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AN ASSESSMENT OF HEALTH PROVIDER RELATED FACTORS INFLUENCING UTILIZATION OF HEALTH FACILITY DURING CHILD BIRTH BY WOMEN AGED 15-49 YEARS IN MATINYANI SUB-COUNTY IN KITUI COUNTY

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Abstract

Purpose: This study was aimed at identifying health provider related factors influencing utilization of health facility during child birth by women aged 15-49 years in Matinyani Sub-County in Kitui County.

Methods: It was a facility- based study conducted in Matinyani Sub county where 376 women and 6 health facilities were included. It was a descriptive cross-sectional study. The variables tested were utilization of health facility during child birth and provider related factors. Data collection was done using focused group discussions guide, interview schedule guide, observation and analysis was done using SPSS version 17. Chi test was used to show association between the variables.

Results: Majority of health workers were trained on FANC but not trained on comprehensive RH.

Unique contribution to theory, practice and policy: All health workers to be educated on drug storage to avoid expiry hence wastage of drugs.

Keywords: *Health provider, utilization, health facility, Matinyani Sub-County*

1.0 INTRODUCTION

1.1 Background of the Study

Pregnancy related mortality is almost always preventable yet more than half a million women die annually worldwide due to its related complications. Every minute of every day, somewhere in the world and most often in a developing country, a woman dies from complications related to pregnancy or childbirth. Nearly all maternal deaths (99%) occur in the developing world, making maternal mortality the health statistic with the largest disparity between developed and developing countries (UNFPA, 2007).

The average woman in sub - Saharan Africa faces a 1:16 life risk of dying in pregnancy and childbirth, compared with a 1 in 2800 chances for a woman in a developed country. Another 300 million women in developing countries suffer a long term illness as a result of pregnancy and childbirth (Safe Mother,2006). In Kenya, 6150 mothers die every year due to pregnancy related and preventable complications. For every woman who dies, 30 to 50 women suffer injury, infection, or disease. Pregnancy-related complications are among the leading causes of death and disability for women aged 15-49 in developing countries (WHO, 2007).

In developing countries, the risk of MMR is higher and made more dangerous by the widespread incidence of Malnutrition, Lack of access to clean water and sanitation, Epidemics such as malaria, tuberculosis, HIV and AIDS, inadequate or unaffordable transport facilities in remote areas so that women with complications cannot reach skilled help, inadequate human resources, drugs and equipment being available at health centers and hospitals, inequitable opportunities for women and girls, leading to poor levels of education on knowledge about their own bodies and basic hygiene practices, inequitable social and cultural status for women and girls, leading to inability to achieve their human rights, including control over their own reproductive health (WHO, 2009).

In Kenya, Maternal Newborn and Child Health (MNCH) indicators remain low.Progress has been hindered by poor policy implementation and weak health systems, which do not engage with or respond to community needs. This results in poor access to and utilisation of preventive and curative health service. Wide-spread prevalence of HIV, TB and malaria in the country and especially in the targeted area, exacerbates maternal health, necessitating an integrated approach to health systems strengthening (UNFPA, 2007). More than a decade of research has shown that small and affordable measures can significantly reduce the health risks that women face when they become pregnant. Most maternal deaths could be prevented if women had access to appropriate health care during pregnancy, childbirth, and immediately afterwards (UNICEF, 2007).

1.2 Problem Statement

Globally, at least 160 million women become pregnant annually. Of these, 15% develop a serious complication. Over 30 million women in the developing world suffer from serious diseases and disabilities which include uterine prolapse, pelvic inflammatory disease, fistula,

incontinence, infertility, and pain during sexual intercourse as a result of inadequate or inappropriate care during pregnancy, delivery or the first critical hours after birth (WHO, 2005).

All pregnant women need to have access to skilled care throughout pregnancy, delivery, postpartum and postnatal periods to ensure the achievement of the desired outcome of a healthy mother and baby. The lower eastern region of Kenya is a poor area with over 56% of the population living in absolute poverty. The MMR in the country is at 488 per 100,000 live births (KNBS, 2009) but in Matinyani Subcounty, the MMR is unknown.

In the world only 46 per cent of deliveries are assisted by skilled attendants. In Southern Asia, the proportion is even lower. Every minute, 110 women in the world experience a complication in their pregnancy, and one of them dies (UNFPA, 2010).

In developing world only 58% of all deliveries are reported as attended by skilled health providers. In some countries, the figure is closer to 10-12 per cent. In many of those cases, the woman does not have access to life-saving emergency care should something go wrong. Report by UNICEF (2010) shows that lack of skilled birth care costs 2 million lives each year.

The use of Skilled Birth Attendants (SBAs) during pregnancy, labour and delivery during the post partum period could prevent many instances of maternal morbidity and mortality. Unfortunately qualified midwives, nurses and doctors are often not available in most rural areas of developing countries where most women are delivered (WHO,2008).

A report by Kitui District Development Plan 2008-2012 (2009) indicates that only 20% of women deliver in a health facility while 80% deliver at home with 70% of the deliveries being assisted by TBAs. Maternal Mortality Ratio in the district is estimated at 452/100,000 live births.

In Matinyani District, 85% of births are conducted at home (outside the health facilities) and obstetric care services are not available in most of the rural health facilities (AMREF, 2008). TBAs are unable to address any of the 5 major causes of maternal mortality which are haemorrhage that is antepartum haemorrhage and postpartum haemorrhage , sepsis, pre-eclampasia and eclampsia, ruptured uterus and complication of induced abortion (MOH, 2006).

A survey by Kenya National Bureau of Statistics *et al* (KNBS) (2010) revealed that 54% of births in Eastern Province are conducted at home by TBAs and relatives and obstetric care services are unavailable in most of the rural health facilities.

1.3 Conceptual Framework

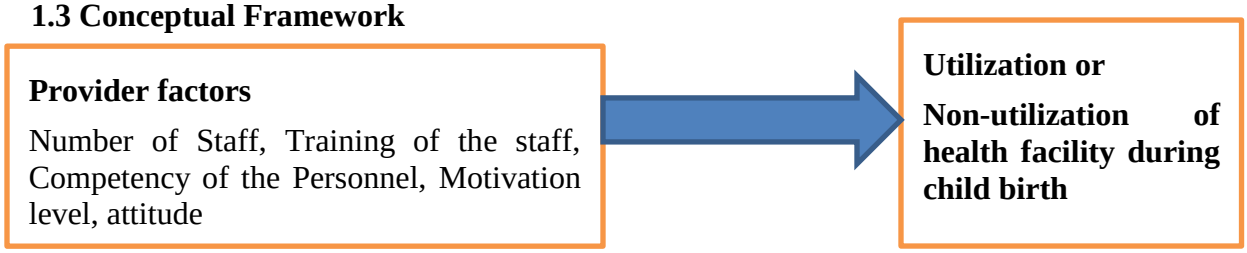

Figure 1 Conceptual Framework

2.0 LITERATURE REVIEW

2.1 Overview of maternal mortality

Along with infectious diseases, maternal and neonatal conditions account for a substantial part ofthe health gap between rich and poor countries. Overall, the average lifetime risk of maternal death is 1 in 4,000 in high-income countries, 1 in 61 in middle-income countries and 1 in 17 in the lowest income countries (World Bank, 2006). More than 80% of maternal deaths worldwide is due to five direct causes, hemorrhage, sepsis, abortions, obstructed labour and hypertensive diseases(WHO,2004 ; Harvey , Ayabaca ,Bucagu , Djibrina ,2004) Most of these deaths can be prevented if women have access to essential obstetric care during pregnancy (UN,2008).

2.2 Effects of maternal deaths

Maternal death has also an impact in the health and well-being of families, communities and in general in the social and economic situation of the societies. Each year an estimated US $15.5 billion is lost in potential productivity when mothers and newborns die (WHO 2005). When a woman dies in childbirth, her infant and any other children's survival is threatened. Infants without mothers are more likely to die within two years. Children up to 10 years whose mothers die are 3 to 10 times more likely to die within two years than children living with mothers. Every year an additional 2 million children worldwide are maternal orphans (WHO, 2005). Maternal death has long term effects on a child's education and health. When a mother dies, older children often leave school to support their family. Children without a mother are less likely to be immunized, and are more likely to suffer from malnutrition (WHO, 2005).

2.3 Risks of maternal death

In developing countries the risks MMR is higher and made more dangerous by the widespread incidence of: Malnutrition; Lack of access to clean water and sanitation; Epidemic levels of disease such as malaria, tuberculosis, HIV and AIDS; Inadequate or unaffordable transport facilities in remote areas so that women with complications cannot reach skilled help; Inadequate human resources, drugs and equipment being available at health centers and hospitals; Inequitable opportunities for women and girls, leading to poor levels of education including knowledge about their own bodies and basic hygiene practices ,inequitable social and cultural status for women and girls, leading to inability to achieve their human rights, including control

over their own reproductive health. The safe mother hood initiative is a global strategy aimed at reducing maternal mortality by half by the year 2000 by creating circumstances within which a woman is able to choose whether she will become pregnant, receive care for the prevention and treatment of pregnancy complications, have access to a trained birth attendant, have access to emergency obstetric care for obstetric complications if she needs it, have care after birth and avoid death or disability from complications of pregnancy and child birth (MNPI, 2001).

2.4 Reasons for maternal deaths

A study from South India showed that assistance during delivery can reduce the risk of obstructed labour and it is highly associated with the place of delivery (Navaneetham *et al*,2000). Another study also presented the role of assisted skilled birth attendants in preventing direct and indirect cause of maternal deaths (AbouZahr, 2003).

Despite the efforts by the Gambian Government in adopting the primary health care (PHC) strategy, the aim of which was to make health care more accessible and affordable to the majority of Gambians, physical access to health services has been hampered by a rapidly growing population, inadequate financial and logistic support, gross shortage of skilled human resource for health, high staff attrition, and an inefficient referral mechanism. Poverty and ignorance have, in some instances, led to inappropriate health seeking delivery behaviour and contributed to ill health. Although the percentage of population living within 5 km of a primary health care facility has improved over the years, the availability, accessibility, and quality of EmOC services in The Gambia are below required standards. Hence, a large number of women in remote settings still continue to travel some distance to reach a basic EmOC facility or resort to home deliveries. It should therefore be noted that nearly two-thirds of all births in Gambia take place in home settings, mostly attended to by traditional birth attendants (TBAs) and/or family members. Thus, most of the deaths and disabilities that women face in these settings could have been averted if the services of a skilled birth attendant were available and accessible to those women in need (Fauveau , 2007).

2.5 Provider related factors

2.5.1 Competencies

Nurses, midwives, auxiliary midwives and other providers working in birthing centers may not have the skills and competencies necessary to perform all of the six signal functions that define a basic EmOC facility (Bailey *et al.*, 2006). Another set of problems revolved around the competency of the health system. ‘‘The health care worker was not skilled enough,’’ was a factor expressed by one man. Another simply observed that, ‘‘the woman died on the operating table.’’ An angrier response was that, ‘‘the doctors and nurses did not know what to do when the women in labor was referred from the primary care center to the secondary level facility. They [doctors and nurses on duty] did not decide on time what to do.’’ Finally, a respondent noted that, ‘‘Skilled workers were nonchalant and inefficient” (Lawoyin *et al.*, 2007).

A maternal morbidity and mortality study in Nepal by Pradhan and colleagues (2010) revealed that staff knowledge and competence, lack of proper training and new development, inadequate

payment, unsupportive management and lack of support from the other staff are some of the constraints on providing the quality maternal health services in Nepal.

A study done by Africa Population Health and Research Council (APHRC) (2006) on barriers to utilization of EmOC services in Nairobi informal Settlements revealed that almost all professional health care workers in the facilities reported that they were able to administer intravenous antibiotics, oxytocics and anticonvulsants but about only 30 percent could prescribe the same medication. Intravenous fluids could be prescribed and administered by nearly all professional staff. Only 20 percent of staff were able to conduct manual removal of the placenta, 14.4 percent were able to carry out dilation and curettage (D & C) for removal of retained products and 9.4 percent were able to do manual vacuum aspiration (MVA) to remove retained products of conception. Among the midwife assistants/nurse aides, only 17 percent, 11 percent and 12 percent were able to administer intravenous antibiotics, oxytocics, and anticonvulsants, respectively. Only 6 percent of midwife assistants/nurse aides were able to conduct manual removal of the placenta, 6 percent were able to carry out D & C for removal of retained products and 1 percent were able to do manual vacuum aspiration to remove retained products of conception. Intravenous fluids could be administered by about 15 percent of nurse aides and 12 percent were able to resuscitate a newborn baby. Skills for MVA were surprisingly low in the surveyed facilities.

2.5.2 Staff attitude

In a study about obstetrics services utilization by the community in Lebowa, Northern Transvaal, it was found that reasons for home delivery include negative staff attitude (12%) and precipitate labour (7.2%) (Uyiworth, 1997).

Certain ethnic or religious groups may be discriminated against by staff, making them less likely to use hospital delivery services (Gabrysch and Campbell, 2009). A study conducted in Zambia in 1994 to ascertain women's perceptions of factors which affect their health and well being during the postnatal period and to establish the influence of partners, relatives, friends or health professionals. Findings from this study suggest that women receive inadequate information, advice and support from health professionals during antenatal and postnatal period to facilitate their transition to motherhood (Making pregnancy safer, 2003).

Both positive and negative attitudes of staff play part in the utilization of Skilled Birth Attendants (SBAs) in various ways. Staffs positive attitude towards women during labour such as giving reassurance and encouragement, politeness encourages use of SBAs. Studies from different developing countries have shown negative attitudes like rudeness, shouting during labour, lack of empathy, refusal to assist, and lack of moral support, making patient wait and giving priority on the basis of links to the staff, caste, ethnic, language and religion all discourage use of SBAs.

2.5.3 Workforce

The global shortage of midwives is severe and it is estimated 700,000 new midwives and other trained providers are needed in order to provide skilled childbirth care to all women who need it.

In Africa alone, an additional 1.5 million health workers are needed, nearly doubling the current workforce of 1.6 million, according to the Global Health Workforce Alliance (UNICEF, 2010).

Different studies from Bangladesh, Malawi and Nepal show that death or retirement of staff, emigration overseas in search of better pay and working conditions are further reasons for shortage of SBAs in many developing countries (Kamwendo & Bullough C, 2005; Pradha , 2010).Carlough ,2005;Pradhan ,2010;Kamwendo ,2005).

3.0 METHODS

The study utilized a descriptive, cross-sectional study design. The study population were 600 women aged 15-49 years who attended post natal check-up and child welfare clinic per month. Simple random sampling method was used to identify the Sub-County in Kitui County. Census sampling was used for the health facilities, stratified sampling and proportionately sampling for women of reproductive age and Systematic random sampling method was used to select the mothers as they were being served in the clinic. A total of 376 women who attended child welfare clinic and post natal check up were included in the sample. Client exit interviews for the women 15-49 years, focused group discussion with two groups of women living in Matinyani Sub-county, Key Informant Interview with District commissioner and Kwa-Mutonga chief, interview schedule for health workers, checklist for health facility.

A structured questionnaire was used which contained both open ended and closed ended questions. This collected quantitative data. Observation technique was used in filling of checklist to assess the health facilities to collect qualitative data. A pre test study was conducted at Kitui West District in Kauwi sub district hospital where10% of the questionnaires were used. This ensured reliability. Analysis of the data was done using (Statistical Package for Social Sciences) SPPS version 17. Both descriptive and inferential statistics for different variables were computed and the findings presented by use of frequency tables, pie charts, bar charts, figures and narration. Chi- square was used to show the association between Variables

4.0 RESEARCH FINDINGS AND DISCUSSIONS

4.1 Socio-demographic factors

A number of maternal socio-demographic characteristics such as age, sex, parity, occupation, level of education, marital status, source of income among others are associated with utilization of health facility for childbirth. This section evaluates the relationships between socio-demographic factors and place of childbirth. The age of a pregnant woman is an important factor in that it is an indicator of whether the woman is at risk of getting obstetrics complications or not. Table 1 shows the age distribution of the respondents.

Table 1 Respondents Age

Age of Respondents in Years	Frequency	Percentage
15-20	31	8.3%
20-25	125	33.2%
25-30	138	36.7%
30-35	58	15.4%
>35	24	6.4%
Total	376	100

Majority of the respondents 138 (36.7 %) were between 25-30 years, with those above 35 years taking 6.4%. This agrees with a study done in Zambia by Hazemba *et al*., (2008) where the majority, 103 (41.2%) were of age less than 25 years, 89 (35.6%) were aged 25-34 years, and 58 (23.2%) were of age 35 years or more. It is therefore important to note that every pregnant woman is at risk despite her age hence if a country wants to decrease the maternal mortality rate then they must invest in educating and empowering the society and women of all ages the importance of utilizing skilled birth attendants during childbirth.

4.2 Main source of income of the respondents

The study observed that the major sources of income of the respondents were farming and business among others. The respondents' main source of income was analyzed and cross tabulated against the place of childbirth and the results were shown in Table 2.

Table 2: Main source of income

Exposure	Home delivery	Facility delivery	Percentage	χ^2, df, P
Main source of income				
Farm produce	185	133	84.6	χ^2=0.732 df= 2 p= >0.05
Business	20	13	8.8	
Employed/salaried	13	12	6.6	

The main source of income was farm produce with 84.6% (n=318) respondents. However there was no significant relationship between main source of income and the utilization of health facility during childbirth (χ^2= 0.732; df=2; p>0.05). This concurs with a study done by Hossain

(2005) that showed that when the population is very poor with very low income, they do not give enough attention to their health care needs due to money problems. Women issues become secondary issues and are ignored by the household head hence women lack opportunity to utilize modern facility for child delivery.

4.3 Main income earner

In most families in the African setup the head of the household is normally the husband who is always the breadwinner. The main income earner of the family is an important factor in determining the place of delivery as he/she will be an important determinant of financial expenditure. The study sought to find out who the main income earner of the family was and data was presented in Table 3.

Table 3: Main income earner in the family

Variable	**Home**	**Facility**	**$\chi 2$, df, P**
Wife/Self	35	31	**$\chi 2$ 0.341** **df 2** **p >0.05**
Husband	176	116	
Support from others (parents, children)	7	11	

Majority 78% (n=292) of the families are supported by the husbands who were the main source of income. A comparison between the main source of income and place of childbirth was done and it revealed that there was no significant relationship between the main source of income and the utilization of health facility during childbirth ($\chi 2$= 0.341; df=2; p>0.05). In most African setting, the husband is the head of the family and in most cases the breadwinner because culture dictates that duties for a man are to work and provide for his family.

4.4 Highest level of education

Education is key in the day-to-day decisions we make. The level of education that a woman may have had is an important determinant of her knowledge on her health. The study sought to find out the respondents level of education and the results were shown in figure 2.

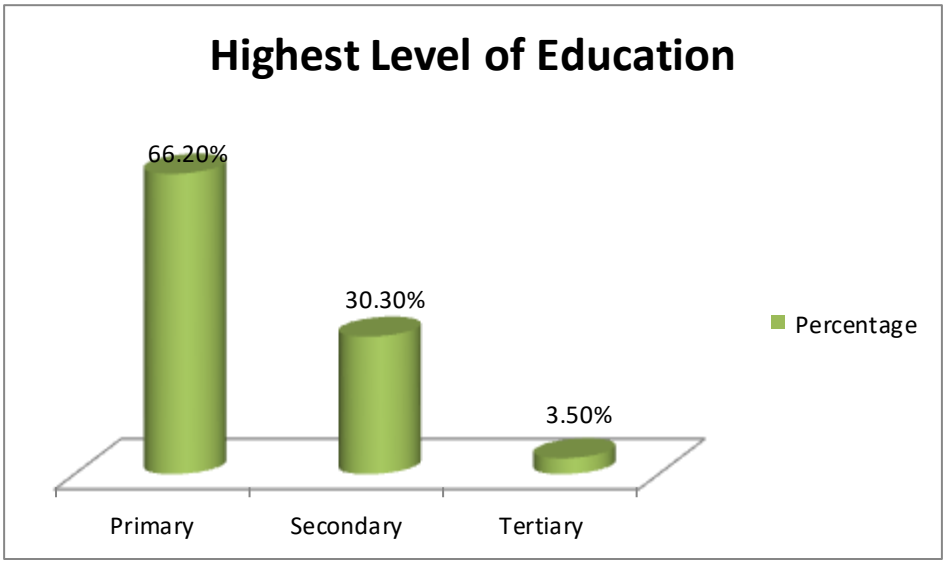

Figure 2: Highest Level of Education of Respondents

At least 66.2%(n=249) of the respondents highest level of education was primary school. Thirty point three percent (n=114) had secondary education while only 3.5%(n=13) had tertiary education and. Mother's education being lower than primary level and not having had antenatal care is also associated with a high prevalence of home delivery without help of SBAs (NDHS, 2006; D'Ambruos, 2005; Say ,2007). A study by Mayhew (2008) also revealed that low female literacy and women aged between 30-39 years were associated with the lower use of SBAs when compared to younger and literate women.

Education is an important determinant in deciding delivery care alternatives. Educated people are able to perceive their health and health related problems better than illiterate people. Most often illiterate people do not access health services despite being economically stable due to various misconceptions. They chose the traditional home delivery system driven by superstitious and traditional beliefs. A study done by Hossain (2005) on determinants of choices of delivery care indicated that increasing maternal education status is closely associated with a significant decrease in chance of home delivery. This concurs with the study because with the increase of level of education there was a decrease in home delivery. A study by Maureen *et al.,* (2008) on determinants of skilled birth attendant utilization in Afghanistan confirmed that low female literacy is associated with lower skilled birth attendant use in a country in which, nationwide, only 6% of women can read. It will take many years to increase literacy among women of childbearing age through existing programs in primary education and female literacy. Strengthening and expanding these programs should contribute to improving women's health in the long term. An educated person is an empowered person who is able to rationalize all the decisions he/she makes.Women who are more educated have a high self-esteem and are equipped with the right attitude to be able to make decisions with a lot of confidence.

4.5 Respondents marital status

In a community, the marital status of an individual normally improves a persons status in that particular society. Table 4 below shows data on respondents marital status.

Table 4: Marital status of the respondents

Variables	Home	Health facility	χ2.df,p
Single	33	31	χ2 0.0401
Married	176	120	df 2
Not living with partner	9	7	p < 0.05

Most of the respondents 78.7% (n=296) were married while 4.3 %(n=16) were not living with partners either due to divorce, widowed or separated. There was a significant relationship between marital status and the utilization of health facility during childbirth ($\chi 2$= 0.0401; df=2; p< 0.05). Marital status may influence the choice of delivery place, probably via its influence on female autonomy and status or through financial resources. Single or divorced women may be poorer but enjoy greater autonomy than those currently married. Young single mothers may be cared for by their natal family, which may encourage skilled attendance, especially for a first birth. On the other hand, single mothers may be stigmatised and prefer to deliver at home because they anticipate a negative provider interaction (Duong *et al*., 2004). A study by Mekonnen (2003) found that married women in a stable relationship are likely to use skilled attendant during childbirth because they plan when to give birth and since it is a wanted baby efforts are made to ensure the safety of both the mother and the baby.

4.6 Religion of the respondents

Religion is often considered as marker of cultural background and is thought to influence beliefs, norms and values in relation to childbirth and service use and women's status. The study sought to compare the religion of the respondents and the utilization of health facility during childbirth and the results were shown in table 5.

Table 5 Religion of Respondents

Variables	Roman catholic	Protestant	$\chi 2$, df, P
Home	97	121	χ2= 0.0401 df 1 p < 0.05
Health facility	70	88	

Forty four point seven percent (n=168) of the respondents were Roman catholics, 55.3% (n=208) were protestant. Majority of the protestant (n=121) did not utilize the health facility for childbirth. There was a significant relationship between religion and the utilization of health

facility during childbirth ($\chi 2$= 3.841; df=1; p < 0.05). A study by Glei *et al.*, (2003) on utilization of care during pregnancy in rural Guatemala revealed that religious groups may be discriminated against by staff, making them less likely to use services. Toan *et al*, (1996) in a study on utilisation of reproductive health services in rural Vietnam showed that Catholics in Vietnam are less likely to receive skilled care. Depending on the conviction of the various teachings, the religion of a woman may influence positively or negatively utilization of health facility during childbirth

4.7 Respondents number of children

The number of children in a family determine the availability of resources to cater for the family's need. The study sought to find out the number of children that the respondents had and data was presented in Table 6.

Table 6: Respondents Number of Children

Parity	Health facility	Home	Percentage	χ2.df,p
1-2	89	90	47.6%	**χ2=0.5604**
3-4	48	85	35.4%	**df 3**
5-6	16	21	9.8%	**p > 0.05**
>7	5	22	7.2%	

4.8 Provider related factors

4.8.1 Health workers availability

The existence of a workforce in the health facility is an important determinant of health facilty utilization during childbirth. The study sought to find out the number of the health workers in the facilities and the results are shown in Figure 3.

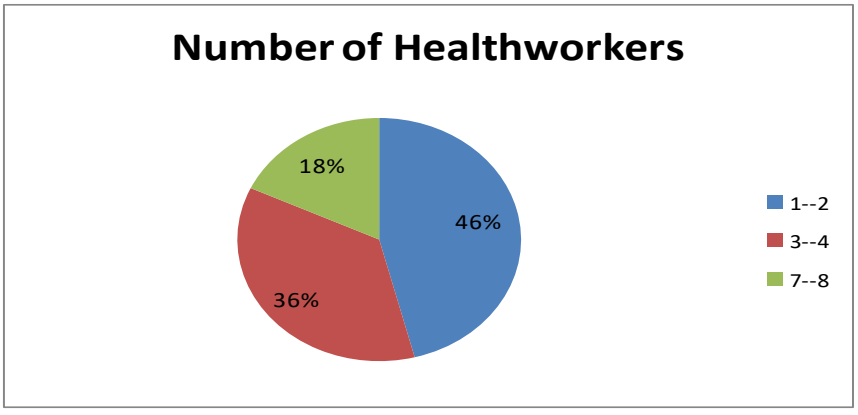

Figure 3: Number of Health workers

Forty six percent of the health facilities had 1-2 nurses.

4.8.2 Training of the skilled attendants

The type of training a health worker had undergone is an important factor in determining health facility utilization during childbirth because it determines the care a mother with obstetrics emergencies receives when they are taken to the facility. The study sought to find out the type of training/ qualifications that the various health workers had in the district and results are shown in Table 7.

Table 4.18 Trainings attended by the skilled attendants

Trainings undergone	Frequency	Percentage
Essential Obstetric care	2	18
Focused Antenatal Care	7	64
Manual removal of placenta	1	9
Essential Obs Care & FANC	1	9

Majority of the health workers were trained on Focused Antenatal Care 64%, 18% were trained on essential obstetric care, and only 9% were trained on manual removal of placenta.

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Majority of H/W trained on FANC while during their basic training while only one nurse was trained on comprehensive reproductive health and had the technical knowhow on how to remove a retained placenta.

5.2 Conclusion

Majority of the health workers were trained on FANC while during their basic training while only one nurse was trained on comprehensive reproductive health and had the technical knowhow on how to remove a retained placenta. Forty six percent of the facilities had one to two nurses allocated to give service.

5.3 Recommendation

On-job training of the health workers on comprehensive reproductive health and all update on reproductive health issues to enhance competency in service delivery.

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