

Original Research Article

Evaluating the capacity of community health volunteers and factors affecting their implementation of community health strategy in Mogotio Sub-County, Baringo, Kenya

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ABSTRACT

Background: Community health volunteers (CHVs) play key role in the delivery of community health strategy. Mogotio Sub County has a total of thirty-two health facilities with nine established Community Units. However, the dissemination of information on community health strategy to household members is low or non-existence, probably due to poor training and facilitation of CHV and lack of awareness creation to local communities in the implementation of the programme.

Methods: Cross-sectional study design was used to collect primary and secondary data through administration of questionnaires to selected respondents in three locations to assess the capacity of CHVs and factors affecting their implementation of community health strategy in Mogotio Sub-County, Baringo, Kenya.

Results: The results indicated that 46%, 36% and 18% of the household respondents had primary, secondary and tertiary level of education respectively. More than 33% of household heads respondents were not employed and hence had no sustainable source of income. A big number of CHV had not attained all the required qualifications for proper implementation of community health strategy. Additionally, the CHVs experienced numerous challenges that affected the efficient implementation of community health strategy. Majority (52.2%) of the CHVs had attained secondary education, and (45%) were unemployed, 35% were engaged in business and 20% earned their living by engaging in casual labor.

Conclusion: The study revealed the need by the county government to strengthen the capacity of the CHVs through proper training and adequate financial support.

Keywords: Capacity, Community, Health, Mogotio sub county, Strategy, Volunteers

INTRODUCTION

Globally, the community health strategy approach has been identified as an effective way in bringing improvement in health care service delivery and addressing heavy burden of disease to contributes to the health and socio-economic development. The community health approach was a key pillar of the Primary health care (PHC) approach adopted by counties in 1978 through the

Alma Ata declaration.¹ Many countries in the world tackle problems of inadequate health care providers by utilizing community health workers and also ensuring that the community health workers provide primary health care services to their fellow community members.² Community strategy is an approach to deliver Kenya essential package for health (KEPH) at level one.² Community health services was established in Rwanda in the year 1995 in order to deal with two important challenges which were

lack of enough healthcare workers and inaccessibility to healthcare services. Life expectancy at birth was estimated at 31 years and 2 months and maternal mortality rate was at 1071 per 100,000 live births. Under five years mortality rate was at 196 per 1000 and infant mortality rate was estimated to be at 107 per 1000 live births.³

The Community health volunteers' activities are appropriately designed in the national CHV policy of 2015 which gives such opportunity. Thus, the policy recognizes the need for Community health volunteers (CHVs) and presents further opportunities for ensuring the appropriate design of CHW programs. This policy identifies the need for community health volunteers in addition to Health surveillance assistance (HSAs), recognizing the opportunity cost as well as the duties rights and responsibilities of volunteers.⁴ Community health strategy aims at improving community's knowledge and skills which will boost their routine health practices. Community strategy encourages communities to be responsive to attain the highest possible health status which is a vital community's social goal.⁵ The community health model is based on the wholesome primary health care concept which focuses on the ideals of collaboration, participation of the community and strengthening the community by giving adequate resources that will ensure affordable, equitable and accessible health care. Community health approach is identified as a way of delivering health for all in the community.²

Mogotio sub county is one of the six sub counties of Baringo County. It has a total of thirty-two health facilities and has nine established community units. The sub county needs a total of twenty-two community health units to cover the whole of it, which translates to 40% community unit coverage. The Ministry of Health launched the community health strategy in 2006 in all the provinces. This was in line with Kenya's stated commitment to good health for all Kenyans. Promotion of good health at various levels of the society is the responsibility of all members of the community.² A resolution to implement community health activities needs bold policy decisions and guidelines from the government and all the various departments in the health sector.⁴ The health indicators are in a deteriorating mode and there is need for a development of a strategy that will bring health services to the household level and reverse the declining trends on the health indicators. Community health strategy includes health services devolved to counties but development of policy, standards and technical assistance to counties remain key functions of the National government.² Community health workers provide service at level one which is the community and they should be linked to the health system in general if they are to be effective in their work. A lot of attention in relation to Universal health coverage (UHC) has been focused on financial risk protection and loss more than focusing on coverage of effective healthcare services.³ It is important to note that the first flagship project under health in vision 2030 was to revitalize community health strategy

to promote preventive health care and promote healthy individual lifestyles which imply that community health sits at the center of vision 2030's priority areas.²

The UHC is a significant component of the Sustainable development goals (SDGs). The important aspect of the UHC is the kind of health services offered in the community. A country can achieve UHC in a step by step manner and over time provision of services can expand to include a continuous changing range of preventive promotive and curative services.⁵ The Community health unit (CHU) is a structure of households organized in functional villages or sub-locations formally identified as the first tier in Kenya Health System. Community health volunteers provide health services that improves the community's health and wellbeing and to facilitate referrals of individuals to health facilities.⁶

In 2006, the Ministry of Health launched the community strategy in all the Provinces as part of Kenya's stated commitment to good health for all Kenyans, community health strategy implementation at the community is done by the three community health providers which include the community health committees (CHCs), Community health extension workers (CHEWs) and CHVs. However, the dissemination of information on community health strategy to household members is low or non-existence, probably due to poor training and facilitation of CHV and lack of awareness creation to local communities in the implementation of the programme. Furthermore, there is little progress and attention given to its implementation. Therefore, this study was aimed at evaluating the capacity of CHVs and factors affecting their implementation of community health strategy in Mogotio sub-county, Baringo, Kenya.

METHODS

Location of the study

The study was carried out in Mogotio sub county, Baringo County, Kenya between the month of June 2019 to the month of February 2020. The County had a population of 754,014 persons, 150,803 households, 1,946 villages, 348 sub locations, 30 Wards and 6 sub counties including Mogotio sub county which was the study area. Mogotio sub county had a population of 82,734 persons 16,547 households (HHs) and 336 villages. Mogotio sub-county borders Nakuru county, its headquarter is in Mogotio town which is 40 kms from Nakuru town along Nakuru-Marigat highway. The study was conducted in three locations in Mogotio ward namely: Ngubereti location, Koitebes location and Sirwa location. Ngubereti is 55 km from Nakuru Town along Mogotio-Marigat road and it is 15 km from Mogotio town. Koitebes is 75 km from Nakuru town along Emining-Eldama Ravine Road. Sirwa is 95 km from Nakuru town accessed through Kimngorom-Sirwa tarmac road.

Research design

The study applied cross-sectional study design to collect primary data. Quantitative and qualitative information was collected through the administration of questionnaires to selected respondents in three locations (community units) through random sampling in the Sub-County. The respondents included household heads, CHVs, CHEWs and key informants. Focus Group discussions (FGDs) and interview schedules was also conducted to get in-depth information relevant for the study from the community leaders.

Target population

The target population included; Community members, Community health volunteers, Community health extension workers, County health officers, office of Chief officer of health, Office of county executive committee. The study was carried out in three locations in Mogotio ward, namely; Koitebes Location, Ngubereti Location and Sirwa Location with 2140 and 434, 4374 and 926, 5919 and 1050 respectively for target population and household heads. Koitebes location had a population of 2140 persons and 434 households, Ngubereti with a population of 4347 and 926 households and Sirwa with a population of 5919 with 1050 households.⁷

Sample size determination

The sample size was determined using formula;

$$N = Z^2pq \div d^2$$

Under this formula, N is the desired sample size (if the target population is greater than 10,000), Z is the standard normal deviate at the required confidence level (1.96)², p is the proportion in the target population estimated to have characteristics being measured. The study used community unit coverage which was 40% (0.04), q is IP and d is the level of statistical significance set (0.05).⁸ Through this formula, the actual calculation was done as giving a total sample size of 369;

$$N = 1.96^2 \times 0.40 (1 - 0.40) \div 0.05^2$$

To arrive at the number of household heads to be involved in the study, Eng method of 1998 for the study population of less than 10,000 was used.⁹ The method formula;

$$Nf = n \div (1 + n) \div N$$

Under this, Nf is the desired sample size (when the population is less than 10,000), 1 is a constant, N is the estimate population size (2410 households). Through the formula total number of households were calculated to be 320. The distribution of the sample size and key informants were as provided in Table 1.

Table 1: Distribution of sample size and key informants.

Location	Target population	Sample size (Proportionate percentage)	Sample
Koitebes	434	13.278%	58
Ngubereti	926	13.278%	123
Sirwa	1050	13.278%	139
Key informants			
CHMT	15	50%	8
CHEWS	10	50%	5
CHVs	75	50%	38

RESULTS

Response rate and characteristics of household heads

The study yielded 87.4% overall successful response rates. The results show that 51% of the household heads from the 3 locations were male whereas 49% were females.

Table 2: Categories of age of the household respondents in the study locations.

Years	18-24	25-45	46-59	60-70
Sirwa	10%	45%	27%	18%
Ngubereti	10%	53%	27%	10%
Koitebes	2%	53%	36%	9%

Table 3: Education level of household respondents as per the location of the study area.

Community unit	Primary education	Secondary education	Tertiary education
Sirwa	49%	34%	17%
Ngubereti	41%	41%	18%
Koitebes	48%	31%	21%
Mean	46%	36%	18%

Table 4: The occupation of the household respondents.

Community units	Employed	Not employed	Casual	Business
Sirwa	12%	30%	32%	26%
Ngubereti	21%	42%	8%	29%
Koitebes	26%	28%	29%	17%
Mean	19%	33%	23%	24%

Within the community units, Sirwa had 71 males and 68 females, Ngubereti had 70 males and 53 females while Koitebes had 22 males and 36 females. The results (Table 2) indicated that majority (45%, 53% and 53%) of the household respondents in Sirwa, Ngubereti and Koitebes locations respectively were aged between 25 and 45 years, in which the young adults were between 18-25 years and the old were between 60-70 years). The result shows that

majority (46%) of the household respondents had primary level of education whereas 36% had attained secondary education and only 18% had acquired tertiary level of education (Table 3). Through the study, it was also found that more than 33% of household heads respondents were not employed and hence had no sustainable source income. Sirwa and Koitebes locations were the most affected by the unsustainable source of income (62% and 57% respectively) (Table 4).

The level of trainings for community health volunteers

The study results showed that community health volunteers (CHVs) were trained on the six basic modules as per the Government policy which requires that all CHVs should undergo such training after being selected by the community for meeting the recruitment criteria such as one being able to read and write and being a resident in the village or community unit. These modules were: module 1- health and development in the community, module 2- community governance and leadership, module 3- community advocacy and mobilization, module 4- best practices for healthy promotion and disease prevention, module 5- basic health care and lifesaving skills and modules 6- management and use of community information and disease surveillance. The results show that 69% (frequency of 26) of the community health volunteers had been trained on the six basic modules listed above, which is always a ten days training course. However, 31% (frequency of 12) had not been trained. Additionally, there were additional two technical modules which the CHVs had to undergo. These two technical modules were: Family planning (FP) and Maternal Neonatal Child Health (MNCH), which were three days and five days trainings respectively.

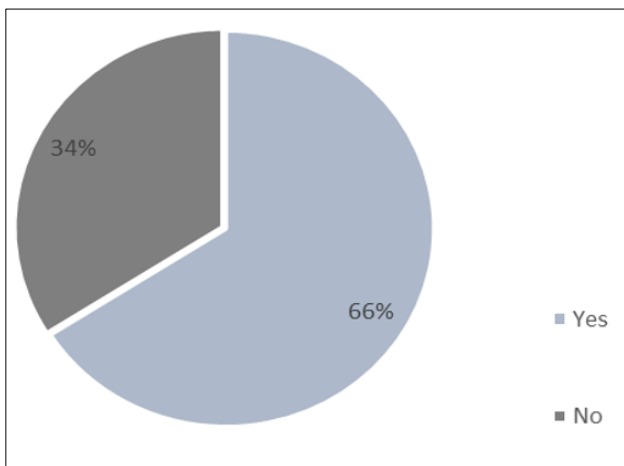


Figure 1: CHVs training on two technical modules.

The results (Figure 1) show that only 34% of the CHVs had not been trained on the two technical modules possibly because they were selected to replace community health volunteers who had dropped out or were lost through natural attrition. In addition to the basic and technical modules, the CHV were required to be trained on other

additional health topics such as primary eye care (PEC), first aid, Baby friendly community initiative (BFCl) and behavior change communication (BCC). The results (Figure 2) showed that 68% of the community health volunteers had not been trained on these additional health topics. This implies that majority of the households did not get health updates on these subjects from the untrained CHVs. The few CHVs (32%) were trained by various partners for example first aid was supported by world vision, primary eye care and behavior change communication was sponsored by Fred hollows foundation (FHF) and Afya Uzazi facilitated the training on baby friendly community initiative.

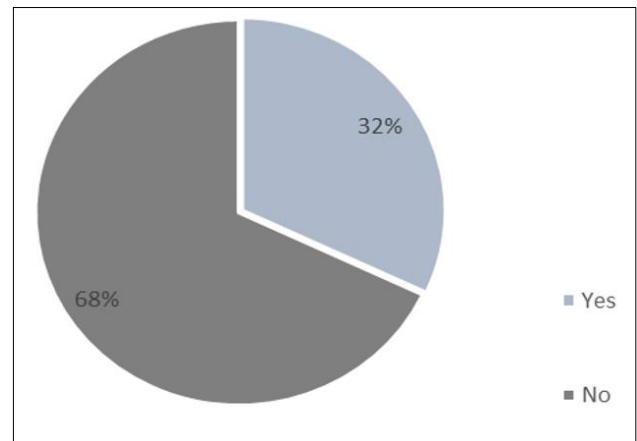


Figure 2: CHVs training on other health topics.

Challenges experienced by Community health volunteers in the implementation of community health strategy

Table 5: Challenges experienced by Community health volunteers.

Challenges	No. of respondents	Respondents
Poor creation of awareness	3	8%
Lack of stipends	10	27%
Lack of transport	5	14%
Lack of commitment by households to implement issues raised by CHVs	6	16%
Lack of funds to support community health strategy	2	5%
Demand for subsidy by household	2	5%
Ignorance	5	14%
Alcoholism	1	5%
Poor road networks	1	3%

The result (Table 5) shows that there existed numerous challenges experienced by the CHVs and that affected the efficient implementation of community health strategy.

Social economic characteristics of community health volunteers

From the study, it was found that 52% of the community health volunteers were females while 48% were males. The results of this study also indicated that 82% of the community health volunteers were responsible for more households than the recommended number of households of between 20-30 households. For example, in Sirwa community unit, every CHV was responsible for 42 households which meant that it was not possible for a CHV to visit all households within one month. This was evident from the results which revealed that household visitation was 89%, 93% and 83% for Sirwa, Ngubereti and Koitebes community units respectively.

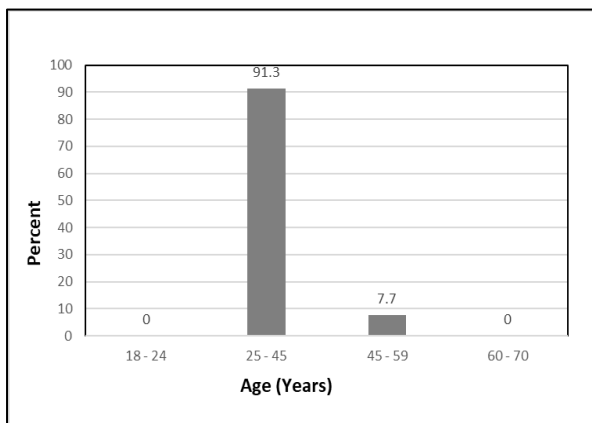


Figure 3: Age distribution of community health volunteers.

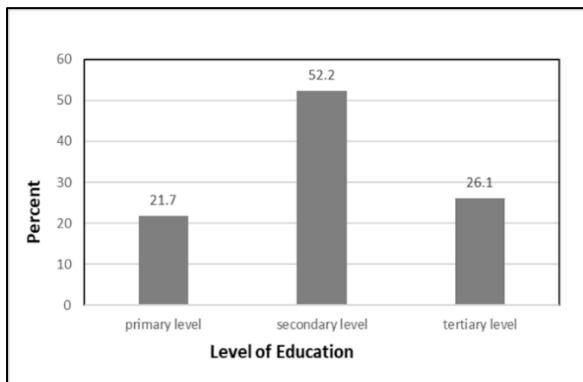


Figure 4: Education level of CHVs.

According to figure 3, majority (91.3%) of the CHVs were between the age of 25 years and 45 years and only 7.7% were aged between 46 years and 59 years. Additionally, the study findings (Figure 4) show that majority (52.2%) of the community health volunteers had attained secondary education, 26.1% had tertiary education whereas 21.7% had primary education. The study findings (Figure 5), showed that majority (45%) of the community health volunteers were unemployed, 35% were engaged in business and 20% earned their living by engaging in casual labour.

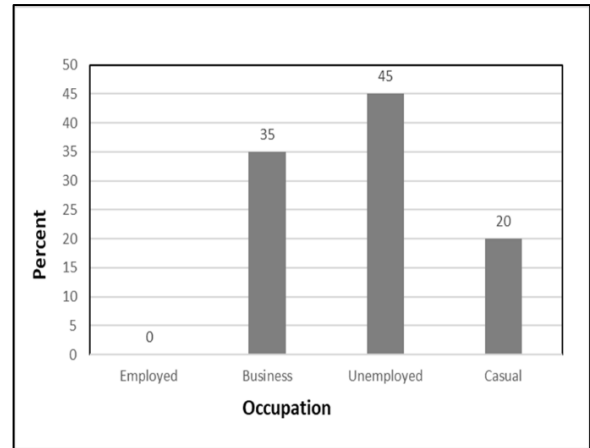


Figure 5: Occupations of CHVs.

DISCUSSION

Response rate and characteristics of household heads

According to Bird, this is the rate that equals the number of persons to whom structured questionnaires were administered and divided by the total number of people in the entire sample.¹⁰ Babbie indicates that 50% response rate is adequate, 60% is good while 70% and above is very good for analysis.¹¹ This indicates that 87.4% response rate was appropriate for carrying out data analysis. From the study, equal proportions of both men and women participated in the study, indicating that both genders are equally involved in the implementation of community health strategy. This also meant that all genders were assigned the CHV role, leading to wide acceptance and ownership of the community strategy programme at the household levels. Such findings were in contrast with the results of Kuule et al, whose findings indicated that 65% of respondents were female and only 35% were male.¹² The majority of the responses were obtained from young adults who were more knowledgeable on the modern health issues. This implied that young members of the society are actively involved in the implementation of community health strategy and could also mean that these young people would be relied upon to steer forward the implementation of community health strategy and as such they would play key roles in the operationalization of community units and also sustainability of the community health strategy.¹²

The level of trainings for community health volunteers

The low level of education within the community may be contributing to the challenges the community health volunteers encountered during their work as some of the community members showed a lot of ignorance and were not willing to execute interventions to address certain health problems as were advised or recommended by the community health volunteers. Indeed, low education among household heads may make it difficult to promote culturally appropriate health education on topics related to

chronic disease prevention, physical activity, and nutrition, advocating for underserved individuals to receive appropriate services, collecting data and relaying information to policymakers to inform policy change and development and providing informal counseling, health screenings, and referrals of clients to health facilities for further management.¹³ The study also revealed the poor economic status of the study area. Under such conditions, the households spend most of their time struggling to put food on the table, making them not to have sufficient time to implement community health activities. Indeed, it has been noted that poor economic status within a community affects improved access to health care services, increased health and screening, enhanced communication between community members and health providers and improved adherence to health recommendations.¹³

The listed basic modules are mandatory for any community health volunteer to qualify and be considered a community health volunteers and being allocated roles and responsibilities. The current Government policy requires that all community health volunteers should undertake and complete the 10 days ministry of health- led basic training prior to commencement of their roles and responsibilities as CHVs. The result on training on basic modules implies that quite a sizeable number of community health volunteers were trained on the basic modules as per the community health volunteer curriculum which contains the six basic modules and the seven technical modules. These results were in agreement with the study of Aseyo et al, which described how Hope Core International was helping community health volunteers get training on free health education on essential healthcare for mother and child health and were also taught how to conduct growth monitoring and basic health education at household level.¹³ Through that initiative, CHVs also benefited from free business training on how to run a successful business for community health volunteers which would be beneficial in undertaking any income generating activity (IGA). Hope Core International also supported CHVs in advocating for their needs with the stakeholders, for example, the county Government and Ministry of Health. Indeed, provision of short refresher courses helps to motivate community health volunteers and boost their work outcome in the end.¹³

The result on training on technical modules implies that the households were not receiving the right health information and advice due to untrained CHVs who not be able to provide quality healthcare services to their households. This indicated the need to train more community health volunteers in the study area to provide quality health care services which were also in agreement with world health organization view that globally health workers are inadequate and that this is one of the emerging problems majorly in developing nations. World health organization describes this as worrying situation since it will hamper achievement of the sustainable development goals number 3 which stresses on the access, affordable and equitable provision of quality health care services to the local community. In responding to this shortage of health

workers, many countries have trained community health volunteers so as to bridge this gap and provide essentials health services to marginalized communities.¹⁴ Indeed, the other five technical modules which the community health volunteers had not been trained on include the following; Water sanitation and hygiene (WASH), Communicable diseases, Integrated community case management (ICCM), non-communicable diseases (NCDs) and nutrition. According to the World health organization (WHO) (2017), such technical modules need to be properly incorporated in the training for efficient health service delivery.¹⁴ This result was in contrast with the findings done in Ethiopia, which showed that community health volunteers were given money in the form of stipend from household Kity established by the members of the household arising from contributions they make with the sole motive of motivating their community health volunteers. The trained community health volunteers have continued to drop out of the programme, which has become a big problem for the implementation of community health strategy programme across many nations.¹⁵ There is need to avail enough funds to ensure proper health service provision.²

Challenges experienced by community health volunteers in the implementation of community health strategy

The problems faced by CHVs included lack of transport during reporting and when visiting households for follow ups and health education, lack of commitment by households in implementing issues raised by community health volunteers during household visits, long distance between household at times made the community health volunteers feel tired. Furthermore, lack of funds to support the community health strategy activities, demand for financial and material support by household members, ignorance among some of the household members at times made the community health volunteers work difficult. Alcoholism among some of the community members caused misunderstanding on certain facts explained to the households by the community health volunteers on some action points deliberated and agreed upon to be undertaken as interventions to address certain problems. Poor road networks resulted on the roads being impassable leading to delay of passing of information to reach the right target group at the right time and the hilly terrain in some villages made walking tiresome especially in Sirwa and Koitebes community units. Lack of adequate training precisely on the technical modules hampered the work of community health volunteers making them not able to handle minor illness in the community. Poor creation of awareness on health issues in the community led to lack of understanding among some community members on how to tackle specific health issues, for example, how to carry out community dialogue. Lack of stipend or monetary incentives for the community health volunteers also slowed down the implementation of community strategy. The results of this study are contrary to the findings from other countries, for example, in Brazil where the community health volunteers were put to be part of the

civil servants in the year 1991. They were also earning salary and were recognized as professionals in the health sector in the year 2002. Additionally, community health volunteers in Malawi form part of the ministry of health employees. They were also entitled to monthly payments and other remuneration just like the other health care workers (Mbugua et al). The results of this study also showed that community health volunteers experienced numerous challenges as they undertook their roles and responsibilities in the community. These results were in agreement with the study done by Mohajer and Singh on human resource for health, which indicated that community health volunteers needed to be empowered with social capital in order to meet the expectations of the community to fulfill their non-health requirements so as to successfully deliver the health services to the households.¹⁶

Social economic characteristics of community health volunteers

The study showed that majority of CHVs within the study area were females. Even though females dominated the CHVs' workforce, the difference was within the two third gender rule as outlined in the Kenyan constitution.¹⁷ Gender has been considered an important aspect in the provision of health services and plays a critical role in communication during service delivery between health service providers and clients, which in turn contribute to patient satisfaction, making most health facilities to prefer hiring females to perform the health services.¹⁸ This could be attributed to female gender tolerance to harsh working conditions as well as being keen and gentle in handling patients. Indeed, the study reported that female physicians adopt a more partnership building style and spend longer time with patients per consultation than the male counterparts. The current study was therefore consistent with findings of other studies that indicated high number of female CHVs, for instance study a done by Kuule showed that female community health volunteers were 65%, whereas their male counterparts were 35%, indicating that even in rural Uganda majority of the CHVs were females.¹² This would further imply that many communities prefer recruiting the female CHVs probably because they believe that they would offer better community health services and in most cases they may work for a longer period of time compared to the male CHVs who drop out quite easily as they do not withstand the challenges which face general implementation of community health strategy. Indeed, according to Kuule, only 37% of the individual CHVs took care of more than 20-30 households which was in contrast with the current study result.¹² This implies that CHVs in the study area had more workload and bearing in mind that they were not provided with monetary incentives, hence they were sacrificing a lot, an indication that they valued the health of their fellow community members.

The study showed that most community health volunteers were middle aged meaning that they had the required experience and energy for the implementation of community health strategy. This also showed would also

imply that health service delivery may be sustained because the age category in which majority of community health volunteers are, would sustainably provide the required health services for long period of time. The age of community health volunteers is important and should be considered when recruiting them for it is a critical factor in sustainability of the community health strategy programme. The age category of between 25 years and 45 years would be better placed to handle community health strategy activities because most of the activities involve maternal and child health and also being the child-bearing cohort. Similarly, people aged below 25 often abandon their responsibilities, especially when they get alternative employment and hence not reliable for long term engagement. Therefore, this age of between 25 years and 45 years is preferable for optimum implementation of community health strategy. Nevertheless, the study results also showed that there were neither respondents in the age bracket of 18 years to 24 years nor the age bracket of between 60 to 70 years. This implied an existence of active generation that would robustly help in the implementation of community health strategy activities. The results of this were consistent with the study by Kuule, within rural part of Uganda which also indicated that majority (61.7%) of the community health volunteers were under the age of 45 years.¹²

Education is an important factor for proper implementation of community health strategy by the CHVs. It enables them to clearly understand the scope and requirements of implementation of community health strategy. The fact that more than half of the CHVs had secondary school education qualification showed that they could understand and handle health issues easily and also use the skills they gained during training especially on the basic modules to implement community health strategy in a better way because they would easily comprehend the issues of health especially when communicating and disseminating health information to community members. The findings are in agreement with that of Silvesta which indicated that majority (56.7%) of the CHVs had attained primary and secondary education.¹⁹ The high level of education among CHVs enhances creating of connections between vulnerable populations and healthcare systems, facilitating healthcare and social service system navigation, and determining eligibility and enrolling individuals into health insurance plans.¹³ This result also agrees with that of Nelima, which indicated that education level of community health volunteers was paramount for them to carry meaningful interventions.²⁰ For example, the study found out that CHVs with average level of education were able to deliver behavior change interventions better at the community level. The CHVs work hard to bring the expected behavior change among households in their allocated catchment area despite experiencing numerous challenges which included lack of compensation which featured as one of the demotivating factors for community health volunteers. However, inadequate support to CHVs has resulted to them spending little time in rendering the services, a situation that compromises the quality of

engagement with household members as had been reported by Nelima.²⁰

Furthermore, the fact that most CHVs had no formal employment indicated that most of them had low living standards and therefore they needed help from the county government and the community in terms of monetary and material assistance in order to make their ends meet, considering that they were not being provided with stipends. On the other hand, those who engaged in businesses and other casual work could not have sufficient time to perform their roles as CHVs which would affect the implementation of community health strategy in the long run. These may contribute to challenges that affect effective implementation of community health strategy in the community. Moreover, insufficient income to the CHVs has been reported to be demotivating them in promoting behavior changes among communities in the implementation of Community health strategies in Counties.¹³

Limitations

The study was limited to Mogotio sub county, Baringo County, Kenya and was undertaken between the month of June 2019 to February 2020. Some respondents had challenges of understanding the English language used on the questionnaire, but since the researcher and data enumerators had good command of both the local language and English, they assisted with the translation.

CONCLUSION

The county government of Baringo needs to provide adequate training to CHVs on both the basic and technical modules of the CHV curriculum. The CHVs should also be trained on other relevant topics to build their training capacity in the provision of quality healthcare services at the community level. There is need to consider the education levels of CHVs during their recruitment, probably secondary school level and above would be more preferable to boost their competency in implementation of community health strategy. We recommend further study to establish the levels of uptake for the healthcare services offered through Community Health Strategy by the members of the community.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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