

INTERPERSONAL COMMUNICATION FORMS USED TO CONVEY MESSAGES FOR REDUCING MATERNAL AND CHILD MORTALITY IN WEST POKOT COUNTY, KENYA

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ABSTRACT: *The study investigated the use of interpersonal communication in promoting maternal and child survival in West Pokot County, Kenya. The level of success of this intervention approach has been much lower than in many Counties in Kenya. Based on the study, this paper examines the different forms of interpersonal communication used to convey messages aimed at reducing maternal and child mortality rate. The study adopted a mixed method research approach. A sample of four hundred (400) respondents was selected from the County. Cluster sampling and purposive sampling techniques were used to select respondents. Qualitative data were collected using four key informant interviews and focus group discussions. The qualitative data was analysed thematically and then presented narratively. On the other hand, quantitative data was analysed using descriptive statistics, then presented using a combination of narrative explanations, tables and graphs. The results from the research revealed that face-to-face interpersonal communication was the most popularly used form of interpersonal communication at 82%, while the use of mobile telephone was the least used with only 15%. The study recommends that the government should formulate a policy that incorporates software-based programs with mobile phone platforms to be used by Community Health Workers in prevention, management and monitoring of maternal and child health. This approach has proved successful in other developing countries to improve maternal and child survival.*

KEYWORDS: Forms, Interpersonal Communication, Health Promoters, Convey Messages, Reducing Child and maternal Mortality, West Pokot County, Kenya

INTRODUCTION

Since the adoption of Millennium Development Goals (MDGs) now SDGs by 189 countries, including Kenya in September 2000, many countries designed and implemented various interventions to address the eight targeted goals namely; eradication of extreme poverty and hunger, achieving universal primary education, promotion of gender equality and empowerment of women, reduction of child mortality, improving maternal health, combating HIV/AIDS, malaria and other diseases, ensuring environmental sustainability and development of a global partnership for development (GOK, 2013).

Maternal and Child health has received high attention in Kenya. In 2013, it was reported that there was an improvement of maternal and child health care with a reduction in the number of maternal and child mortality rate worldwide. The report indicates that the number of women who die each year from causes related to pregnancy or child birth dropped from 543,000 deaths in 1990 to around 287,000 deaths in 2010 (WHO, 2013). The WHO (2013) report attributes this improvement to campaign's effort and other support by various governments. Among the efforts by these governments and other stakeholders in health sectors include using various communication strategies targeting both the policy makers and the consumers to bring about

behaviour change. These agencies have used mass media, advocacy, celebrities, sport stars, religious and civic leaders to promote maternal and child health care in various countries worldwide, especially in the developing countries where it records high maternal and child mortality rate.

According to the WHO (2013), countdown profile reports, 30 countries, achieved reduction of maternal mortality rate of 50% between 1990 and 2010 while three countries of Equatorial Guinea, Nepal and Vietnam achieved 75%. Over fifty countries reported reduced mortality rate during the period between 2000 and 2010, faster than during the previous decade. In East Africa, maternal mortality rate has also improved with Uganda recording 310 per 100,000 live births, followed by Rwanda with 340, Kenya 362, Tanzania 460 while Burundi has 800 mortality rate per 100,000 live births. Regarding under five (5) child mortality rate, the report records improvement with Rwanda leading with 54 per 1000 births, Tanzania 68, Kenya 73, Uganda 96 while Burundi has 139 per 1000 births (WHO, 2013; GOK, 2017).

In 2006, the Kenya government came up with a community strategy aimed at empowering Kenyan households and communities to take charge of improving their own health and that of their respective children. The strategy targeted every household with health messages, especially on the health of expectant mothers and children under five years who are normally vulnerable to various diseases and other related ailments. The government, through community strategy, aimed at prevention and management of common maternal and childhood illnesses at the community level with the main objective of attaining universal coverage of cost-effective child survival interventions and hence reduction of maternal and child mortality rate (MOH, 2007). Despite this campaign effort aimed at reducing maternal and child mortality rates, the statistics are still high as shown by a KDHS report of 2014.

West Pokot County has recorded the highest maternal mortality rate of 488 per 100, 000 live births (GOK, 2013). In child health, the County has recorded low immunization rate with 43.2% of children below one year, having fully undergone immunization as required (CRA, 2013). This poor state of affairs has come about despite spirited attempts to increase health education.

Maternal and Child Survival Messages in the Kenya Context

The Community Health Workers (CHWs) and the Health Workers based at health facilities across Kenya are charged with the responsibility of educating expectant mothers through interpersonal communication on key maternal and child survival messages. This is normally done by CHWs when they visit their respective households and at health facility during clinic days. In such occasions, the health workers at the health facility have sessions reserved for health education every clinic day for those community members who have gone to seek for ANC and child immunization services (MOH, 2007). These maternal and child survival messages are passed by the health workers using different forms of interpersonal communication and these forms include one-on-one talks and small group discussions that have personal touch amongst the stakeholders like use of relevant examples. Other forms of interpersonal communication used include; lectures or teaching with demonstrations/use of teaching aids or pictures, counselling, video viewing coupled with discussions (MOH, 2014).

The MOH (2007) outlines the following as the main maternal and child survival messages that should be passed to the community members by health workers:

- Recognizing the warning or danger signs during pregnancy like anaemia, paleness inside the eyelids, or easily out of breath, swelling of legs, arms or face, spotting or bleeding from the vagina during pregnancy or profuse or persistent bleeding after delivery, severe headaches or abdominal pains, severe or persistent vomiting, high fever, the water breaks before due time of delivery, convulsions and prolonged labour. Women who identify any of these signs are normally advised to quick seek medical assistance from the nearest health facility that offers maternal and child health services.
- Encouraging pregnant women to attend ANC for at least four times during every pregnancy so that they are checked by a clinical officer, nurse or a doctor.
- Encourage all pregnant mothers to sleep under insecticide-treated nets (ITN) as pregnant women are susceptible to malaria which cause sickness for both the mother and unborn baby.
- Help pregnant women to prepare birth plan and organize resources in advance for getting skilled assistance from health facility during delivery.
- Recognize the following risk factors in pregnancy: an interval of less than two years since the previous birth, a woman who has had a previous premature birth or baby weighing less than 2 kilogrammes at birth, the woman who has had a previous difficulty during birth or through Caesarean birth or a woman who has had a previous miscarriage or stillbirth.
- Methods to use for prevention of mother to child transmission of HIV. These include maternal factors that may increase risk of HIV transmission, infant feeding in the context of HIV and feeding exposed children.
- Encourage all pregnant women to deliver with the assistance of skilled medical personnel.
- Encourage pregnant mothers to get immunized against tetanus.
- Immunize all new-born children against the preventable diseases.
- Ensure all births are notified and registered.
- Remember that a child health card is an important document that must be kept safely to monitor growth and immunization and other services to the child.
- Wash hands before feeding or breastfeeding, after cleaning the baby's stools or using toilet.
- Breastfeed the baby exclusively for six months.
- Follow instructions given at the health facility for each service.
- Remind community members that they should avoid physical abuse of women and the abuse during pregnancy is dangerous to the expectant mother and to the unborn baby.
- Encourage fathers to be involved in reproductive health of the family.

Through the use of interpersonal communication, such knowledge and skills can be best disseminated to the target community. Subsequently, the following outcomes are expected: increase audience's knowledge and awareness of a health problem necessitating the need to seek for health solution, reinforcement of existing knowledge, attitude or behaviour, and promotion of uptake of medical services (MOH, 2014). In the context of maternal and child survival, when the target audience understands the message, the indicators or the outcome include: the target individual ability of recognizing danger signs during pregnancy or after birth and act promptly by seeking medical attention or appropriate address, attendance of ANC for at least four times per pregnancy, delivery at health facility, taking new born child for immunization against preventable diseases (MOH, 2014; MOH, 2007).

Statement of the Problem

According to the Kenya Demographic and Health Survey (KDHS) (2014), only 26% of women in West Pokot County deliver at health facilities with the help of qualified medical personnel compared to the current country average of 62%. On maternal mortality rate, West Pokot County stands at 488 per 100,000 live births against the country's average maternal mortality rate of 362 per 100,000 live births, (KDHS, 2014). The government had a target of reducing maternal mortality to 147 per 100,000 live births by 2015 (GOK, 2013). However, *The Second Medium Term Plan (2013-2017), Transforming Kenya Pathway to devolution, socio-economic development, equity and national unity* (GOK, 2013), states that the target of reducing the country average maternal mortality rate was not met; instead, in some counties like West Pokot, still stands at 488.

Despite aggressive media campaigns in West Pokot County, questions remain as to why the county still ranks low in key maternal and child survival indicators. It is on this basis that the study hypothesized that an increase in maternal and child mortality is a function of failure to communicate critical health messages. As such, the study sought to document the forms of interpersonal communication used to create awareness on child and maternal mortality in the region.

MATERIALS AND METHODS

The study was carried out in West Pokot County, one of the 47 counties in Kenya. The county is situated in the North Rift region along Kenya's western boundary with Uganda border. The study targeted the residents of West Pokot County in the two Sub-Counties of South and Central Pokot. Most of the respondents who were selected to participate in the study were aged 15-49, which are in the reproductive age (GOK, 2013). The respondents for the survey comprised women who had children aged under five years, women who had had difficulty during child delivery (such as still births), expectant mothers, the Community Health Extension Workers (CHEWs), Community Health Workers (CHWs), and Community Health Committees (CHCs), who are also opinion leaders. Others included County Ministry of Health officials and coordinators/directors of non-governmental organizations working in the health sector in the County.

This research employed a cross-sectional research design in this study targeting to describe the state of affairs as it exists. This design was found appropriate for this study as it allowed the investigation of relationship among many variables. Again, the design was relevant for this

study as it helped explore attitude and opinions of resident of West Pokot County on the use of interpersonal communication in promoting maternal and child survival. The study adopted a mixed research methods, where both quantitative and qualitative approach were used.

Multiple sampling techniques were employed in this study. First, cluster sampling technique was used to select the study area where the target population reside and this ensured that all the two sub-counties of West Pokot for the survey namely; Central and South Pokot Sub-County selected, all the four wards in each of the sub-county, were included and represented in the study. In each ward, it was further clustered into health facilities. In determining the sample size for the survey, the researcher used the known number of 21,001 women with children under five years in the two Sub-Counties of West Pokot County, namely Central and South Pokot. These figures were obtained from the records of Sub-County hospital of each Sub-County in June 2016.

The formula that was used to calculate the sample size (mothers with children aged 0-5 years) was that by Yamane's formula as presented in Reid and Boore (1991). The Yamane formula assumes a normal distribution. Women with children under five years in the two selected sub-counties of West Pokot County was assumed to be normal in terms of the parameters under study in the interpretation of their experience and practice. The total number of respondents selected to participate in the study was thus three hundred and ninety-two (392) but eight more were selected to make a total of four hundred (400) respondents. The selected instruments for data collection for this study were questionnaire, interview schedules and FGD guides. This being a mixed methods research, both quantitative and qualitative approaches were used for data analysis.

RESULTS AND DISCUSSION

Forms of Interpersonal Communication used in Promoting Maternal and Child Survival

The forms of interpersonal communication used in promoting maternal and child survival in this study was one of the most important factor as it is through those ways or forms that the community members learn about the importance of maternal and child survival messages. The forms of interpersonal communication were therefore seen as a critical variable in this study as it's avenues of access and uptake of maternal and child survival messages and subsequently utilization of these services. The research findings of the study on the forms of interpersonal communication used in promoting maternal and child survival messages were as presented in Figure 1 below.

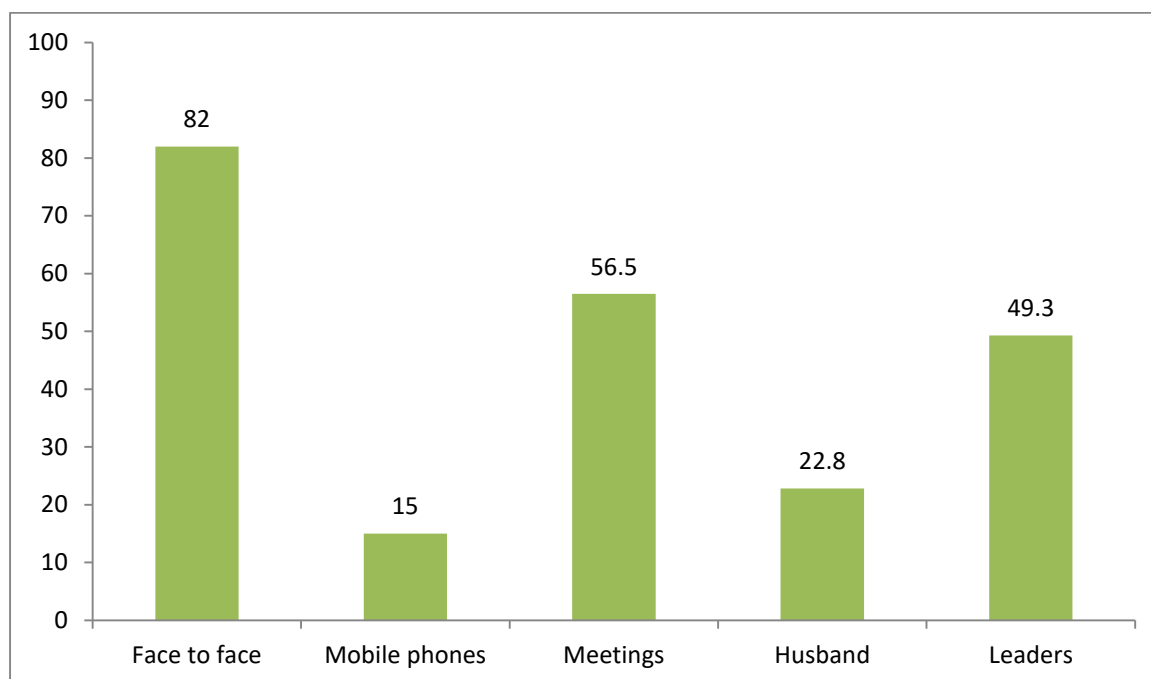


Figure 1: Forms of interpersonal communication used in promoting maternal and child survival

Figure 1 indicates that the most common forms of interpersonal communication used in promoting maternal and child survival were face to face 328 (82%), meetings 226 (56.5%) and use of leaders 197(49.3%). The use of husband and mobile phones was rated second last and last used form 92(22.8%) and at 60(15%), respectively. The interviews of with the key informants (KIIs) revealed that face-to-face form interpersonal communication was the most common and best form of interpersonal communication that have been used in promoting maternal and child survival campaigns. This was stated by KII 2 who had been carrying out health promotion campaigns in the County for several years:

Interpersonal communication which always include; face-to-face, dialogue and health talks are the best and strong ways of handling sensitive health issues. Given that it is the best way it is also very expensive and time consuming (Personal Communication, KII 2, 2016).

Through KIIs and FGDs, it was further established that other forms of interpersonal communication that were commonly used included use of leaders, community dialogue, *Barazas*, health days, stakeholder forums, road shows community radio, text messages, mobile phone-calls and community mobilization, rallies, and cultural events.

The respondents further stated that mobile phones had not been incorporated the strategies of reaching the community with maternal and child survival messages into by the government. The initiative of using mobile phones to boost the campaigns have not been adopted as the government has not developed software to be used by the community health workers (CHWs) as in other parts of the World. Mobile phones are usually used to send messages (SMS) to pregnant mothers and lactating ones and inform them of the clinic days. Mobile phones are also used by health workers to reach out to the lactating mothers to attend clinics by calling them at regular intervals.

In Rwanda, for example, the health management information systems have been incorporated in various electronic health records and software programmes, web-based platform such as mobile phones. Mobile phone technology resources have improved availability and quality health information systems needed for prevention, management and monitoring and evaluation of programmes through an alert system known as rapid short messages services-SMS (Musafili, 2015; WHO, 2013). This rapid SMS which is a mobile phone health system that particular country has implemented for the promotion of maternal and child survival since 2009 (Musafili, 2015).

The way this works is that pregnant women and children under five years are regularly monitored by the Community Health Workers (CHWs), who notify those who should be examined to present themselves to the nearest health facility by SMS. CHWs also report on monthly basis information related to case management of maternal and child health including any deaths at home. This could be attributed to the success of reduction of child mortality rate in Rwanda making it the leading country in East Africa region, in reduction of child mortality rate at 54 per 1000 births (WHO, 2013).

As shown in Figure 1, the use of mobile phone in West Pokot County is very low among the CHWs, standing at 15% and this could be attributed to lack of creation and implementation of mobile phone software programmes for CHWs and other health workers as in Rwanda. The monthly reporting of CHWs is still manual hence lack of accurate data that could aid in maternal and child survival campaigns.

Interpersonal Communication in Maternal and Child Survival Campaigns

The research findings shown in Figure 1 reveals that 82% of the respondents rated face to face as the most common form of interpersonal communication that has been used to the benefit of the target group followed by meetings with 56.5%, with the use of leaders at 49.3% while husbands were rated at 22.8% and the use of mobile was recorded as the least used form of interpersonal communication with only 15% of respondents acknowledging that this mode of communication has been used to their benefits.

These findings are in agreement with the suggestions given by the Kenya Ministry of Health which encourages health workers to use face-to-face mode of interpersonal communication considering the complexity of health issues. It was also pointed out that the use of face-to-face form of interpersonal communication imparts knowledge and creation of awareness among the community members and this will in turn increase knowledge and influence perceptions, beliefs and attitudes and ultimately enhance possibility of driving community to prompt action (MOH, 2014).

Face-to-face interaction between the health workers and the clients coming for maternal and child health services at the health facility must always be preceded by health talks or health education as a norm. According to the FGDs and KIIs discussions held, it was clarified that at health facilities during the days set aside for maternal and child health clinics, maternal and child health education and sensitization are held first before the beginning of any other service. This forum provides arena for the health workers to discuss face-to-face with the mothers who in turn ask questions and seek for clarifications on issues related to maternal and child health. Face-to-face health talks during the clinic days for ANC and immunizations services are one of the packages that has been stressed by MOH policy, that it must be offered during the clinic days according to KIIs and FGDs report.

According to Wambugu (2016), face-to-face communication enhances the synchronization of the brain, makes use of our native, in-born skills and abilities that digital platform does not. This was corroborated by the FGD 2 group member who observed as follows:

The most common interpersonal communication method used here is face-to-face talk; where the health workers assemble people and present to them maternal and child survival messages. This happens mostly in health facility where messages on services rendered at health facility are passed to the audiences who have attended the clinic during those particular days set aside for clinics. Another form which used is the community meeting popularly known as *barazas*, and here the Community Health Workers or Volunteers (CHW/Vs), have sessions of giving health talks or lectures to the community members.

In line with Community Health Strategy, the community has been sub divided or segmented into units and the CHW/Vs are to take care of those units in terms of their health needs with the assistance of the CHEWs. When the CHW/Vs visit homes they pass maternal and child survival messages through face-to-face talks and sometimes when they visit markets or in a meeting where there are crowds, role plays or local drama or locally produced videos are also used to drive the important messages to the audience (Personal Communication, FGD2, respondent 4, 2016).

Again, it was revealed during KIIs and FGDs discussions that pictures are used for demonstrations. Information Education Communication (IEC), materials are also used to educate the public like the baby and mother pictures which are commonly used in the health facility. In addition, it was found that charts showing the effects of diseases like polio are used to educate the public and drive the message to the people that if they fail to take their babies for immunization as required, the target child may be affected by these diseases which could be have been prevented through immunizations.

The use of mobile phones was recorded to be the least used form of interpersonal communication with only 15% of respondents revealing that mobile phone has been used to their benefits. This corroborates the observations made by Schiavo (2007), that technology-mediated interpersonal communication are more widespread in developed countries than in many countries in the developing world, where more conventional ways of communications like word of mouth may still be dominant. KIIs and FGDs interviews held revealed that mobile phones were mainly used only when passing urgent messages like informing the clients the new changes on the information provided earlier like if the mobile clinic day for maternal and child health has been changed due to unavoidable circumstances, mobile phones are normally used by CHW/Vs to pass such messages to their respective households indicating the changes. Community radio is sometimes used to pass such messages to the target audience and also calling the others who heard the message to inform the target group.

On the use of public meetings (*barazas*) by the CHWs and NGO health promoter officials in the study area, it was rated the second mostly popularly used mode of interpersonal communication. The respondents who participated in the FGDs and KIIs discussions also elaborated that such forums were good for reinforcing knowledge and attitude and in addition provides an opportunity to refute myths and misconceptions on maternal and child health messages. They further pointed out that this form allows detail discussions and seeking for clarifications on attitudes and cultural practices that are common in the community. The

participants in FGDs again noted that this mode is suitable when there is need for quick or prompt action that requires the community to discuss and act collectively.

There was need to establish the factors that are in play while choosing modes of interpersonal communication in promoting maternal and child survival in the study area. Table 1 shows the findings on the factors associated with the choice of face to face mode of interpersonal communication.

Table 1: Factors associated with Choice of Mode of Face-to-Face Interpersonal Communication

Factor	Face-to-face		χ^2 -value	p-value
	Yes	No		
Age				
<=25	118 (81.4)	27 (18.6)		
26-35	174 (86.1)	28 (13.9)	9.496	0.009
>35	36 (67.9)	17 (32.1)		
Married (Yes)	279 (82.1)	61 (17.9)	0.055	0.942
Education				
None	57(81.4)	13(18.6)		
Primary	152(81.3)	35(18.7)	0.225	0.973
Secondary	64(83.1)	13(16.9)		
Tertiary	55(83.3)	11(16.7)		
Religion				
Christian	311(83.4)	62(16.6)	7.109	0.016
Others	17(63)	10(37)		
Occupation				
Government employee	36(85.7)	6(14.3)		
Self employed	235(80.8)	56(19.2)	1.289	0.525
Others	54(85.7)	9(14.3)		

Age-group and religion were significantly associated with choice of face to face as a form of interpersonal communication used in promoting maternal and child survival. Higher proportion of those below 35 years chose use of face-to-face compared to those above 35 years (86.1% versus 67.9%). A higher proportion of Christians preferred face-to-face compared to other religions (83.4% versus 63%). Regression analysis indicated that those aged 26-35 years were almost 3 times more likely to choose face to face compared to those above 35 years (OR; 95% CI: 2.822; 1.388-5.739). Similarly, Christians were almost 3 times more likely to choose face to face compared to other religions (OR; 95% CI: 2.801; 1.204-6.519).

The Christians, namely Catholics, Protestants and SDAs, as shown in the findings on Table 4.12, were three times more likely to use face-to-face form of communication than any other religions. This was because it was disclosed by both the key informants and FGDs that Christians in that particular area normally met several times a week with the main services held on Sunday or Saturday. In these forums face-to-face form of interpersonal communication was always used to share Christian messages and any other important messages like maternal and child survival messages. During the FGD 1, one of the respondents noted that:

We always use churches to make announcements and educate the community members on maternal and child survival messages. When we have church meetings in most cases sessions are reserved for health education which are mostly on

maternal and child health, nutrition and general sanitations especially during the seasons when there are diseases outbreaks. The church meetings are important arenas where maternal and child survival messages are spread and key new issues passed to the members of the community. The churches have mid-week services normally held in the homes within villages (Personal Communication, FGD1 respondent 2, 2016).

It was also revealed during FGDs discussions that the church forums are important avenues of spreading health messages including maternal and child health as some of the main churches namely Catholic and Evangelical Lutheran church have several health facilities in the study area. During their meetings, the church normally reserves sessions for health education.

Table 2: Factors Associated with Choice of Mobile Phones

Factor	Mobile phones		χ^2 -value	p-value
	Yes	No		
Age				
<=25	24(16.6)	121(83.4)	4.183	0.124
26-35	33(16.3)	169(83.7)		
>35	3(5.7)	50(94.3)		
Married (Yes)	56 (16.5)	284 (83.5)	3.845	0.050
Education				
None	57(81.4)	13(18.6)		
Primary	152(81.3)	35(18.7)	0.225	0.973
Secondary	64(83.1)	13(16.9)		
Tertiary	55(83.3)	11(16.7)		
Religion				
Christian	60(16.1)	313(83.9)	5.110	0.024
Others	0(0)	27(100)		
Occupation				
Government employee	20(47.6)	22(52.4)		
Self-employed	34(11.7)	257(88.3)	38.713	<0.001
Others	6(9.5)	57(90.5)		

Religion, age-group and occupation were significantly associated with use of mobile phones as forms of interpersonal communication in promoting maternal and child survival ($p < 0.05$). A higher proportion of those in South Sub-County chose use of mobile phone compared to those from Central (18.5 versus 11.5%). Higher proportion of government employees chose use of mobile phones compared to the self-employed and others (47.6% *vis a vis* 11.7% and 9.5%). Higher proportion of those below 35 years chose use of mobile phones compared to those above 35 years. Higher proportion of Christians chose use of mobile phones compare to (0%) of the other religion. Regression analysis indicated that those in the South Pokot sub-county were almost 2 times more likely to choose mobile phone compared to those from Central (OR;95% CI: 1.986; 1.081-3.648). The married were 2 times more likely to choose mobile phones compared to the unmarried (OR; 95% CI: 2.353; 0.774-7.157). Government employees were almost 9 times more likely to choose use of mobile phone compared to the unemployed (OR; 95% CI: 8.485; 2.880-24.994). The explanation on why those employed in government are more likely to use mobile phones than their self-employed counterparts, could be due to the affordability and also the strict schedule of their work of those employed group compared to those who are self-employed who have flexible time schedule.

CONCLUSION AND RECOMMENDATIONS

The study established that face-to-face interpersonal communication was found to be the most popular mode of conveying maternal and child survival messages at the rate of 82%. Other forms of interpersonal communication found in use included meetings/*barazas*, followed by the use of leaders, and then the use of husband. The mobile phone was rated the least used form of interpersonal communication. From the findings of the study the major stakeholders in maternal and child survival, namely the National and County government together with civil society organizations working in health sector, should make deliberate efforts to formulate policies to guide the design and dissemination of maternal and child survival messages to promote women's reproductive health.

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