Effects of Beneficiary Accessibility and Family Role of Community Health Volunteers on Community Health Volunteer Performance in Health Programs in Juja Sub-County

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Abstract

This study examined the combined effect of beneficiary accessibility workload and family demands of CHWs on worker performance. Undeniably, multiple constraints such as huge deficits in trained health care personnel, inadequate facilities, shortage of medical supplies and limited healthcare centers as well as low-income level among many households, access to adequate primary health care services mainly to large populations living in rural areas, is still a great challenge to developing countries. To bridge this gap, World Health Organization (WHO) recommends utilization of community health volunteers. Community health volunteers circumvent the healthcare personnel deficient especially among marginalized areas that are grappling with high maternal, neonatal and infant mortality. Community Health volunteers (CHVs), mainly drawn from the host communities, confront multiple challenges such as households' responsibilities as well as logistical impediments. This paper therefore attempted to examine the role of accessibility of targeted beneficiaries (households) as well as demanding family roles on the performance of CHVs, in Community-Based primary Health Programs in Juja Sub County, Kiambu County. To address this cause-effect dichotomy, the lenses of social exchange theory, Herzberg's motivational theory or two factor theory as well as Vroom's Expectancy theory (VET), were adopted. A mixed methods research design consisting of qualitative and quantitative methods, was adopted. Open and closed ended questionnaires were administered to purposively sample 140 respondents comprising 120 community health volunteers and 10 informants from community health strategy project assistants and 10 social workers in charge of CHVs. Results revealed that family demands and accessibility to households significantly influence the performance of the Community Health Workers. This present paper contributes to community health volunteer research, and specifically to family demands and beneficiary accessibility and their relative effects on performance of community health volunteers in the primary community health preventive programs sub-sector.

Keywords: Volunteers, Health, Community, Beneficiaries, Family roles, Performance

Introduction

The 7.8 million global healthcare personnel deficit exuberated by sub-Saharan Africa's total health care workers at 3% compared to its 24% of world disease burden (Britnell, 2019), underscores the relevance and efficacy of the work done by community based health volunteers (CHV) in extending healthcare promotion, preventive services and (limited) medical health support to hard-to-reach (Abuya et al., 2021). CHV consist of an array of individuals, selected through different mechanisms (nomination, election and/or hired from communities), who receive basic healthcare training and fulfil a variety of roles within communities (Monyangi, 2019). CHW prototypes include India's Ascribed Social Health Champion (Aseyo et al., 2018), Nepal's Female Community Health Volunteer scheme, (Gyawali et al., 2021) and Ethiopia's health extension workers (Selamu et al., 2017) among others.

Despite its high-profile accolade, CHV performance is on the spot. At a personal level, performance among community health volunteers has been found wanting in most of different interrelated performance attributes, including low self-esteem, poor or lack of motivation, negative perceptions, diminished skills, failure to adhere to CHV guidelines, roles dissatisfaction and inadequate resources to support community-based agencies. At the program level, CHW program performance grabbles with poor health outcomes for the clients that they support, this includes low uptake of health services.

Although non-performance is linked to multiple factors, the currently scholarly discourse presents CHV beneficiary accessibility and community health volunteers work-family role conflict as potentially massive contributors to CHV underperformance. This assumption is informed by the quantification of beneficiary accessibility as the highest consumer of CHV workload time (Chatio et al., 2019, Gamech, 2019, Vareilles et al, 2015). CHV productivity is compromised when CHVs travel for long time to serve beneficiaries, inadequate transport means, and remote beneficiary location. Equally, poor terrain, poor communication, spending long time waiting for patients, exhausts CHVs. Other challenges CHVs face while trying to access beneficiaries include insecurity that compromises CHVs accessing and serving beneficiaries. culture and traditions opposed to CHV equipment and activities, among others (Pereira et al, 2021).

Besides, beneficiary accessibility, this paper strongly presents CHV work-family conflict as a major contributor to CHV dismal productivity. Empirical evidence of CHVs doubling up or picking part-time, is a cursor to low-income among CHVs. The lenses of the social exchange theory and vroom expectancy theory (Homans, 1983) validates the low-income factor as a motivation for CHVs subscribing to CHW programs with financial incentives expectations. This paper argues that CHV complaints of volunteer work denying them family engagement, are frustration outlets of unmet CHV benefit expectations predicted by social exchange theory and vroom expectancy theory. Maslow's hierarchy of needs (McLeod, 2020) drives this standpoint home when he classifies the expected reciprocal benefit as basic need if indeed CHVs prioritize work-family balance in order to engage in part-time.

Studies have tried to link the relationship between beneficiary accessibility workload and CHV family role conflict. A study by, Strachan et al., (2015) that sought to investigate utilization of CHWs services on child health in Uganda, established that households within1 to 3 km away from a health care facility were 72% more likely to utilize CHW services in comparison to households residing within 1 km away from the health facility. The study further found that households located within 1 and 3 km from a CHW were 81% less likely to

utilize CHW services in comparison to households residing within 1 km of a CHW. Thus, proximity of community health volunteers and health care facilities by members of community could affect utilization of CHW services. Despite patiently waiting for overflowing river in order to progress with CHW public health sensitization program on the importance of early cancer screening among the aged Bangladesh population, the flood increased to unprecedent proportions. With supplies running out due to exceeding budgeted accommodation and food and hope of CHWs reaching communities fading, CHVs called off the campaign thereby hampering their performance (Abuya et al, 2021). Hence, disasters and emergencies have the potential of impacting (delaying, stopping or even ending) CHW programs. Brunie et al (2020) estimated that CHV in 58% of beneficiaries in Madagascar were residing more than 2 hours away on foot from the health facility which support them, while for supply points, this percentage was 61%. In practice, accessibility of health facility and commodities supply support structures combined with erratic assignment by the supervisors could results in irrational and ineffective outcomes by community health volunteers.

Iba and Morrow (2019) further noted that CHWs in India struggle to balance their health care activities and domestic tasks. Despite their pride in benefitting their communities, and high job satisfaction, and increasing range of activities, the volunteers expressed exhaustion and inadequate time to perform their roles. A study by in Tanzania by Mpembeni et al (2015) reports that CHVs were compelled to walk on foot for over 25km as the slopy and rocky terrain settings could not allow them cars or bicycles or vehicles. In South Africa, Tseng et al (2019) observed that inadequate resources denied patients access to CHW service.

A study by Selamu et al. (2017) noted that CHVs in Ethiopia, work for longer hours, serve large populations (800–1200), have increasing duties making them feel rushed and tired. With still to travel and meet timelines before ending the day with part-time work, it obvious this compromises their performance. Ballard and Montgomery (2017) made similar observation in Malawi that volunteer work encroaches on CHVs family time for (paid) work.

Other issues undermining CHV performance include fatigue from accumulated tiredness (Abuya et al, 2021), CHV role starving marriage duties (Chatio et al., 2019) and lack of corporation by patients due to inappropriate cultural material/tools (Schuster et al., 2016). Other issues undermining CHV performance include program delay/stoppage due to safety of CHWs (Linn, Tripathy & Maung, 2018), while office formalities and bureaucracies were found to decrease service quality and in discontent (Cometto, 2016).

Although Kenya has scaled up CHV efforts through the Kenya Community Strategy for Health, 15 workers per 10,000 people ration is still far below the standard 23:10,000. Equally, although Juja Sub-county promotes primary healthcare through community health volunteers, 335 CHVs are a drop in the ocean in the light of its high population of 300,948 with 2,652 healthcare personnel, doctor: population ratio at 1: 6,667 and a nurse population ratio at 1:1,110 (United States Aid Agency, 2019). Healthcare staff shortage, increased poverty levels, high population and dismal CHV, have resulted into poor healthcare outcomes. Despite this CHV performance challenges, empirical evidence that can inform policy and practical interventions is scanty. Most studies have been contextually done outside the country and on different aspects (Chatio et al., 2019; Gamech, 2019; Vareilles et al., 2015). Local studies have equally focused on other conceptual issues (Abuya et al., 2021,

Aseyo et al., 2018, Lusambili et al., 2021, Monyangi et al., 2019). Other local studies have been conducted in other geographical contexts (Monyangi et al., 2019, Ngugi et al., 2018).

The current study, therefore, strove to address this research gap by investigating the effect of beneficiary accessibility and family role of community health volunteers on worker performance among community health programs. To achieve this key research objective, the research paper attempted to answer this core research question; To what extend does beneficiary accessibility and family role of community health volunteers affect worker performance among community health programs? Accordingly, the research significantly contributes to community health volunteer literature and particularly to two major literature streams namely beneficiary accessibility and family role.

The objectives of the study were to determine influence of family roles and beneficiary accessibility on the performance of community health volunteers in community-based health programs.

2.0 Literature Review

The study was guided by social exchange and Herzberg's motivational and Vroom's Expectancy (VET) theories. Social exchange theory by Homans (1983) postulates that, depicted human behavior or social interaction is as a result of an exchange process. The exchange process purpose is to maximize benefits and minimize cost, in a social relationship or engagement people consider potential benefit and risks involved. The theory provides a better understanding on inputs required against expected outputs to organizations that heavily rely on community health volunteers for service delivery reporting at community need. Herzberg's motivational theory demonstrates that human behaviors are influenced by two sets of factors: namely satisfaction factor and dissatisfaction factor. Ataliç, Can and Cantürk (2016) explain how Herzberg's founded shares the belief that those factors result in human motivation and job satisfaction in the workplace and the absence of them does not cause dissatisfaction but not motivation either. The theory provides for clarity on motivation factors such as recognition to improve on commitment and performance. Supporting volunteers with hygiene factors as a way of motivation and may also result to good performance.

A study by Selamu et al. (2017) on study indicated that stress and burnout were recognized among healthcare workers. Notwithstanding these, there were an unmet need for interventions to address fatigue or emotional difficulties. The study was qualitative and conducted in rural areas of southern Ethiopia. Respondent included 52 frontline primary healthcare workers who participated in in-depth interviews (n = 18) or Focus Group Discussions (FGDs) (4 groups, total n = 34). There were 35 facility-based healthcare professionals and 17 community-based health workers. Data were analysed using thematic analysis.

Lusambili et al. (2021) scrutinized challenges faced by community health volunteers and their choice income generating activities to enhance sustainability of volunteer services in the context of rural Kilifi, Kenya. Qualitative research method was employed in the study comprising of 8 key informant interviews (KIIs) with diverse stakeholders and 10 focus group discussions (FGDs) with CHVs. Data was organized and analyzed thematically using NVIVO software. The key findings indicated that community Health Volunteers role is not compensated, this conflicts with volunteer's family and community expectations such as livelihoods, childcare and others. In addition, inadequate support supervision, work plans and training hinder delivery of CHVs' services to the communities. Volunteers cited lack of appreciation and competing task in the volunteer service.

Vareilles et al (2017) carried out a study targeting health programmes in marginalized area, the study sought to understand the performance of community health volunteers involved. Realist synthesis of publications of interest dating from 2008 to 2012 were identified by a systematic search in PubMed and IDEAS databases. Findings indicated that effectivities community health volunteers' performance was greatly influenced by just treatment by stable and responsive cultural, political and social systems and interventions linkage of these factors to local health services, created an enabling environment for better CHVs' performance.

Vareilles et al (2017) undertook an investigation on the understanding of what motivates volunteers and linkage to performance of community health volunteers involved in the delivery of health interventions in Kampala, Uganda. A realist mixed evaluation protocol that included individual interviews of respondents, participant observation and desk review, was utilized in methodology. The thematic investigation was based on the programme theory and sought for context-mechanism-outcome configurations. Results demonstrate institutional incentives such as few working hours, enabled CHWs engage in income generating activities to meet family needs which resulted into improved performance of CHWs.

Abrams et (2021) investigated why adolescents did not only require ARVs and adherence counselling based on the health care provider experiences with a HIV youth peer mentoring program at Ndola in Zambia. A qualitative approach was employd comprising ten in-depth interviews with participating HCPs between November–December of 2018. Thematic areas were analyzed based on two implementation science outcomes–acceptability and feasibility to inform scalability. The findings showed that HCPs were overloaded and inadequate time and resources as a hinderance to delivery of health services. HCPs indicate the need for constant consultation in key procedures related to patient clinical management, including drug administration changes. Considering this, many HCPs proposed increased resource allocation in support of AYAs' different needs.

Accessibility to Households by Volunteers

Logistical support involves creation of an enabling environment for community health volunteers to deliver the volunteer services such as health education, defaulter tracing, referral and reporting (Ormel et al., 2019). Delivery of these services require community health volunteers to visit their client's home, on average each community health volunteers has an allocation of 25 to 30 households. In ideal situation the household should be within the same village, however this is not always the case because of population density, topography, lack of willing volunteers and volunteers' attrition (Ngugi et al., 2018). Due to these factors community health volunteer's stretch to cover far away households.

Assefa et al. (2019) health extension workers spend 70% to 75% of their time by doing home to home visitation to deliver health education, promotion and environmental health. Study conducted systematic review and synthesis of the literature on the HEP in Ethiopia between 2003 and 2018. Literature search was generated by use of medical subject headings (MeSH) and accomplished in PubMed, Embase and Google scholar databases. The three-tier screening process selected the publications and three reviewers used pre-prepared data extraction form to extract data. Results indicated poor working and living conditions of health extension workers.

A study by Brunie et al. (2018) surveyed on improving conceptualization of Community Health Worker programs with direct focus on the job, satisfaction, and income generating

initiatives of CHWs in Madagascar. A cross-sectional survey using one-on-one interviews of 874 CHWs, also referred to as Agents de Santé Communautaire (ACs), drawn in 14 districts across 5 clusters was administered. AC survey data were analyzed using SAS 9.3. Food and Nutrition Technical Assistance (FANTA) project 22 to calculate a household food insecurity access prevalence (HFIAP) status indicator. Research outcomes found indicated lack of transport and insufficient transport reimbursement during supervisory meetings to do households visitation as a common challenge experienced by community health volunteers.

Study by Woldie et al. (2018) investigated on role of community health volunteers in improving access to and utilization of essential health services by populations in LMICs. Systematic reviews of 39 studies, searching PubMed, the Cochrane library, the database of abstracts of reviews of effects (DARE), EMBASE, ProQuest dissertation and theses, the Campbell library and DOPHER, was utilized. Lack of transport for caregivers was cited as the biggest challenge. Also, lack of health kits as challenge in their care service 43.3% of respondents in the study reported to have the health kit sometimes.

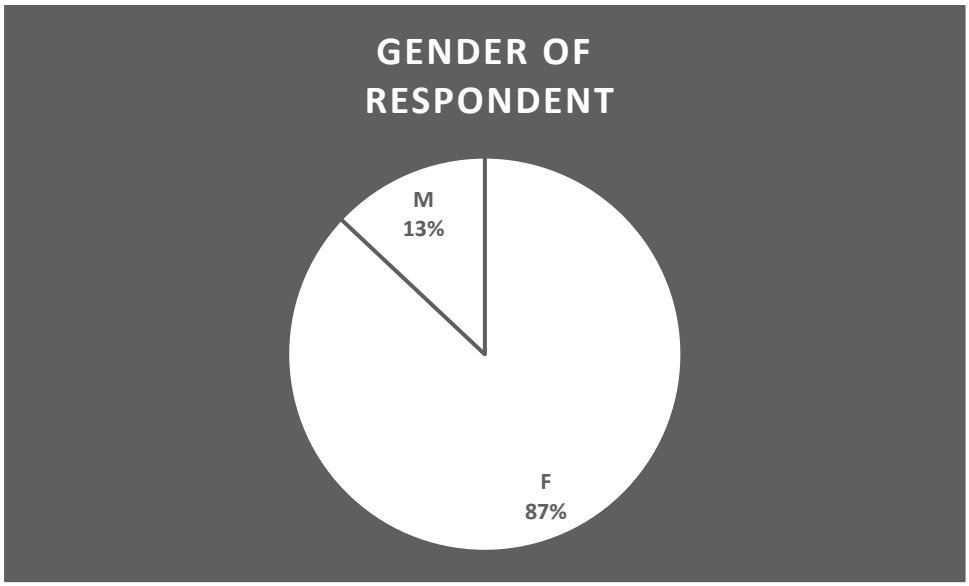
3.0 Research Methodology

This research utilized descriptive study design comprising qualitative and quantitative methods. The target population included 290 active community health volunteers and 20 community health assistants and social workers. Using purposive sampling, 120 CHVs and 20 social workers and community health assistants were considered to participate in the study respectively. Quantitative data was analysed using descriptive statistics to determine basic features of volunteers and a summary of socio-economic features examined by the study. Analysed data frequencies and percentages were presented by use of graphs and tables. Qualitative data was keyed in excel sheet and content analysed on the basis of emerging key themes generated from the objectives of the study.

4.0 RESULTS AND DISCUSSION

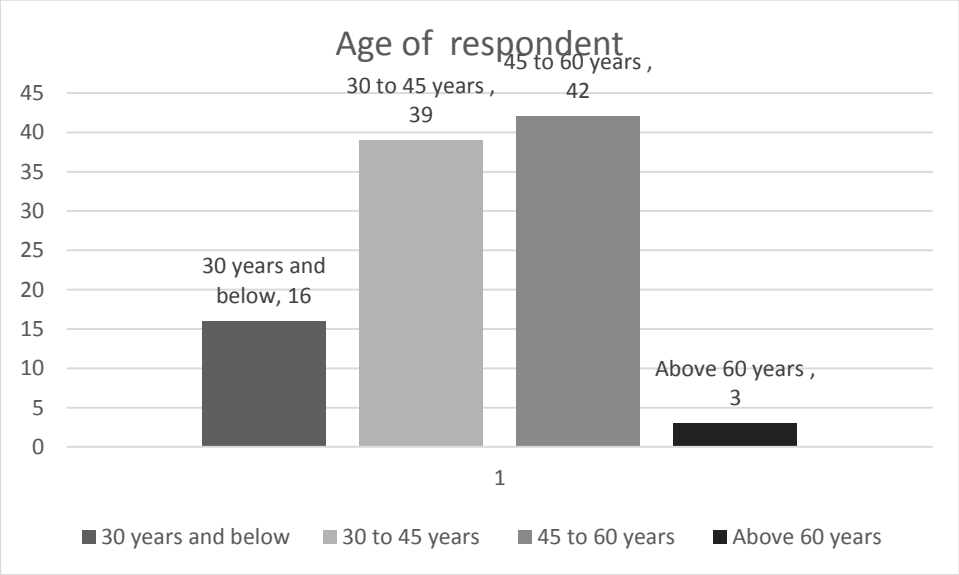
4.1 Demographic Presentation of Respondents

Figure 4.1: Gender illustration of the Respondents (Source- Survey 2021)



From the figure 4.1 above, a majority of the respondents, 87% were female while the remaining 13% were male. This puts the number of female volunteers higher in comparison with that of men. This indicates that female who were the majority of CHVs may have many competing roles due to their gender roles in the family set up and this may affect their performance. The findings agree with a study by Selamu et al. (2017) that indicated that indicated that stress and fatigue among slowed down of community health service providers.

Figure 4.2: Age representation of the Respondents (Source- Survey 2021)



Above figure 4.2 shows that most of the respondents 42%, were between the age of 45 to 60 years, 39% of the respondent were of 30 to 40 years. Of the remaining respondents 16% were below 30 years of age while 3% were above 60 years. Study findings indicate that majority of the respondents were within the energetic age bracket and hence have the ability to serve as Community Health Volunteers.

Figure 4.3 Respondents educational level (Source- Survey 2021)

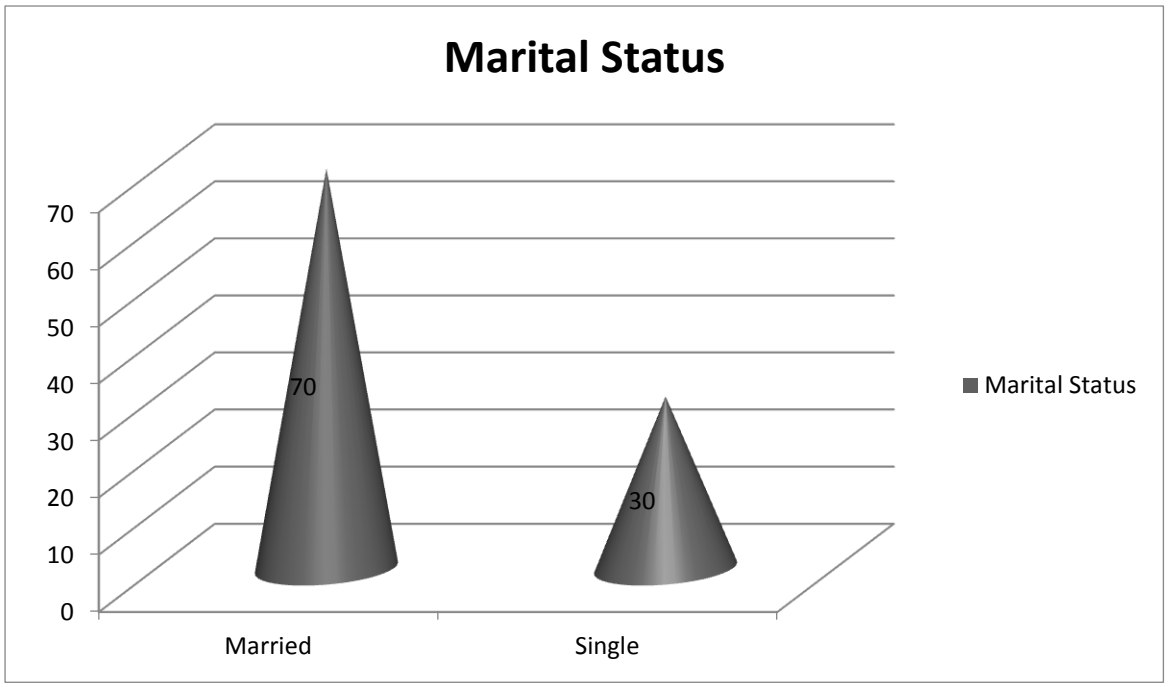
Qualification	% of the respondent
Primary	7
Secondary	55
Certificate	37
Diploma	6

The results indicate that mose respondent have have the minimum qualification to serve as volunteer since they can read and write. This correlates with a study by Monyangi et al. (2019) that indicated that basic education or more greatly enhanced performance of volunteers.

4.2 Influence of Family demands on the Performance of Community Health Volunteers

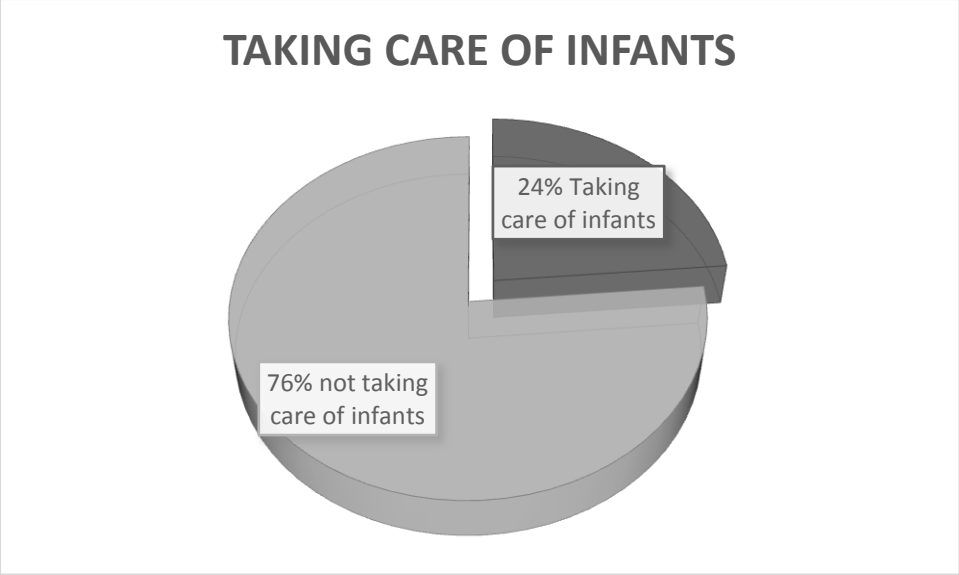
The study sought to establish how family demands influence the performance of community health volunteers for community health programs in Juja Sub County**.**

Figure 4.4 Representation of respondents' Marital status (Source - Survey 2021)



A majority of the respondents, 70% attested to being married while the remaining 30% indicated in the negative. This indicated that majority of the respondent may have more family demands associated with marriage including taking care of their spouse, children and family business. These findings agree with a study by Vareilles et al. (2015) that established that institutional incentives such as few working hours, provided volunteers with more time to attend to their family demands including family income generating activities to meet family needs which resulted into improved performance of volunteers.

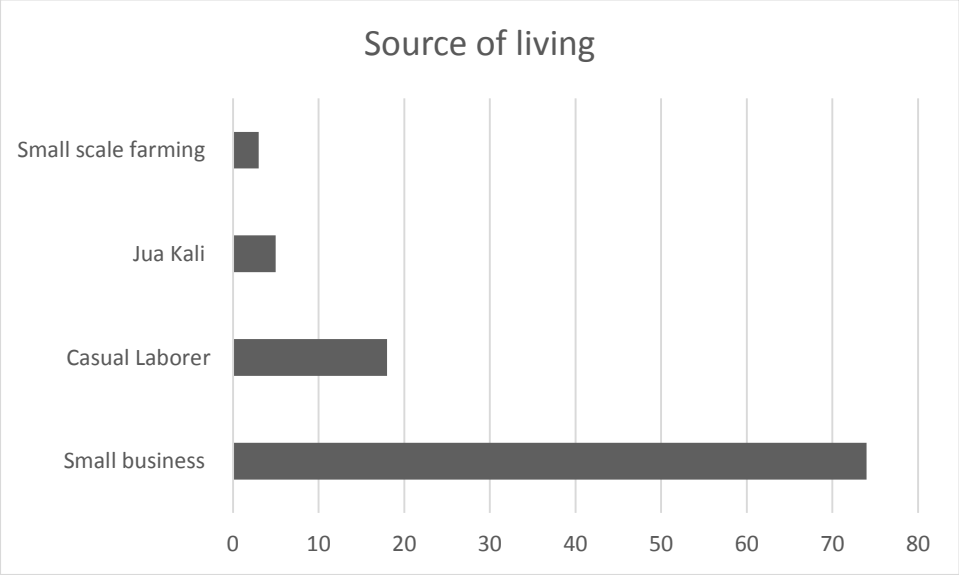
Figure 4.5 Illustration of respondents nurturing Infants and children under 5 years within their households (Source - Survey 2021)



A majority of respondents, 76% confirmed that they did not have infants and children under 5 years of age under their care.

> "I do home visits in the community in the afternoon when there somebody in the house to take care of my baby" (female respondents aged below 30 years)
>
> "I carry my baby when visiting the households" (female respondent of 30 to 45 age range).

Figure 4.5 Representation of respondents means of income apart from volunteer work (Source- Survey 2021)

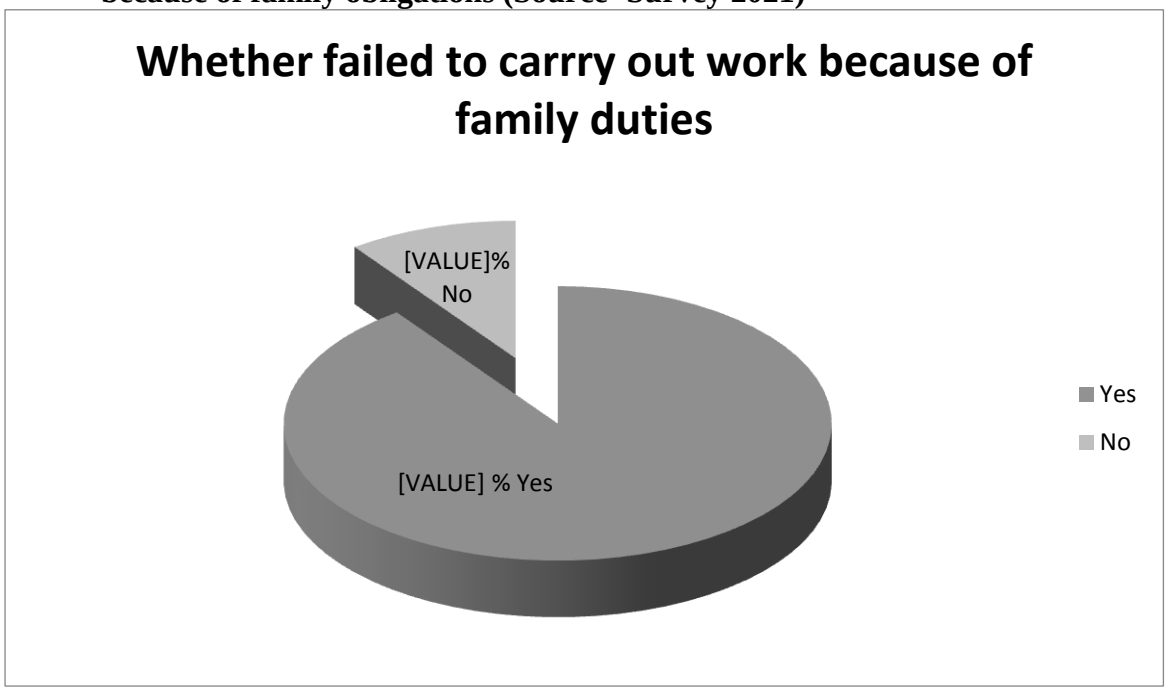


From figure 4.5 above, majority of the respondents, 74% operated small business that they stated to include cooking kiosks, grocery and shop vendors. 18% reported to be casual laborers that included touting and caretakers of rented premises, 5% worked in Jua kali sector while the remaining 3% indicated small scale farming.

> "It takes many hours to visit the households allocated to me and I lose on my business time, sometimes am not able to visit the households, because I have many family and business demands".

"It is not easy to balance my casual work with voluntary work, sometime am not given permission by my employer and some volunteer work is not done"

Figure 4.6 Respondents indication on if they ever fail to carry out volunteer work because of family obligations (Source- Survey 2021)

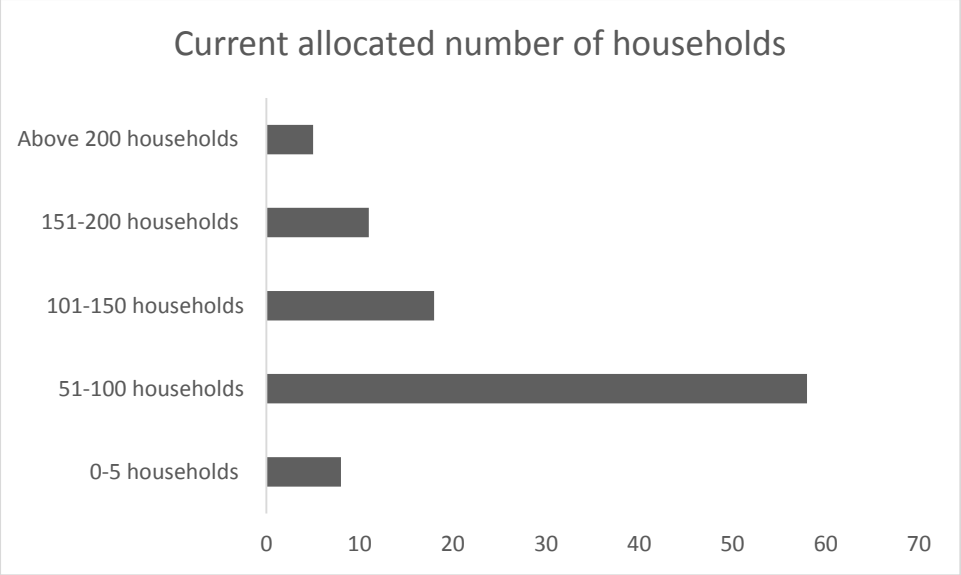


From figure 4.6, a majority of the respondents, 90% indicated in the affirmative with a paltry 10% dissenting. Asked to elaborate how it affects their work schedule, the respondents denoted that in cases where they have to attend to urgent family needs, such as when there is a sick member at home who needs attention, or because of school demands, they are usually forced to forfeit their duties of visiting the households and this leaves them behind schedule. "I cannot leave an unattended issue at home to come for work. The whole day will be wasted because of being tormented and hence I will not be productive"

4.3 Influence of household's accessibility on the Performance of Community Health Volunteers in Juja Sub County

Given the nature of Community Health Volunteering; most of their work is in the field and it revolves around the allocated households. This being the case, the capacity to access these households becomes very critical in gauging their success of their work. In fact, how easily and comprehensively they access these households is a great indicator of their performance.

Figure 4.7 Illustration of number of households allocated to each respondent for health volunteer support (Source - Survey 2021)



From figure 4.7 above most of the respondents, 58% reported between 51-100 households, 18% with 101 to 150 households, 11% indicated 151 to 200 households. 8% reported allocation of 0-50 households while the remaining 5% had over 200 households allocated for their volunteer assignments.

Figure 4.8 Respondents monthly income in Kenya shillings (Source- Survey 2021)

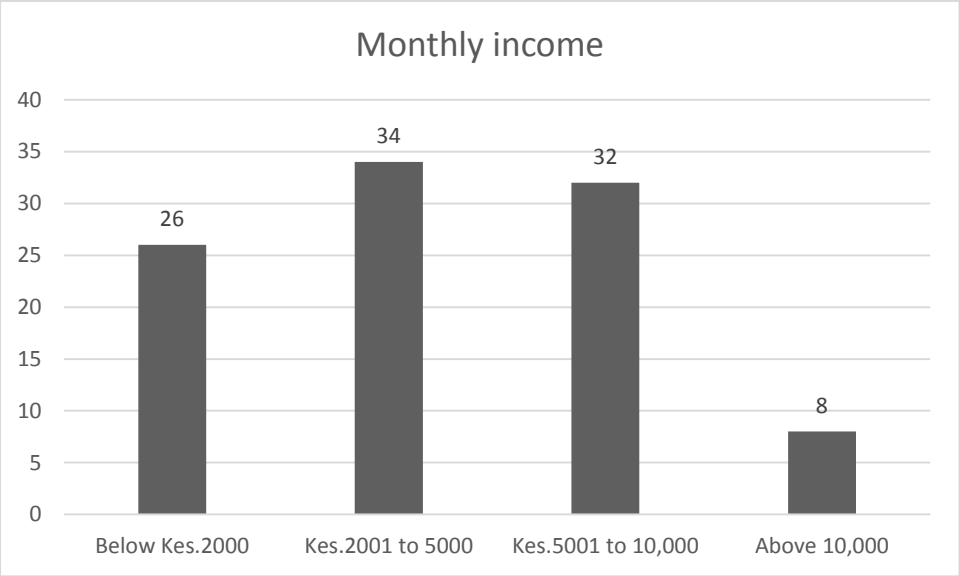
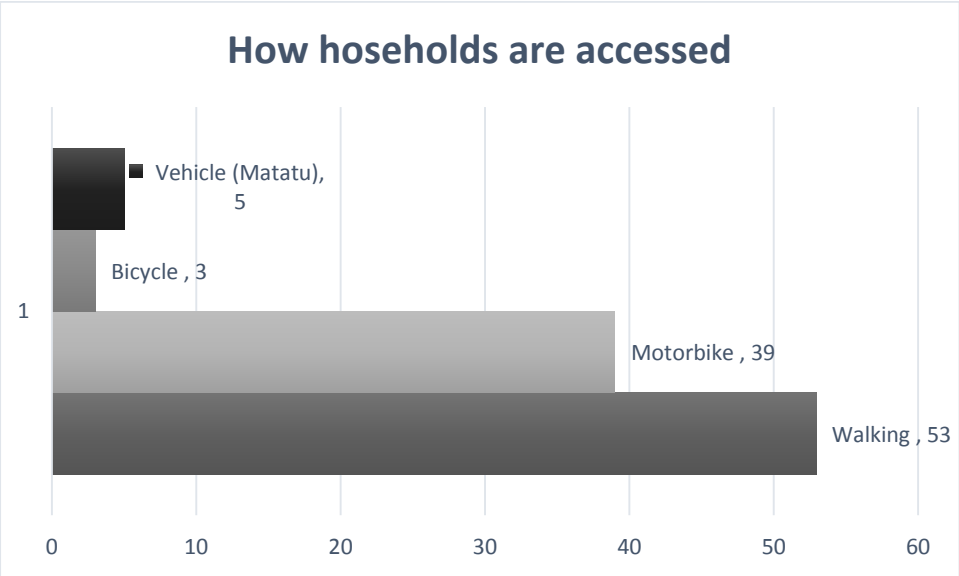


Figure 4.8 above illustrates that most of the respondents, 34% monthly income was between Kes.2001 to 5000, 32% ranging between Kes.5001 to 10,000, 26% had income below Kes.2000 and the remaining 8% income being above Kes. 10,000. The findings denoted that, respondent's income is not adequate to take care of their family needs and to support their volunteer work. To the knowledge of the researcher, community volunteer service is a voluntary concept, as such, community health volunteers are expected to take up volunteer services alongside their normal daily chores. In principle community health volunteers should dedicate only few hours of their time to volunteer services and this way they are able to manage other commitments. These results correlate with other studies done in Kenya and sub-Saharan Africa, which cites lack of compensation for volunteer work and transport to access the households as a great impediment to provision of volunteer services since the volunteers are not able to provide for this from their small income (Lusambili et al., 202; Ormel et al., 2019).

Fig 4.9 Characteristics of means of transport used by respondent in their volunteer work (Source - Survey 2021)



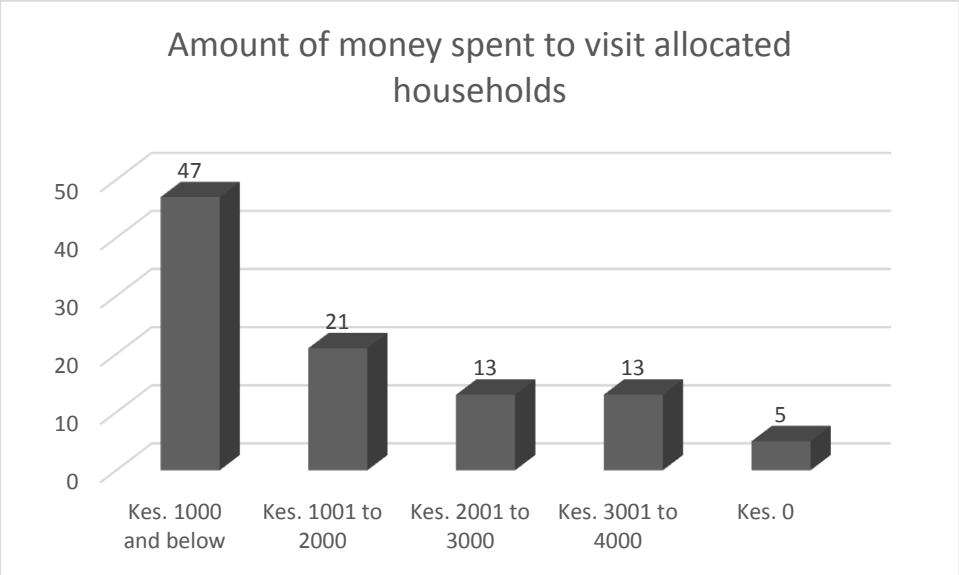
It was apparent from the findings from the figure above that a majority of the respondents, 55% used footing to access those households while another 39% used motorbikes. Those who used motor vehicles were only 5% and the remaining 3% indicated that they use bicycles. Asked whether the respective methods were effective in reaching all patients, 50% answered in the affirmative while the remaining 50% in the negative. Those who answered in the negative cited inconveniences and especially by footing due to extreme weather conditions and the high risk they expose themselves to through contact to COVID 19 disease.

*"*During the rainy season roads are bad, I don't reach in time, means of transport its very expensive when it rains, people don't allow me to enter their households because of the wet clothes and mud" (45-60 years old respondent with 106 households)

"I lack gumboots, umbrella and means of traveling is a challenge during the rainy season because roads are not very good"

"It is difficult to visit the households during the dry season, I have to walk in the hot sun and no umbrella or huts to prevent the hot sun" (one female respondent)

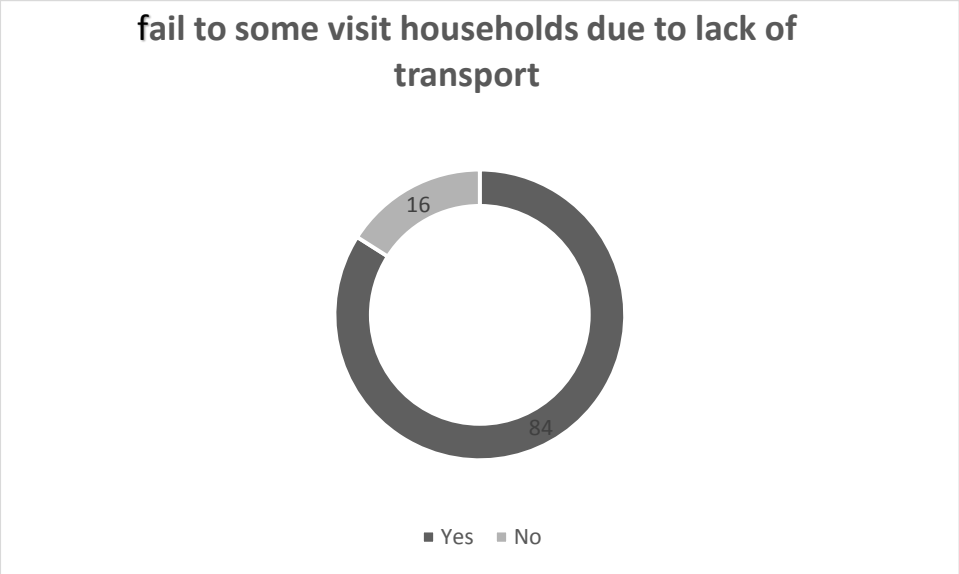
Figure 4.10 Illustration of amount of money spent by respondent to carry out volunteer work per month (Source - Survey 2021)



From findings illustrated in the above figure it was apparent that most of the respondents, 47% spent Kes. 1000 and below, 21% spent between Kes.1001 to 2000, 13% of the respondent spent Kes. 2001 to 3000, another 13% spent between Kes. 3001 to 4000 and remaining 5% stated that they do not spend any money to visit allocated households.

"I use money from my casual worker" (one of the respondents engaged in Jua kali industry)

Figure 4.10 Respondents indication on if they fail to visit households allocated to them due to lack of transport (Source - Survey 2021)



Findings illustrated by figure 4.13 above show that most of the respondents (84%), indicated in the positive and remaining 16% in the negative. Asked to explain, respondents who answered in the positive shared that this mainly affected households that are far away due to lack of transport facilitation. Those who answered in the negative indicated that they call the households caregivers, and this enables them to offer follow up services. The quotes below demonstrate the findings:

"Yes, if the household is too far and fare is needed, and I lack finances"
"Yes, but my business is small, and I don't have money to reach the households"
"No, yes, I do make calls and request to meet somewhere"

5.0 Conclusion and Recommendation

Regarding the first objective, it was established that family demands have a significant influence on the performance of Community health workers. They were at times forced to strike a balance between the two and every time that happened, it tilted in favor of the family. The family demands were also a determinant of their effectiveness at work because if the family demands were not met, their effectiveness was significantly compromised and as such, they were unable to discharge their duties effectively. This forced them to either fail to cover all the households that were targeted or fail to frequently meet the members. This had an effect of failure to attain the intended objectives of meeting everyone for health support.

As far as the influence of households' accessibility on the performance of community health workers is concerned, it was established that several factors influenced their ability to access the households. Key among them was the issue of means of transport to reach the households; many of the respondents expressed lack of facilitation (fare) to pay for the transport means of transport that are at their disposal to reach the clients which severely ended up negatively affecting their ability to reach out to clients promptly and at times they were totally unable to reach the households. This disadvantage was negative in as far as attaining the Universal Health coverage is concerned. This disadvantage has the effect of making the health recipients not to follow up their health obligations and in so doing can lead to acceleration of their conditions and hence pose a risk in the attainment of the universal health care.

Based on the study findings, it can be concluded that Community Health Volunteers play a very seminal role in the attainment of universal and comprehensive Healthcare which aspires to reach out to the entire population, both in and out of health facilities. These community health volunteers compliment the work of the mainstream health workers in significant ways. However, when it comes to their performance, the two parameters that formed the basis of this study ought to be strengthened namely family demands and accessibility to households. There should be more robust means and strategies being put in place to ensure that they are harnessed towards enhancing their performance.

Based on the findings, the study recommends development and implementation of a well outlined HR policy that takes care of the needs of CHV which should cover monthly stipend to compensate their family responsibilities as well as transport reimbursements that are in tandem with their work. Department of Health and non-state actors that utilizes community health volunteers should develop policies that stipulate Community Health Volunteers motivation package that may include free medical services to the volunteer and their dependants and paid medical insurance cover for the volunteers and their dependants.

The study further recommends integration of more Community Health Volunteers in order to reduce workload (number of households allocated to each volunteer) and distance covered to reach all allocated households per volunteer. To improve volunteer programs, best practices should be learnt from organizations that carry out successful volunteer programs targeting the communities and be integrated so that success is realized in terms of reaching out to the population in need of community-based health interventions. Lastly more studies should be done on the specific challenges facing community health volunteers.

These analyses are meant to provide both government and non-government actors with preliminary information to evaluate whether the status quo is rational and realistic and coming up with guidelines and policies for adaptive management.

References

Abrams, E. A., Burke, V. M., Merrill, K. G., Frimpong, C., Miti, S., Mwansa, J. K., & Denison, J. A. (2021). Adolescents do not only require ARVs and adherence counseling: A qualitative investigation of health care provider experiences with an HIV youth peer mentoring program in Ndola, Zambia. *PLoS ONE 16*(6): e0252349. https://doi.org/10.1371/journal.pone.0252349.

Abuya, T., Mwanga, D., Obadha, M., Ndwiga, C., Odwe, G., Kavoo, D., Wanyugu, J., Warren, C., & Agarwal, S. (2021). Incentive preferences for community health volunteers in Kenya: findings from a discrete choice experiment. *BMJ Open. 11*(7):e048059. doi: 10.1136/bmjopen-2020-048059. PMID: 34226227; PMCID: PMC8258597.

Ataliç, H., Can, A., & Cantürk, N. (2016). Herzberg's Motivation- Hygiene Theory Applied to High School Teachers in Turkey. *European Journal of Multidisciplinary Studies, 1*(4), 90. https://doi.org/10.26417/ejms.v1i4.p90-97.

Assefa, Y., Gelaw, Y. A., Hill, P. S., Taye, B. W., & Van Damme, W. (2019). Community health extension program of Ethiopia, 2003–2018: Successes and challenges toward universal coverage for primary healthcare services. *Globalization and Health, 15*(1), 24. https://doi.org/10.1186/s12992-019-0470-1.

Ballard, M, & Montgomery, P. (2017). Systematic review of interventions for improving the performance of community health workers in low-income and middle-income countries. *BMJ Open. 7*(10):e014216. doi:10.1136/bmjopen-2016-014216.

Brunie, A., MacCarthy, J., Mulligan, B., Ribaira, Y., Rabemanantsoa, A., Rahantanirina, L., Caleb, P., & Emily, K. (2020). Practical implications of policy guidelines: A GIS model of the deployment of community health volunteers in Madagascar. Global Health: *Science and Practice, 8*(3):466-477.

Chatio, S., Welaga, P., Tabong, P. T. N., & Akweongo, P. (2019). Factors influencing performance of community-based health volunteers' activities in the Kassena-Nankana Districts of Northern Ghana. *PLoS ONE 14*(2): e0212166

Cometto, G. (2016). Initial Planning Proposal. Guideline Title: WHO Guidelines on Health Policy and System Support to Optimize Community Health Worker Programme. Geneva: WHO HIS/HWF.

Gamech, D., Ormel, H., Kane, S., Koning, K., & Taegmeter, M. (2019). The health workers on salary as well as those that the voluntary basis: how incentives and motivations determine their performance. *Journal of Human Resources for Health Workers*.

Gyawali, B, Sharma, R., Mishra, S. R., Neupane, D., Vaidya, A., Sandbæk, A., & Kallestrup, P. (2021). Effectiveness of a female community health volunteer–delivered intervention in reducing blood glucose among adults with type 2 Diabetes: An Open-Label, Cluster Randomized Clinical Trial. *JAMA Netw Open.* 4(2).

Homans, G. C. (1983). Steps to a Theory of Social Behavior: An Autobiographical Account. *Theory and Society, 12*(1), 1–45. JSTOR.

Iba, O., & Morrow, M. (2019). Landscape Analysis of National Community Health Worker Programs. USAID/MCSP; https://www.mcsprogram.org/resource/landscape-analysis-of-national-commu.

Kasteng, F., Settumba, S., Källander, K., & Vassall, A. (2015). Valuing the work of unpaid community health workers and exploring the incentives to volunteering in rural Africa. *Health policy and planning*. 31(2), 205–16.

Linn, N. Y. Y., Tripathy, J. P., Maung, T. M. (2018). How are the village health volunteers deliver malaria testing and treatment services and what are the challenges they are facing? A mixed methods study in Myanmar. *Trop Med Health* 46**,** 28.

Lusambili, A.M., Nyanja, N., Chabeda, S.V., Temmerman, M., Nyaga, L., Obure, J., & Ngugi, A. (2021). Community health volunteers challenges and preferred income generating activities for sustainability: a qualitative case study of rural Kilifi, Kenya. *BMC Health Serv Res 21*, 642 (2021). https://doi.org/10.1186/s12913-021-06693-w.

McLeod, S. A. (2020). *Maslow's hierarchy of needs*. Simply Psychology. https://www.simplypsychology.org/maslow.html.

Woldie, M., Garumma, T., Feyissa, T., Admasu, B., Hassen, K., Mitchell, K., Mayhew, S., McKee, M., & Balabanova, D. (2018). Community health volunteers could help improve access to and use of essential health services by communities in LMICs: an umbrella review, *Health Policy and Planning*, *33*(10), 1128–1143.

Monyangi, N., Owenga, J., & Olayo, (2019). Assessments of The Community Health Volunteers Work Performance on Maternal and Neonatal Health Outcomes by Using A Community Health Worker Assessment Improvement Matrix Tool in Nyando, Kenya. *SJ. 7*(12).

Mpembeni, R. N., Bhatnagar, A., LeFevre, A., Chitama, D., Urassa, D. P., Kilewo C., Mdee, R. M., Semu, H., Winch, P. J., Killewo, J., Baqui, A. H., & Asha, G. (2015). Motivation and satisfaction among community health workers in Morogoro Region, Tanzania: nuanced needs and varied ambitions. *Human resources for Health*, 13(1):44.

Ngugi, A. K., Nyaga, L. W., Lakhani, A., Agoi, F., Hanselman, M., & Lugogo, Mehta, M. K. (2018). Prevalence, incidence and predictors of volunteer community health worker attrition in Kwale County, Kenya. *BMJ Glob Health*, *3*(4): e000750.

Ormel, H., Kok, M., Kane, S., Ahmed, R., Chikaphupha, K., Rashid, S. F., Gemechu, D., Otiso, L., Sidat, M., Theobald, S., Taegtmeyer, M., & de Koning, K. (2019). Salaried and voluntary community health workers: exploring how incentives and expectation gaps influence motivation. *Human Resources for Health*, 17(59).

Pereira, M. A., Marques, R. C., & Ferreira, D.C. (2021). An Incentive-Based Framework for Analyzing the Alignment of Institutional Interventions in the Public Primary Healthcare Sector: The Portuguese Case. *Healthcare*, 9, 904

Schuster, R. C., de Sousa, O., Rivera, J., Olson, R., Pinault, D., & Young, S. L. (2016). Performance-based incentives may be appropriate to address challenges to delivery of prevention of vertical transmission of HIV services in rural Mozambique: a qualitative investigation. *Human Resources for Health*, *14*(1):60.

Selamu, M., Thornicroft, G., Fekadu, A., & Hanlon, C. (2017). Conceptualization of job-related wellbeing, stress and burnout among healthcare workers in rural Ethiopia: a qualitative study. *BMC Health Service Research, 17*(1), 412.

Strachan, D. L., Källander, K., Nakirunda, M., Ndima, S., Muiambo, A., & Hill, Z. (2015). Using theory and formative research to design interventions to improve community health worker motivation, retention and performance in Mozambique and Uganda. *Human Resource Health*, 13**,** 25.

Tseng, Y. H., Griffiths, F., de Kadt, J., Nxumalo, N., Rwafa, T., Malatji, H., & Goudge, J. (2019). Integrating community health workers into the formal health system to improve performance: a qualitative study on the role of onsite supervision in the South African programme. *BMJ open*, *9*(2), e022186.

United States Aid Agency (2019). *The Medical Situation in Kenya fact sheet. 2019*

Vareilles G, Pommier J, Kane S., Pictet, G., & Marchal, B. (2015). Understanding the motivation and performance of community health volunteers involved in the delivery of health programmes in Kampala, Uganda: a realist evaluation protocol. *BMJournal Open*, *5*(11), 1-13.

Vareilles, G., Pommier, J., Marchal, B., & Kane, S. (2017). Understanding the performance of community health volunteers involved in the delivery of health programmes in underserved areas: a realist synthesis. *Implementation Science, 12*(22).

Woldie, M., Feyissa, G. T., Admasu, B., Hassen, K., Mitchell, K., Mayhew, S., McKee, M., & Balabanova, D. (2018). Community health volunteers could help improve access to and use of essential health services by communities in LMICs: An umbrella review. *Health Policy and Planning, 33*(10), 1128–114.