

Implementing a Community-Based Participatory Approach to Promote Health Facility Delivery among Women of Reproductive Age in Kanamai Area, Kilifi County

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Abstract

Maternal utilization has been low over the years in Kenya. Approaches to establish safe motherhood through promotion of health facility have been equally fronted. This study applied certain aspects of community education approach encompassing group discussion and community dialogue to provide a clear insight of how the approach is a vital tool. Community based cross sectional study was conducted in Kanamai sub-location, Kilifi County to recruit 232 women selected by simple random sampling technique. The data were collected using pre-tested semi-structured questionnaires and the collected data was coded, entered, cleaned, and analysed using R for Windows (version 4.0.3). Sixty-nine percent (69%) of women advocated for the delivery at the designated health facilities. Independent factors that were found to influence health facility based delivery in this study were being employed (OR = 12.42, 95% CI: 6.25 - 24.70, $p < 0.0001$), having given birth to 3-4 children, (OR = 2.56, 95% CI: 6.25 - 24.70, $p = 0.0062$) and rating of both group discussion (OR = 0.15, 95% CI: 0.03 - 0.66, $p = 0.0041$) and community dialogue (OR = 0.21, 95% CI: 0.08 - 0.59, $p = 0.0013$) to be low. Leading by the example set by the government of offering free maternal services, engaging the key stakeholders through approaches such as group discussion and community dialogue could go a long way in increasing delivery in the health facilities thus tremendously lowering mortality rate for both the baby and the mother which could otherwise occur when the mother doesn't get services of a specialized personnel.

Keywords: Advocacy, Delivery, Community Education Group Discussion, Community Dialogue.

Introduction

Improving the well-being of mothers, infants, and children is an important achievement for any nation. Their well-being determines the health of the next generation and can help predict future public health challenges for families, communities, and the healthcare system. The period of giving birth is very critical in ensuring the continuity of the generation. Thus, it needs to be handled by a professional individual ideally a skilled birth attendant (SBA), and supported by an enabling environment [1]. Delivery assisted by skilled

professionals within the health facilities have been shown to contribute to better outcome of pregnancy and childbirth, and it is one of the indicators of progress towards achieving Millennium Development Goal (MDG) number 4 and 5, which aims at reducing child mortality and improving maternal health [2]. Skilled birth attendant plays a vital role in the reduction of maternal and newborn morbidity and mortality [3, 4].

Unfortunately, despite of this well-stipulated responsibility bestowed on them, maternal mortality is still a global problem. Women in developing countries are still experiencing

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maternal challenges during the time of pregnancy, labor, and delivery [5]. Pregnancy and childbirth are a major headaches for mothers in less developed and economically underprivileged countries [6].

Even though tremendous strides have been made to advocate for delivery assisted by a skilled professional, many still do not utilize these services. For instance, in a report prepared by UNICEF [7], they showed that every year an estimated 60 million women give birth outside of health facilities, mainly at homes, and 52 million of these births occur without a skilled birth attendant [7], and mostly affected groups are those from poor backgrounds. In effort to improve the utilization of skilled birth attendant and maternal services, the Kenyan Government have fronted several approaches over the years. Some of the interventions that the Government has put in place included the launching of a Maternal and Newborn Health (MNH) Road Map in August 2010 and also rolling out free maternity services program. These efforts were all geared towards improving health facility-based delivery. In order for these targeted group to be able to appreciate these efforts lied down and utilize them, they need to be made aware through approaches such as community education.

Community education is a kind of education concerned with active creation and positive nurturing, and intentional communities which demonstrate respectful reverence for all life forms and the biophysical environment [8]. It encourages learners to actively apply concepts and information, skills, and attitudes to local situations. The emphasis of community education extends beyond mastery of knowledge, skills, and attitudes and into areas of active social reconstruction [9].

For the essence of understanding the role contributed by community education in advocating for health facility-based delivery, this study applied certain aspects of community education approach encompassing group discussion and community dialogue to provide

a clear insight of how an approach is a vital tool.

Material and Methods

Study Design and Target Population

This was a community-based cross-sectional study targeting all 570 women of reproductive age (15-49 years) with children less than 1 year.

Area of Study

The study was conducted in Kanamai Area, Kilifi County (formerly, Kilifi District).

Sampling, Data Collection, and Data Analysis

The study employed a simple random sampling using a sample frame constructed from the community health workers in each area of the Kanamai sub-location. The community health workers knew all the women of reproductive age in their area of jurisdiction. A sampling frame was constructed from such list, and later, a simple random sampling was done through the fishbowl technique to recruit the study participants. This study made use of primary data.

The data were collected for a period of 3 months by five research assistants who were recruited and trained in basic ethics of data collection and on the study instrument. The instrument for data collection was a structured interviewer-administered questionnaire. Pretesting of instruments was done at the Tezo sub-location, located in the Northern part of the county, after which necessary changes to the questionnaire was made before the main study. The data collected were entered into Microsoft excel (version 2010) then exported to R for Windows (version 4.0.3) for analysis.

Univariate statistics was explored to determine the descriptive statistics. For bivariate analysis, we used chi-square tests to measure the significance of relationships between the outcome variable and the predictor variables. Independent predictors were assessed using the logistic regression model. Odds ratio

(OR) and their 95% confidence intervals were calculated. A p-value less than 0.05 were considered significant.

Ethical Considerations

Ethical approval was sought from the Great Lakes University of Kisumu Ethics and Review Committee.

Permission was also granted by the heads of health facilities, and either written or verbal informed consent was obtained from the respondents. Participation in the study was on voluntary basis and confidentiality was assured and maintained in the entire data collection period.

Results

We collected data from 229 respondents out of our onset target of 232. This gave an overall return rate of 98.7%. The age of the respondents recruited for the study ranged between below 20 years and above 40 years. Women who were in the age group of 30 up to 39 years accounted for the highest proportion (58.95%) of the respondents. The majority of them (62.88%) had primary education, with most of them (58.08%) also reporting to be employed. Almost all the women were married (82.97%), and slightly more than half (52.84%) had given birth to 3-4 children (Table 1).

Table 1. Socio-demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Age	<20	21	9.17
	20-29	43	18.78
	30-39	135	58.95
	40≥	30	13.1
Education level	No formal education	43	18.78
	Primary	144	62.88
	Secondary	37	16.16
	Tertiary	5	2.18
Occupation	Unemployed	96	41.92
	Employed	133	58.08
Marital status	Single	11	4.8
	Married	190	82.97
	Divorced	25	10.92
	Widowed	3	1.31
Parity	0-2	59	25.76
	3-4	121	52.84
	5≥	49	21.4

Table 2 represents the ratings of both the group discussion and community dialogue conducted. The majority of the respondents

rated the standard of both group discussion (65.07%) and community dialogue (52.84%) conducted to be low.

Table 2. Group Discussion and Community Dialogue Conducted

Variable	Category	Frequency (n)	Percentage (%)
Group Discussion	High	23	10.04
	Moderate	57	24.89
	Low	149	65.07
Community Dialogue	High	34	14.85
	Moderate	74	32.31
	Low	121	52.84

Regarding their opinion on the preferable place of birth, most of the women (69%)

supported for delivery at the designated health facilities (Figure 1).

ADVOCACY FOR HEALTH FACILITY DELIVERY

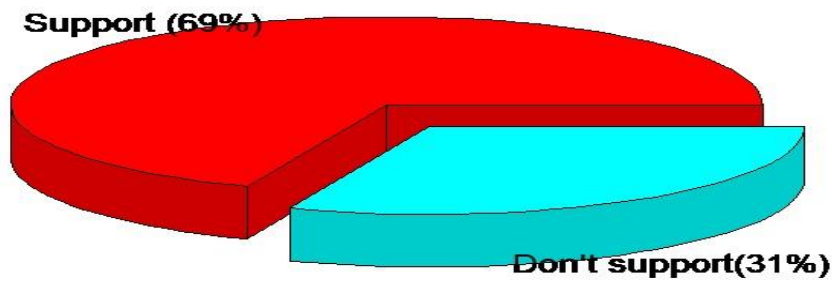


Figure 1. Advocacy for Health Facility Delivery

Table 3 presents the relationship between socio-demographic characteristics and advocacy for delivery in the health facility. This bivariate analysis revealed significant differences in advocacy for delivery in health facility related to education level ($p=0.01$), occupation ($p<0.0001$) and parity ($p=0.02$).

Majority of the women (57.59%) who had attained primary school education were in the forefront of advocating for delivery in the health facility. Similarly, women who were employed (75.32%) and had 3-4 children (42.25%) were also reported to front delivery in the health facility.

Table 3. Socio-demographic Characteristics Associated with Advocacy for Delivery in Health Facility

Variable	Category	Frequency n (%)	Advocates for delivery in health facility		p-value
			Yes [n (%)]	No [n (%)]	
Age	<20	21(9.17)	14(8.86)	7(9.86)	0.55
	20-29	43(18.78)	27(17.09)	16(22.54)	
	30-39	135(58.95)	98(62.03)	37(52.11)	
	40≥	30(13.1)	19(12.03)	11(15.49)	
Education level	No formal education	43(18.78)	30(18.99)	13(18.31)	0.01*
	Primary	144(62.88)	91(57.59)	53(74.65)	
	Secondary	37(16.16)	34(21.52)	3(4.23)	
	Tertiary	5(2.18)	3(1.9)	2(2.82)	
Occupation	Unemployed	96(41.92)	39(24.68)	57(80.28)	<0.0001*
	Employed	133(58.08)	119(75.32)	14(19.72)	
Marital status	Single	11(4.8)	7(4.43)	4(5.63)	0.57
	Married	190(82.97)	133(84.18)	57(80.28)	
	Divorced	25(10.92)	17(10.76)	8(11.27)	
	Widowed	3(1.31)	1(0.63)	2(2.82)	
Parity	0-2	59(25.76)	32(20.25)	27(38.03)	0.02*
	3-4	121(52.84)	91(57.59)	30(42.25)	
	5≥	49(21.4)	35(22.15)	14(19.72)	

In regard to the ratings of both group discussion (p=0.001) and community dialogue (p<0.0001) and their relation to advocacy for

delivery in the health facility, these differences were significant (Table 4).

Table 4. Group Discussion and Community Dialogue Associated with Advocacy for Delivery in Health Facility

Variable	Category	Frequency n (%)	Advocates for delivery in health facility		p-value
			Yes [n (%)]	No [n (%)]	
Group Discussion	High	23(10.04)	21(13.29)	2(2.82)	0.001*
	Moderate	57(24.89)	46(29.11)	11(15.49)	
	Low	149(65.07)	91(57.59)	58(81.69)	
Community Dialogue	High	34(14.85)	29(18.35)	5(7.04)	<0.0001*
	Moderate	74(32.31)	62(39.24)	12(16.9)	
	Low	121(52.84)	67(42.41)	54(76.06)	

Table 5 shows independent factors influencing advocacy for delivery in health facility. Women who were employed were 12.42 times (OR = 12.42, 95% CI: 6.25 - 24.70, p<0.0001) more likely to advocate for delivery in health facility compared with their counterparts who are unemployed. Women who had given birth to 3-4 children were 2.56 times (OR = 2.56, 95% CI: 6.25 - 24.70, p=0.0062) more likely to advocate for delivery in a health facility compared to those who fall in the

bracket of 0-2 in terms of giving birth. Additionally, women who rated the standard of group discussion and community dialogue to be low had reduced odds of 85% (OR = 0.15, 95% CI: 0.03 - 0.66, p=0.0041) and 79% (OR = 0.21, 95% CI: 0.08 - 0.59, p=0.0013) respectively of advocating for delivery in a health facility compared to their counterparts who rated the standard of group discussion and community dialogue to be high.

Table 5. Independent Factors Influencing Advocacy for Delivery in Health Facility

Variable	Category	Advocates for delivery in health facility		OR (95% CI)	p-value
		Yes [n (%)]	No [n (%)]		
Socio-demographic characteristics					
Age	<20	14(8.86)	7(9.86)	1	-
	20-29	27(17.09)	16(22.54)	0.84(0.28 - 2.53)	0.0935
	30-39	98(62.03)	37(52.11)	1.32(0.50 - 3.54)	0.6060
	40≥	19(12.03)	11(15.49)	0.86(0.27 - 2.79)	1
Education level	No formal education	30(70)	13(30)	1.54(0.23 - 10.33)	0.6415
	Primary	91(63)	53(37)	1.14(0.19 - 7.07)	1
	Secondary	34(92)	3(8)	7.56(0.89 - 64.44)	0.0994
	Tertiary	3(60)	2(40)	1	-
Occupation	Unemployed	39(41)	57(59)	1	-
	Employed	119(89)	14(11)	12.42(6.25 - 24.70)	<0.0001*
Marital status	Single	7(64)	4(36)	3.5(0.24 - 51.90)	0.5385
	Married	133(70)	57(30)	4.67(0.41 - 52.50)	0.2219
	Divorced	17(68)	8(32)	4.25(0.33 - 54.06)	0.2839

	Widowed	1(33)	2(67)	1	-
Parity	0-2	32(54)	27(46)	1	-
	3-4	91(75)	30(25)	2.56(1.33 - 4.94)	0.0062*
	5≥	35(71)	14(29)	2.11(0.94 - 4.71)	0.0761
Group Discussion					
Group Discussion	High	21(91)	2(9)	1	-
	Moderate	46(81)	11(19)	0.40(0.08 - 1.96)	0.3281
	Low	91(61)	58(39)	0.15(0.03 - 0.66)	0.0041*
Community Dialogue					
Community Dialogue	High	29(85)	5(15)	1	-
	Moderate	62(84)	12(16)	0.89(0.29 - 2.76)	1
	Low	67(55)	54(45)	0.21(0.08 - 0.59)	0.0013*

Discussion

Our study established that 69% of the women advocated for delivery at the health facilities. This figure is slightly higher of the national average of 62% on delivery assisted by skilled birth attendants [10] in health facilities. In another study conducted on the utilization of public health facilities after the implementation of free maternal services (FMS) program in Kenya, 97% of women were reported to deliver in the various health facilities [11]. Indeed, free maternal healthcare has been shown in various studies [12, 13] to increase access and utilization of maternal services. The majority of the participants who took part in the study and greatly advocated for health facility-based delivery were women aged 30-39 years. Although the link between age and health facility utilization during pregnancy has not been exhaustively settled, prior studies have corroborated the influence of age and utilization of maternal services at the health facility during pregnancy.

Ahmed and Abdel-Rahman [14] reported that younger women (18-20 age groups) were more likely to give birth with the assistance of skilled birth attendants. Bell [15] added that lower utilization of skilled birth attendants was observed among mothers who were over 35 years of age. Similar findings were also reported by KDHS, (2008-09) [10] and Wanjira [2]. Mothers' age serves as a proxy for women's accrued knowledge of health care

services, which may have a positive influence on the use of health services. Additionally, a combination of both women's age and their literacy level [16] also plays a significant role in influencing health facility utilization. For instance, because of developments in modern medicine and improvements in educational opportunities for women in recent years, younger women might have an enhanced knowledge of modern healthcare services and place more value upon modern medicine. Increased education influences service use by increasing female decision-making power, changing marriage patterns [17], and improves on health-seeking behavior through a higher level of health awareness and greater knowledge of available health services [18].

Being employed was significantly associated with the advocacy for delivery in the health facility. Women who were employed were in the main group who advocated for delivery in health facility. A plausible explanation would be that these women who were working are able to have some stable economic grounds or save some money to be used in facility-based delivery and also are more aware of existing modern health care services and can afford those services easily. Pradhan [19] pointed out that women with low economic status are less likely to use modern facilities, whereas women with higher economic status takes the initiative in seeking care for themselves and their children. Babalola and Fatusi [20] reported that the use of skilled assistance at delivery is more

than four times higher among women from rich and very rich households compared to the women from very poor households. Further, Gabrysch and Campbell [21], affirms that women who are working and earning money are able to save and decide to spend their savings on health facility delivery under skilled care.

Our study findings also indicate that type of parity also was significant factor in influencing advocacy for delivery in the health facility. Women who had given birth to 3-4 children were the more likely group to advocate for health facility delivery. In our previous study [22], we observed that women's decisions on the place of delivery tend to be influenced by their evaluation of the comparative analysis based on their past experience whereby those who had given birth to 2-3 children and these children were alive, were reluctant to deliver at health facility. A clear explanation for this study findings is that due to their past experience in giving birth at the health facility, these women will encourage their counterparts who were giving birth for the first time or those they presumed to be at risk to deliver in the assistance of skilled birth attendance. Group discussion and community dialogue were the main approaches used in this study to assess their effectiveness in influencing the participants in advocating for health facility delivery. Majority of the participants reported the use of these two approaches were still low and there is need to fully embrace them so that they could significantly improve health facility-based delivery. Study conducted in several sites have shown the importance of fully involving a community in a study. Miltenburg [23], reported that community participation can provide an avenue for increased understanding and more effective execution of strategies that strive for to improve outcomes. The study has shown that majority (69%) of the participants fully advocated for health facility delivery despite the approaches (group discussion and community dialogue) used to engage the

community reported to be low. Therefore, to help in improving the turnout of health facility delivery, there's need for the concern stakeholders to fully engage the community and ensure that the approach used is well articulated and fully embraced by the target groups.

Conclusion

Leading by the example set by the government of offering free maternal services in Kenya, engaging the key stakeholders through approaches such as group discussion and community dialogue could go a long way in increasing delivery in the health facilities thus tremendously lowering mortality rate for both the baby and the mother which could otherwise occur when the mother doesn't get services of a specialized personnel.

Abbreviations

FMS: Free Maternal Services; KDHS: Kenya Demographic and Health Survey; KNBS: Kenya National Bureau of Statistics; MDG: Millennium Development Goal; MNH: Maternal and New-born Health; OR: Odds Ratio, UNICEF: United Nations International Children's Emergency Fund; WHO: World Health Organization

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Conflict of Interest and Funding

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Authors' Contributions

JSM was the lead researcher in this study. OWY and JK, greatly assisting with the reviewing of the entire manuscript. All authors read and approved the manuscript prior to publication.

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