DETERMINANTS OF BIRTH PLACE AMONG WOMEN OF CHILD BEARING AGE IN MTAA LOCATION, KWALE COUNTY, KENYA

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ABSTRACT

This is a Cross-sectional analytical community based study on determinants of a birth place among reproductive aged women in their last delivery in Mtaa location, Kwale County. The specific objectives of the study were to establish demographic, socio-cultural, environmental, and economic and health institutional factors associated with the choice of a birth place. The influence of the mother's knowledge, attitude and practice on choice of place of birth was also explored. Maternal and child health is a component of the SDGs. The study randomly sampled 231 mothers as participants. A pretested semi-structured questionnaire was used for quantitative data collection. Data were analyzed using the Statistical Package for Social Scientists (SPSS. 22). The key conclusions were that; the proportion of home delivery in Mtaa location was 74% while the national indicator is 36%; thus higher comparatively. Health facilities were located far from the community and there was a positive association between the number of children a woman had, and the choice of a birth place. The influence of cultural practices was noted to have played a negative influence on hospital delivery. Among the recommendations were that; men should be put on board when deciding maternal issues, health facilities should be placed closer to the community and an all inclusive approach should be instituted to curb the negative cultural belief influence. Results may be used to improve quality of delivery care for mothers, to inform on policy and to promote health education for service providers.

Keywords: Birth place, Delivery, reproductive age, Accessibility.

INTRODUCTION

A homebirth refers to unattended or an attended childbirth in a non-clinical setting, typically using natural childbirth methods, that takes place in a residence rather than in a hospital or a birth center, and usually attended by a midwife or lay attendant with experience in managing home births (Cheyney, 2008). Home birth was, until the advent of modern medicine, the *de facto* method of delivery. Since the beginning of the 20th century, home birth rates have drastically fallen in most developed countries, generally to less than 1% of all births. Infant and mother mortality rates have also dropped drastically over the same time period (Joseph et al., 2016). Women with access to high-quality medical care may choose home birth because they prefer the intimacy of a home and family-centered experience or desire to avoid a medically-centered experience typical of a hospital (Grunebaum & Chervenak 2015). Professionals attending home births can be obstetricians, certified or uncertified midwives, and doulas. In developing countries, where women may not be able to afford medical care or it may not be accessible to them, a home birth may be the only option available, and the woman may or may not be assisted by a professional attendant of any kind (WHO, 2012).
Globally over 600,000 women die each year from complications of pregnancy and child birth. Almost 90% of these deaths occur in Africa and Asia, rendering maternal mortality high with the largest discrepancies between developed and developing countries. Whereas

women in developed countries face 1 in 2800 chances of dying from pregnancy related causes, women in developed countries face 1 in 61 chances (Joseph et al., 2016).

In Africa and Asia, only 53.3% and 41.7% respectively of women gave birth with professional assistance. In less developed regions, the highest levels of unskilled attendant at birth were in East Africa (65.5%), south central Asia (61.1%) and Western Africa (59.1%) with the lowest levels in South America (13.2%) (WHO, 2009). In Kenyan coast and Kwale at large, cultural practices on new born are at rampant as rituals are conducted to cleanse the new born at few hours from birth (UNICEF, 2009).

In Kwale County, among 80 percent of women who attend antenatal clinics for safe motherhood services, only about 20% come back for child birth in health facilities under care of health professionals. This figure is way too low compared to the national indicator that stands at 45%. Despite efforts by the government as well as other nongovernmental organizations, the prevalence still remains low at 20%. This study therefore aimed at establishing barriers of accessibility to health delivery services among reproductive aged women in their last delivery in Mtaa Location, Kwale County, Kenya

LITERATURE REVIEW

Factors Associated with Home Deliveries

Age plays crucial role in determining place for birth. Studies indicate that older women who, most probably have had many children are most likely to receive no assistance during delivery. Results obtained by KDHS (2014) indicated that women aged 35 years and older are much more likely than younger women to deliver at home. Also, birth order of child influences choice for place of delivery. Births of higher order are more likely to occur at home (CBS, 2012). Hospital delivery is also higher in urban areas than in rural areas (98 percent and 94 percent, respectively), among women with at least some primary education (95 percent or higher), and among women in the higher wealth quintiles (95 percent or higher) (KDHS,2014). A study done in Mbeere district revealed that use of maternity services was significantly influenced by the number of children the mother had. As the number of children increased, utilization of maternity services reduced (Mwaniki et al, 2012). After the fifth or sixth pregnancy, women are more likely to have complications, including high blood pressure, anemia and abnormal presentation of the baby. The main risks are problems caused by weakened muscles in the womb (UNESCO, 2010).

Also significant in determining skilled delivery is the knowledge attitude and practices of the mothers**.** In the year 2000, family care international (FIC) conducted extensive baseline survey in three countries; Kenya, Tanzania and Burkina Faso. A substantial number of community members raised concerns about the interpersonal communication skills of maternity care providers and the way pregnant women were treated at health facilities. Skilled attendants at health facilities were always described as physically abusive or neglectful at best. Nurses/midwives were sometimes described as cruel, impatient, unsympathetic and insulting. Some community members reported that nurses told maternity patients that their discomfort was “self-inflicted” and therefore they were not entitled to complain of discomfort or pain (FCI, 2005). Among women in one study who delivered at home, although they believed it was safer to do it in a health facility; 21% said they stayed at home because healthcare staff were unkind. Other studies have also found that health workers can be harsher with clients who have little or no education or who are from different ethnic groups. Women in Sudan were ashamed of being poorly dressed in front of health workers

(who were generally of higher socio-economic class) and were afraid of health workers who would react negatively to their illiteracy. These feelings deterred many women from using formal maternal health services (Campbell et al., 2009).

A study carried out in Yemen revealed that a majority the women chose home despite acknowledging the importance of their medical needs because of fear of bad experience of institutional delivery, including being forced to deliver lying on their back, attitude of superiority on the part of health providers, lack of authority during birth, inability to have questions answered, separation of baby and mother at the health facility (Abebe, Berhane & Girma, 2012). A study conducted through focus group discussion regarding dissatisfaction with the quality of maternal care, women gave various reasons which include shortage of drugs and essential supplies, unfriendly staff that were not committed to their work, poor quality and inadequate quantity of food in health facilities (Mwaniki , 2008).

The high maternal mortality rates in developing countries are also attributable to the socio-cultural factors. These factors include taboos, beliefs and cultural practices. Some beliefs in many rural communities have been blamed of infidelity (Sakeah et al,.2014). In parts of Papua New Guinea, it is believed that delivering at home would contaminate the home. Women in labor therefore have to leave home to labor sometimes alone in the bush or other secluded places (WHO, 2013). It was further noted that, women lack control over their lives and was much reflected in limited decision making. For example, numerous studies in Africa and South Asia found that other family members (husbands, and mother in-laws) often made decision about where a woman could deliver. In Pakistan, two thirds of women who delivered at home did so because their husbands or family members forbade hospital delivery, while many women in South Asia and parts of Africa needed husbands permissions to visit a health facility or must be escorted. When husbands were away, women rarely use even nearby health services (Kanini , 2013).

The high level of maternal deaths in developing countries has also been attributed to the non-availability of services and poor utilization of these services. Accesses to quality care during pregnancy and especially at delivery is a crucial factor in explaining the disparities in the maternal mortality and morbidity between developing and developed world (Karkee, Binns & Lee ,2013). Access means services are available and within reach of women who need them. Good services require that health care providers have adequate clinical skills and necessary equipment and supplies and that referral system function well enough to ensure that women with complications get essential treatment (Karkee, Lee & Khanal 2014).

In most rural areas, one in three women lives more than five kilometers from the nearest health facility. The scarcity of vehicles especially in rural areas and poor road conditions can make it extremely difficult for women to reach nearby health facility. Walking is the only mode of transportation even for women in labor (Pfeiffer & Mwaipopo, 2013). In most cases, access is defined in terms of distance or more specifically time and financial access. Rural areas area considered to have access to health care if the travel time is less than 30 minutes (World Bank, 2001).

Theoretical Statement

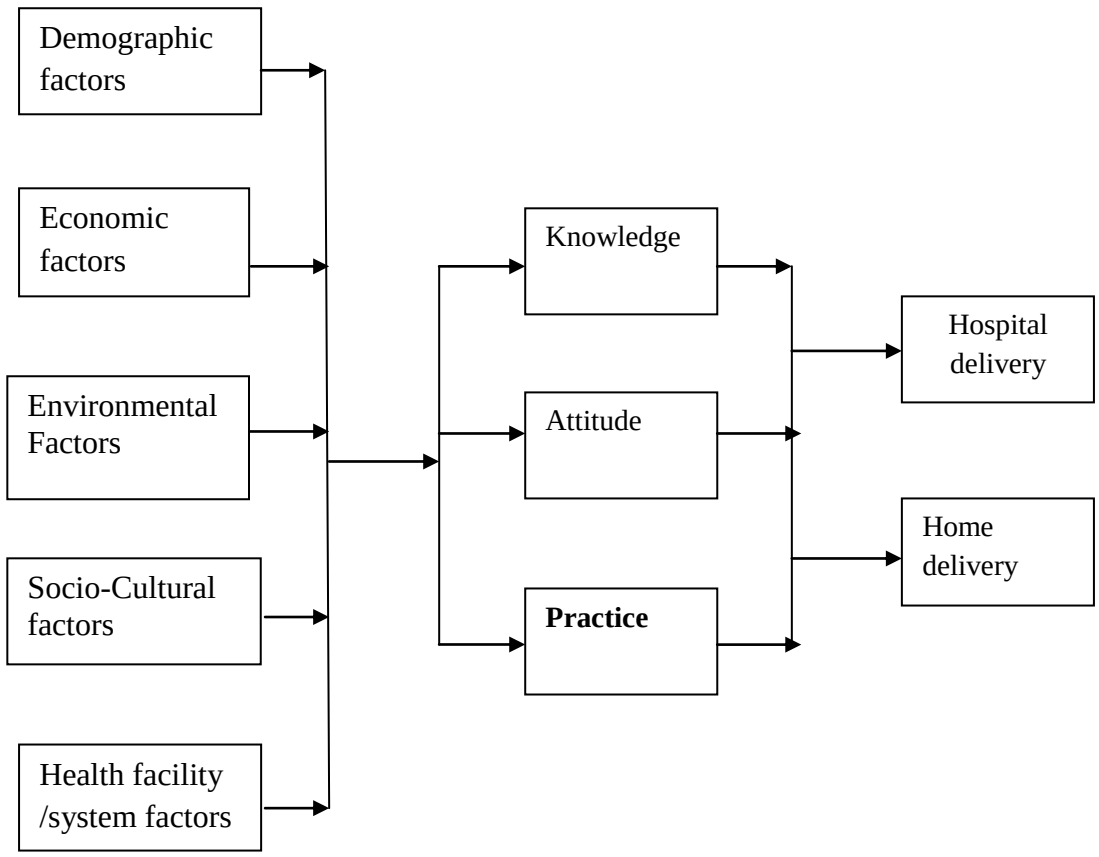
The research was guided by the theory of planned behavior (TPB) Ajzen (2011) which adopted a cognitive approach to explaining behavior and centers on individual attitudes and benefits towards a behavior. The integrative model used in this study is the most recent

formation of Fishbein and Ajzen's (1977) reasoned action approach. The integrative model of behavior prediction points attention to skills and environmental barriers as moderators of the intention – behavior relationship. It takes a reasoned action approach to understanding behavior, which holds that; although an infinite number of variables may in some way influence behavior, only a small number of variables need to be considered to predict, change or reinforce a particular behavior in a particular population.

Although knowledge, accessibility and culture of reproductive age women play a role to influence a birth place; attitude of the community may also moderate the choice of a birth place, either hospital or home. These factors were used to construct the conceptual framework.

CONCEPTUAL FRAMEWORK

Background Factors Proximate Factors **Outcome factors**



METHODOLOGY

Data was collected using Quantitative methods among the primary respondents using semi-structured questionnaires. The study population was women of reproductive age with children below five years of age who were residents of Mtaa location, Kwale County. Cluster sampling method was used, where all the villages in the sub-location were clusters. Stratified sampling was used to come up with the number of households in each cluster. The first household to be sampled in each cluster was determined after throwing a pen on the front door of the village elder's house. The direction of the tip of the pen determined the first

household and the direction of the study, until the sample size is reached. Data were analyzed using the Statistical Package for Social Scientists (SPSS.22)

RESULTS

Socio-Demographic Characteristics

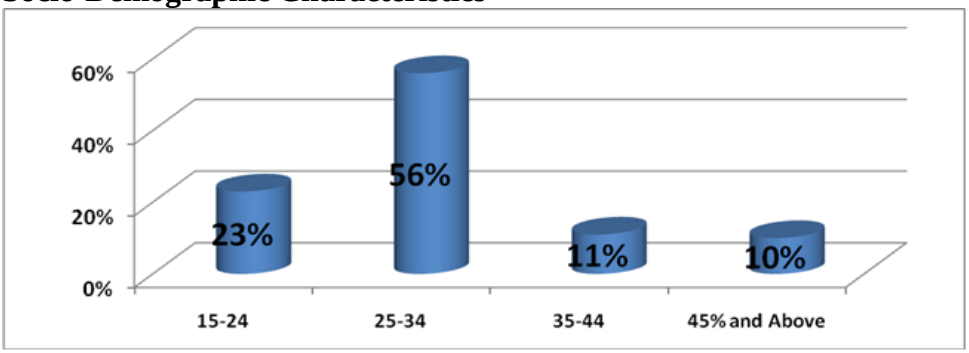


Figure 1: Age of respondents: (n= 231)

More than a half of the respondents were between the ages of 25-34 years of age, while only 10% were 45years and above. The mean age group was 35years with a standard deviation of 11.2.

Marital status of respondents

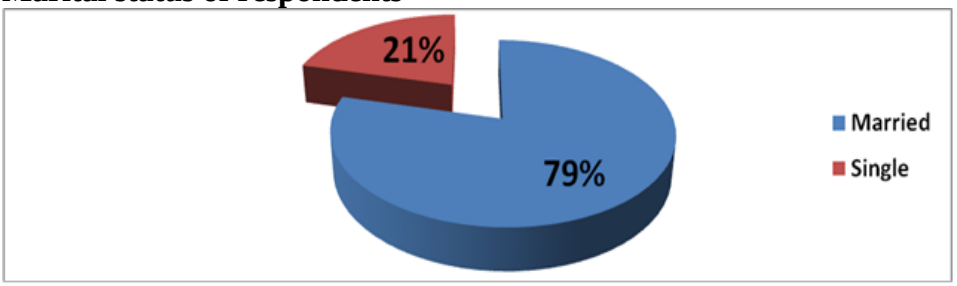


Figure 2: Marital status (n=231)
Majority of the respondents (79%) were married, while the rest were single.

Parity of respondents (n=231)

Majority (67%) of the respondents had 3-5 children, while 23% had 1-2 and 10% had 6 children and above.

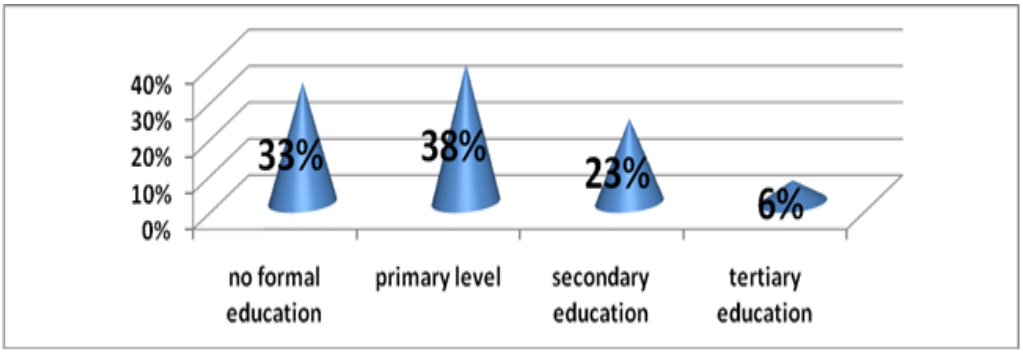


Figure 3: Level of education (n= 231)
Only 5% of the respondents were primary dropouts, while the rest completed primary level and beyond.

Occupation of respondents

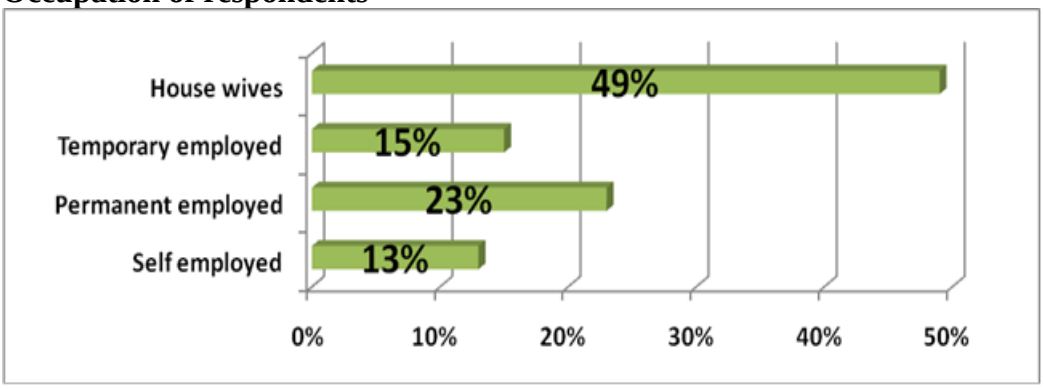


Figure 4: Occupation of the respondents (n= 231)
Almost half (49%) of the respondents were house wives, while the least (13%) were self-employed.

Religion of respondents

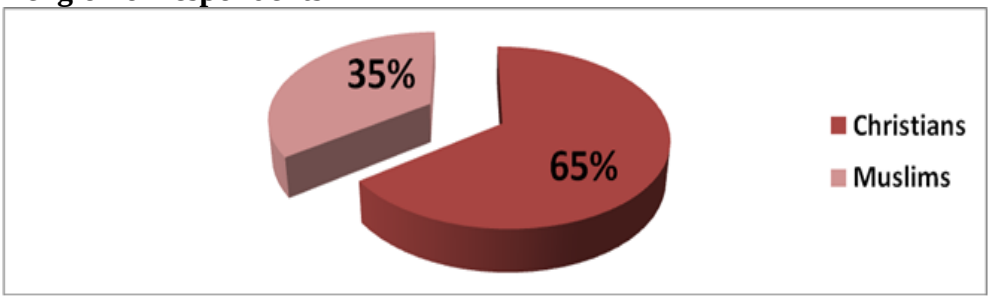


Figure 5: Religion of the respondents (n= 231)
Three quarters of the respondents (65%) were Christians, while the rest were Muslims.

Proportion of Home Delivery

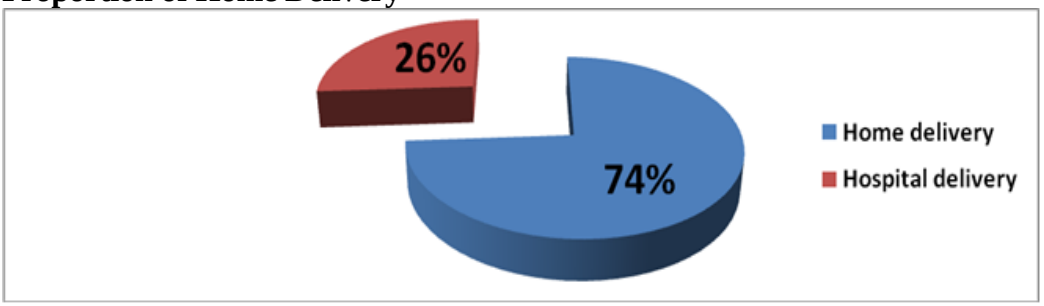


Figure 6: General proportion of home delivery (n= 231)
Majority (74%) of the respondents delivered at home, while the rest did it at hospital.

Table 1: Proportion by age (n= 231)

Age in years	Home delivery	Hospital delivery	Total aged respondence	Prevalence
15-24 years	23	28	51	45%
25-34 years	109	13	122	89%
35-44 years	23	10	33	69%
45-55 years	16	9	25	65%
All Ages	171	60	231	74%

The prevalence of home delivery was higher (89%) at the age group of 25-34 years of age and lowest at the 12-24 years of age at 45%.

Table 2: Proportion by marital status (n= 231)

Marital Status	Home delivery	Hospital delivery	Total respondence	prevalence
Married	155	34	189	82%
Single	16	26	42	38%
General prevalence	171	60	231	74%

The prevalence among married women was the highest (82%), while that of single women was at 38%.

Table 3: Proportion by level of education (n= 231)

Level of education	Home delivery	Hospital delivery	Total response	Prevalence
No formal education	62	11	73	86%
Primary education	72	25	97	74%
Secondary education	31	14	45	68%
Tertiary education	6	10	16	37%
General prevalence	171	60	231	74%

As the level of education rises; the prevalence of home delivery also goes down (from 86% to 37%).

Table 4: Proportion of home delivery by occupation (n= 231)

Occupation	Home delivery	Hospital delivery	Total response	prevalence
House wives	113	13	126	90%
Temporary employed	20	7	27	74%
Permanent employed	30	19	49	61%
Self employed	8	21	29	27%
	171	60	231	74%

House wives had the highest (90%) prevalence, whereas the self employed women had the lowest (27%) prevalence of home delivery.

Table 5: Proportion by distance to the nearby health facility (n= 231)

Distance	Home delivery	Hospital delivery	Total response	Prevalence
Up to 30 minutes	7	16	23	30%
31- 60 minutes	120	21	141	85%
61 and above minutes	44	23	67	65%
	171	60	231	74%

Majority of the respondents (85%) used between 31 – 60 minutes the nearby health facility, while only 30% used up to 30 minutes to the nearby health facility.

Accessibility to Delivery Services

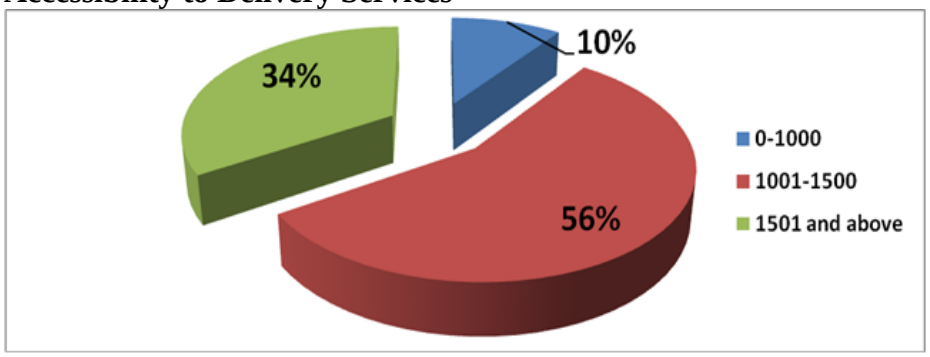


Figure 7: Cost of home delivery (Those who delivered at home: n= 171)

More than a half (56%) of the respondents paid between 1001 and 1500 for home delivery of their youngest children.

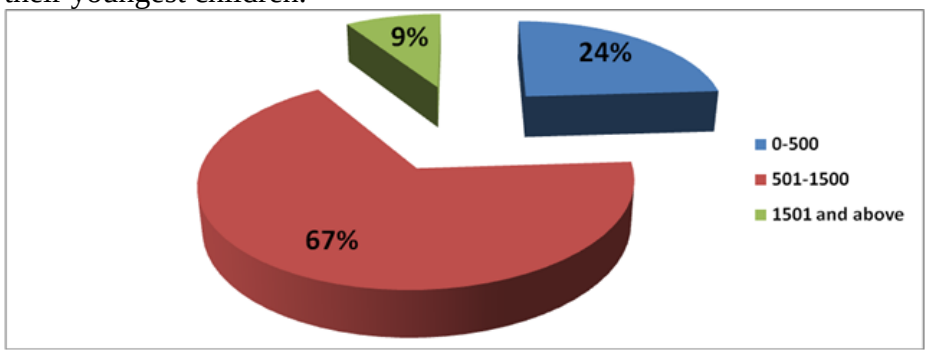


Figure 8: Cost of hospital delivery (n= 60)

Majority (67%) of the respondents paid between 501-1500, while the rest paid up to 500 and 1501plus.

Table 6: Analysis of Accessibility to Delivery Services **(N= 231)**

Place of delivery	Variable	Payment	Percentage
Home delivery	Cost of delivery	Up to 1500	34%
Hospital delivery	Cost of delivery	1500 and above	66%

Majority of the respondents (66%) paid more than 1500 to access

Distance to nearby health facility (n= 231)

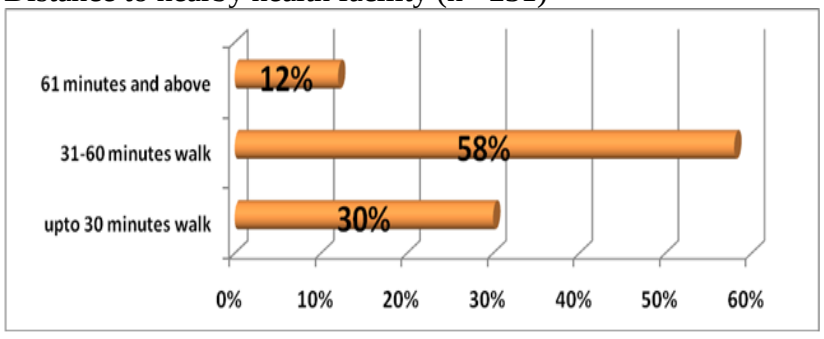


Figure 9: Distance to nearby health facility (n= 231)

Less than a half (30%) of the respondents took up to 30 minutes to arrive at the nearby health facility, while the rest took more than 30 walking to the nearby health facility.

Cultural Practices

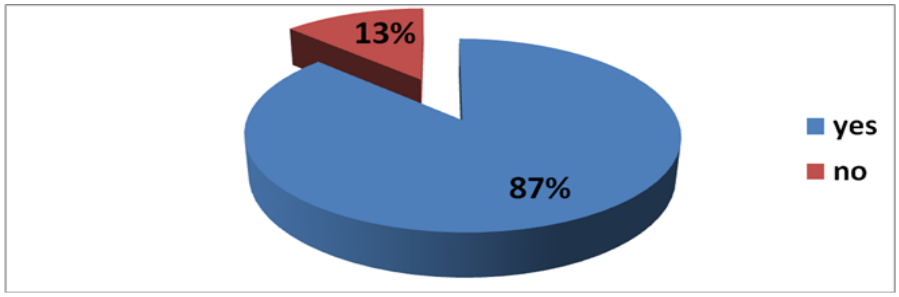


Figure 10: Existence of cultural practices (n= 231)

Majority (87%) of the respondents said there exists cultural practices, while the rest said there was not.

Cultural Practices

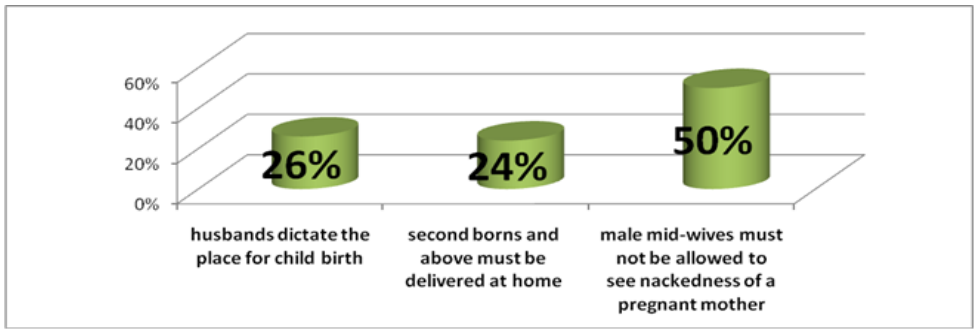


Figure 11: Cultural practices influencing choice of a birth place (n= 201)

Half of the respondents (50%) said male mid-wives were not allowed to see nakedness of a pregnant woman while the least said as fro second birth order; women were to give birth at home.

Level of Knowledge on Importance of Hospital Delivery

This section describes the level of knowledge on the importance of delivering in hospital, where a score was made from series of yes/no questions where yes was given a higher score such as *do you know the danger signs as a result of delivering at home.* Those women scoring below the 50th percentile were regarded as having a poor knowledge; whereas those with scores above 5oth percentile were regarded as having a good knowledge.

Table 7: knowledge on Importance of Hospital Delivery

Variable	Place of Delivery		
	Home Delivery	Hospital Delivery	
Good knowledge	160 (73%)	59 (27%)	219 (100.0%)
Poor Knowledge	7 (58%)	5 (42%)	12 (100.0%)
Total	167 (72%)	64 (28%)	231 (100.0%)

Benefit associated with hospital delivery

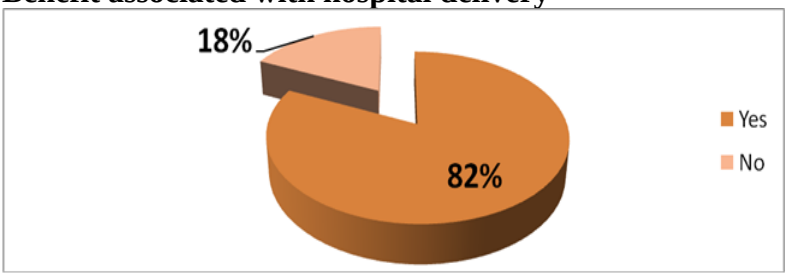


Figure 12: Benefit associated with hospital delivery (n= 231)

Majority of the respondents (82%) there were benefits associated with hospital delivery, while the rest said there were none.

Table 8: Benefits of hospital delivery (n= 189)

Benefit	Frequency	Percentage
Availability of referral system	151	80%
Emergency services in case of operations	145	77%
Presence of trained personnel	164	87%

Majority of the respondents (87%) said that there were well trained midwives among other benefits.

Attitude on Hospital Delivery

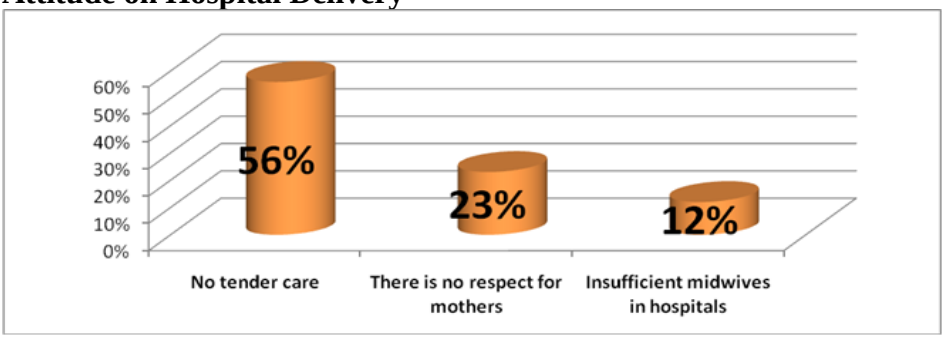


Figure 13: Opinion on hospital delivery services (n= 60)

More than a half of the respondents (56%) said they felt that there was no tender care in hospitals, while 12% felt that the midwives were insufficient.

Inferential Analysis

Table 9: Inferential Analysis

Variable	$\chi 2$	Ω	Level of confidence	Significance	Odds Ratio
Age of respondents	26.885	10.627711	P ‹ .05	yes	1.0586- 3.3981
Marital status	34.467	14.2888123	P ‹ .05	yes	0.82672-0.987265
Level of education	6.601	.010189	P ‹ .05	yes	0.42318-0.987265
Religion of respondents	.267384	1.2301	P ‹ .05	no	1.01672-1.072765
Parity of respondents	.312210	1.0154	P ‹ .05	no	1.827665-2.67265

DISCUSSION

Demographic factors influencing choice of place of delivery

The findings show that the prevalence of home delivery was higher (89%) in the age group of 25-34 years of age. These results are in consistent with the findings by the Kenya Demographic Health Survey (2014) which showed that Nine in ten mothers reported seeing a skilled provider at least once for maternity services for their most recent birth in the five-year period before the survey. Maternity care is slightly more common among mothers age 20-34 compared with those outside this age group. Coverage is also slightly higher in urban areas than in rural areas (98 percent and 94 percent, respectively), among women with at least some primary education (95 percent or higher), and among women in the higher wealth quintiles (95 percent or higher).

Home deliveries among married women was the highest (82%), while that of single women was at 38%. This shows that single women are more conscious of their health, and they can make good decisions for their life. It also shows that, women left alone to manage themselves can make better decisions that when controlled by other people, especially husbands.

The results also show that as the number of children a woman had increases; increased are also the chances of giving birth at home. This shows that the confidence of women increases and a feeling of experienced is exhibited by older women who have given birth more times. The level of education is found to make difference in the results. As the level of education rises; the prevalence of home delivery also goes down (from 86% to 37%). These results concur with the findings by KDKS (2014) who reported that; about one-quarter of births to mothers with no education receive skilled care compared with 85 percent of births to mothers with secondary or higher education.

Knowledge influencing choice of place of delivery

Majority (82%) knew that there were benefits as results of giving birth in hospital. Most (95%) of the respondents mentioned danger signs associated to giving birth at home. The above results agree with those by Rejendra (2004) whose findings revealed that majority of women know the importance of giving birth in a health care setting under care of trained midwives, but the sole decision to do so lies in a third party. The same results have been backed in this research where majority (82%) of the married women gave birth at home while only 32% of the single women gave birth at home.

The results show that educational level of a woman played a key role in deciding a place of birth. In this study, prevalence of home delivery is seen to go down as the women's level of education rises. The prevalence of home delivery is 82% for women without formal education, while for those with tertiary education is as low as 37%. These results were also backed in the KDHS (2014) which stated that education gives women power to decide their health destiny and always right choices are made by those who pursue higher education.

Attitude influencing choice of place of delivery

More than a half (62%) of the respondents said that they don't prefer going to deliver in a healthcare setting because the midwives were not sympathetic to their condition. These results concur with results from a study conducted in Sudan by FCI (2006), who found out that women complained of being harassed and humiliated by harsh health workers who saw

them as primitive and illiterate. The same results were backed by Gay Julio (2008) in a study conducted in Yemen among women of reproductive age. He found out that despite women knowing the importance of delivering at home; they discouraged by attitude of superiority demonstrated by health workers.

Cultural beliefs influencing choice of place of delivery

The study found out that 50% of the respondents stated that in their community, male midwives are not allowed to see the nakedness of pregnant women, 24% stated that from the second born baby and above, should be given birth at home by traditional midwives and 26% said that the husbands are the decision makers on where a woman should give birth assisted by the mother to the husband. These results seem to be in line with those by Julius Ashford (2008) conducted among reproductive aged women in West Africa who reported that those who gave birth at home did so because family members forbade hospital delivery. In Pakistan, women were given permission to go for delivery by husbands and mother in laws and were escorted by family members.

Accessibility to health facility that determine the choice of a place of delivery among women of reproductive age

More than a third (67%) of the respondents paid up to Ksh 1500 for delivery services compared to 56% of those who paid for the same services up to 1500 at a traditional birth attendant. This shows that the community view health services as being expensive in such a way that they cannot afford. It also shows that they community perceives hospitals delivery services as being for the elite and high class people in the society.

Only 30% of the women took a half an hour to reach the nearby health facility. The rest took up to 2 hours to reach nearby health facility by foot. This demonstrate that the health facilities are far from the community and therefore being a factor for high prevalence of home delivery (74%)

CONCLUSIONS

The study concludes that the prevalence of home delivery in Mtaa location is higher at 74% compared to the National Indicator at 36%. With this; married women were seen to have higher prevalence of 82% compared with single women at only 38%. There is a clear gap of the decision makers who, in this study happen to be mostly husbands. The trend of home delivery goes down as the level of education of a woman rises. Education in Mtaa seem to be a challenge, as 71% of the respondents are primary level and below, with 33% completely without formal education.

There is a grown negative attitude of women toward maternity services as 62% of the respondents said they would rather go to a midwife because the care providers are hostile and not sympathetic to their condition. Culture is also a huge hindrance towards utilization of maternity services. This is demonstrated by the fact that 50% of the respondents said that in their community, their husbands do not allow them to be delivered by male mid wives among other negative cultures. The health facilities were noted to be very far from the community since only 30% of the respondents could walk for a half an hour to reach nearby health facility, besides them being expensive for the community to afford. 67% of the respondents paid up to 1500 just for delivery as compared to only 56% of those who paid the same for

services by midwives. A chi square test analysis done to all the key variables has shown that there is association between the religion of a woman and the choice of a birth place. It has also revealed an association between the number of pregnancies a woman is in and the choice of a birth place.

RECOMMENDATIONS

On the basis of the foregoing conclusions, the study recommends the following;
In order to scale up the trend of hospital delivery in Kwale County, men should be brought on board during decision making and empowering them with knowledge of safe motherhood. Sub County Health Management Teams and other stakeholders to promote this activity. Raising the educational level of a woman means improving her health decision making capacities. As the level of education the community went higher, there were inverse proportional results, since the prevalence of home delivery went down. The County education office should spearhead this item with assistance of provision administration.

The Sub County Health Teams should work closely with the administration so that the issue of negative attitude towards health delivery services is addressed. Cultural beliefs are also as result of knowledge gap and sensitization should be done by local health officers, and local administration, while involving the community leaders.

The issue of accessibility in terms of distance and cost of care should squarely and carefully be addressed. Policy makers at County level should prioritize the need of more health facilities closer to the communities.

ACKNOWLEDGEMENTS

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