (2). Health promotion at ANC was also inadequate since the respondents could not mention the services offered in Focused Antenatal Care and this could lead to them not seeing the importance of not attending all the recommended four ANC visits. This compares well with a study carried out by The World Bank that found out that health care providers do not provide adequate knowledge during antenatal visits due staff shortages, lack of adequate knowledge and negative attitude (1).

The findings of this study showed that the proportion of women who had knowledge on danger signs during pregnancy was high. This affirms the reason why ANC attendance is high. Respondents who had knowledge on danger signs during labour and delivery was the lowest while those who had knowledge on danger signs after delivery was low. The declining trend indicates the lack of utilizing skilled birth attendance which was also attributed to ignorance, negative attitude and myths and beliefs. This was similar to findings by WHO which stated that mothers and neonates are not taken out of the house, even for medical assistance, due to socio-cultural beliefs and lack of knowledge on signs of severe illness (10).

Birth Preparedness ensures that a woman knows when her baby is due, identifies a skilled birth attendant, a health facility for delivery/emergency, can list danger signs in pregnancy and delivery and knows what to do if they occur. It also identifies a decision maker, how to get money in case of emergency, a transport plan, a birth partner/companion for the birth and has collected the basic supplies for the birth (17). Birth preparedness is not only a strategy just for the community but also for the care provider at the facility level. Most respondents did not carry out birth preparedness as expected and this could be the reason why they deliver under unskilled birth attendance. Support from partner or significant others plays a crucial role during pregnancy, delivery and post-natal periods. In this study it was found that most respondents received support from partners or significant others in terms of preparation of the individual birth plan and choice of place of delivery. Since the study targeted women who had delivered at home, this support was detrimental especially when it comes to decision making as the partner or significant others chose for the mothers to deliver at home. These findings contradict with a study carried out in Kenya which found out that women who involved their loved ones were more likely to plan early for delivery hence utilizing SBAs (18). Male involvement is currently a priority of ministry of medical services and public health and sanitation especially in the Division of Reproductive Health (19). There is need for promotion of positive influence among partners and significant others in terms of decision making on choice of place of delivery.

According to the KDHS, proper medical attention and hygienic conditions during labour and delivery reduce the risk of complications, infections or death of the mother and baby as well as enhancing utilisation of skilled birth attendance (2). Respondents whose perception on health facility staff was good was less compared to those who had a negative perception on health facility staff. Some respondents did not know whether the health facility staff were good or bad. The poor perception towards health facility staff is similar to the findings by the Kenya National Commission on Human Rights which states that Kenya's public health facilities have long been plagued by reports of abuse, mistreatment and negligence of patients in the hands of staff, a problem enhanced by poor supervision and understaffing (20). A FGD participant commented,

"When you go to a hospital in labour the nurses just look at you. Some of them are very abusive and beat patients." FGD participant.

This portrayed the lack of confidence towards health care providers. Similar findings were reported in a study carried out in Uasin Gishu County (21). Delay in seeking appropriate medical help due to lack of transport at night, insecurity and lack of 24 hour services were found to be contributing to mothers not being able to utilise skilled birth attendance. Respondents were aware of the availability of human resource, equipment and supplies but still did not utilise the services. According to the study findings, lack of utilizing the services was attributed to the negative attitude towards the health care system. Improving accessibility and adequate treatment and care by skilled birth attendants is crucial in preventing maternal morbidity and mortality (22).

Redirection of unskilled birth attendants to offer safe services through reorientation of traditional birth attendants to birth companions and referral agents goes a long way to scaling up uptake of skilled birth attendance (18). Reorientation of traditional birth attendants to birth companions and referral agents

led to the increase of skilled birth attendance. This is an initiative that can be adopted by the Ministry of health so as to improve utilisation of skilled birth attendance in the entire country. Improvement of women's education, gender equity, health systems through provision of quality services and positive staff attitude, roads, addressing socio cultural myths and beliefs, active male involvement in reproductive health issues, reinforcement on the individual birth plan and engaging with community owned resource persons are some of the strategies that may be used in improving utilisation of skilled birth attendance (1).

As much as access to health facilities was insignificant, transport and referral mechanisms at night were reported by clients as reasons for opting for unskilled birth attendance. The referral mechanisms in the County were poor since there are four functional county ambulances which are meant to serve twelve sub counties. This made it impossible to coordinate many referrals at night. There is need for increasing the number of ambulances so as to enhance referral effectiveness. Security has been of concern limiting access to 24 hour referral mechanisms. Majority of women reported to walk to the facility in labour since the only affordable and available means of transport was motor cycle which was not safe in labour. This calls for increased advocacy to the county government and local leadership so as security is enhanced as well as reinforcement on the importance of the individual birth plan in health facilities and public forums so that mothers can organize to go to the nearest health facility in good time so as to avoid night referrals. Similar findings were found in a study carried out in Tanzania (23). There is need to improve referral systems which may go a long way in improving maternal health

"The government has been telling us that there are ambulances available to transport us to hospital incase of an emergency but every time we request for it, it never comes. Instead we are told that we have to take the patient to the nearest health facility where the ambulance picks patients. This makes us to deliver at home." FGD participant.

Lack of trust in health workers and health professionals led women to delay seeking medical care (7). This portrayed the fear/mistrust the community had on the health system. Respondents reported to have been left alone during labour and delivery hence preferred to deliver at home alone. This could also be attributed to staff shortage as most facilities operated below the required health provider client ratio(24). Health centers reported to have 4 nurses with required capacity of 15 nurses (facility in charge and CHEW linked to Mung'ungu health centre). There is need for deployment of more health workers who are culturally sensitive to health facilities.

"Health workers are very abusive and do not care about our welfare. We shall not utilise hospital services unless they become human." FGD participant.

Culture is a way of life of a group of people- the behaviors, beliefs, values, and symbols that they accept, generally without thinking about them, and that are passed along by communication and imitation from one generation to the next (25). In a study carried out in Ethiopia on cultural practices affecting utilisation of skilled birth attendance, mothers gave a variety of reasons for delivering at home, majority felt more comfortable to deliver at home since they will perform a variety of cultural practices, assumed no problem no problem during home delivery as it is natural and partners/significant others decided where they should have a baby and preferred home as their place of delivery (16). These study findings coincide with the findings found in Kakamega County where women preferred to deliver at home so that some rituals were done such as cleansing the mother's breast before commencing breastfeeding, and burying the placenta at home. It was also found out that partners had a significant influence in deciding where the mother will deliver. Most of these mothers who had delivered at home were decided for by the partners hence there is need for active male involvement so that they know the importance of skilled birth attendance.

CONCLUSION

Among the mothers interviewed, they had more knowledge on pregnancy and less knowledge on labour and delivery and post partum periods. Majority of the respondents only knew postpartum hemorrhage as a danger sign yet there are several danger signs that would lead to maternal morbidity and mortality.

Socio-cultural factors leading to women seeking unskilled birth attendance were found to include the influence of partners on choice of delivery place. Other cultural issues found to curtail utilisation of UBAs included the believe that birth preparedness should not be done before the baby is born, the placenta must be buried at home and breastfeeding should not commence until the mother is cleansed by an old woman who is found at home. On health system factors leading to utilisation of unskilled birth attendance, it was found that the major thing that makes women utilise UBA was the negative staff attitude followed by lack of 24 hour health services and insecurity.

The strategies which could scale up utilisation of skilled attendance were established and included reorientation of traditional birth attendants to birth companions and referral agents, improvement of women's education, gender equity, health systems strengthening through provision of quality services and positive staff attitude and reinforcement on

the individual birth plan. The study had one null hypothesis which stated that persistent utilisation of unskilled birth attendance is not determined by the lack of knowledge on danger signs during delivery. The findings of this study found out that lack of knowledge on the danger signs during delivery led to utilisation of unskilled birth attendance hence making it an alternative hypothesis that states that persistent utilisation of unskilled birth attendance is determined by lack of knowledge on danger signs during delivery.

RECOMMENDATIONS

The Ministry of Health, Ministry of Education, Ministry of Culture, Gender and Social services should equip women with knowledge on the dangers signs in pregnancy, labour and delivery, and post-partum periods and also be able to prepare individual birth plans. Socio-cultural factors leading to unskilled birth attendance ought to be addressed by the Ministry of culture, gender and social services through active engagement with custodians of culture to help allay myths and perceptions. Pregnant women have a birth preparedness and complication readiness plan all the time. The SBAs too should have an IBP which is clearly written and reviewed during each ANC visit with the clients. The ministry of Health should ensure that healthcare workers serve patients with the highest degree of professional integrity and are culturally sensitive to the needs of the clients. Reorientation of Traditional Birth Attendants to Birth Companions and referral agents hence enabling them to accompany mothers to health facilities for delivery.

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