

Research

Corresponding author

Beverly M. Ochieng, PhD

Great Lakes University of Kisumu

P.O.Box 2224- 40100

Kisumu, Kenya

E-mail: beverly_ochieng@yahoo.com

Volume 3 : Issue 4

Article Ref. #: 1000PCSOJ3134

Article History

Received: August 14th, 2017

Accepted: October 26th, 2017

Published: October 27th, 2017

Citation

Ochieng BM, Kaseje DCO. Volunteers motives in relation to their task preference in health service delivery: A case of West Kenya. *Psychol Cogn Sci Open J*. 2017; 3(4): 123-130. doi: [10.17140/PCSOJ-3-134](https://doi.org/10.17140/PCSOJ-3-134)

Volunteers Motives in Relation to their Task Preference in Health Service Delivery: A Case of West Kenya

Beverly M. Ochieng, PhD^{*}; Dan C.O. Kaseje, PhD

Great Lakes University of Kisumu, P.O Box 2224-40100, Kisumu, Kenya

ABSTRACT

Background: According to the World Health Organization (WHO), human resources is the key ingredient to the effective functioning of health systems. The growing human resource crisis in low-income countries has re-energized the debate concerning the role of community health volunteers in health service delivery. Researchers have studied task-shifting among community volunteers focusing on its impact on health outcomes. This study focused on how task preference could be related to volunteer motives in an African setting.

Methods: We carried out a cross-sectional survey with the aim to investigate the relationship between motives and task preference among health volunteers compared with non-volunteers matched by gender, residence, and education in Western Kenya. The eight motives that were taken into account in the present study were obtained from existing literature, and tasks were derived from the common health activities undertaken by volunteers in Kenya. We recorded the preference of 1062 respondents for each of the tasks on a 1-5 Likert scale. The task preference among volunteers on the basis of motives and the status of the volunteers were compared.

Results: Long-term health tasks such as mother and child healthcare, home visiting and curative care were significantly more associated with altruistic than with material gain motives ($p=0.00$). Short-term tasks such as helping in disease outbreaks, and participation in immunization campaigns were associated with both altruistic and material gain motives. The self-seeking motives tend to be associated only with short-term tasks.

Conclusion: The preference for long-term health tasks was associated with non self-seeking motives; while short-term tasks were associated with both non self-seeking and self-seeking motives. It was concluded that the assessment of the motives of the volunteers was critical in assigning tasks to volunteers.

KEY WORDS: Motives; Tasks; Preference; Community health volunteers.

ABBREVIATIONS: CHV: Community Health Volunteers; CHW: Community Health Workers; VAF: Volunteer Assessment Framework; LMIC: Low and Middle Income Country.

INTRODUCTION

Task shifting refers to the rational redistribution of tasks from health professionals to community health workers in order to improve access to care and optimize the use of limited human resources. Since 2006, global attention has been drawn towards human resources for health crisis, which is worse in lower income countries.¹ This crisis has re-energized the focus on the use of community health workers in service delivery, through task shifting. Task shifting has gained in prominence and urgency to meet the demands concerning the health systems.²⁻⁵

The primary healthcare strategy adopted by the World Health Organization (WHO) at Alma-Ata⁶ promoted the initiation and rapid expansion of community health volunteer (CHVs) programs in low and middle income country (LMIC) settings in the 1970s.⁷ However, researchers questioned the effectiveness and cost of such programs in the following decade, particularly due to high attrition rates that tend to push up the cost of training. Thus, although volunteer-

Copyright

©2017 Ochieng BM. This is an open access article distributed under the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ing constitutes an essential aspect of primary healthcare, being able to identify and allocate health tasks preferred by volunteers would improve the efficiency of such programs.

Existing studies demonstrate that CHVs play a critical role in providing household services, substituting for health professionals participating in a range of tasks,^{1,8-10} in the quest towards universal health coverage and sustainable development goals.^{4,11-16} CHVs help increase access to, and facilitate the use of healthcare services during medical cases as tuberculosis, immunization and family planning programs, particularly in populations with limited access to healthcare facilities.¹⁷ In complying with the expectations and having received sufficient investment and support, community health workers (CHWs) show great potential towards strengthening the current situation of health systems.¹⁸ Yet such task shifting to volunteers should be carefully done to ensure that the secured livelihoods of the volunteers themselves are not compromised in the process. Kaseje and Sempebwa¹⁹ argued that CHV programs fail because of unrealistic expectations, irrational allocation of tasks, poor planning and an underestimation of the effort and input required to work with CHVs. Assignment of tasks may not always be in the interest of volunteers, thus, arising the need to gain an understanding of the tasks they prefer. This is necessary for a meaningful and sustainable task shifting to volunteers.

Despite its importance, surprisingly, little research has examined as to how volunteer motives relate to their task preferences in the African setting. Studies provide clues that volunteers' experiences are likely to be an important determinant for sustained involvement in volunteering, but there is inadequate information to explain the factors that shape these experiences. Only a handful of studies have examined sustained participation, which is typically measured in terms of the number of hours that volunteers are willing to work and for what period of time. Snyder et al²⁰ suggested that there may be variations in tasks suitable for different volunteers. Specifically, how task preference relates to volunteer motives in African settings have not been investigated. While many studies have demonstrated the effectiveness of CHVs^{4,14,18} and led to the understanding that it is a more cost-effective approach to implement their participation to complement for the available formal services towards saving lives than the formal healthcare system working without their involvement.²¹ The aim of this study was to investigate the relationship between volunteer motives and their task preference. The specific objective was to determine the relationship between volunteer motives and their task preference in an African setting.

METHODOLOGY

The study adopted a cross-sectional design comparing task preference among long serving volunteers and non-volunteers as well as examining relationship with volunteer motives. Five hundred and thirty-one CHVs in Nyakach, Rarieda and Butere Sub-Counties, West Kenya who had served for five years or more, were included in the study. For each CHV participating in the study, their nearest next door neighbor of the same sex,

education and age group, was included resulting in a sample population 1062 respondents. The eight motives (altruistic, materialistic, development of understanding, career development, esteem, social and spiritual) were introduced from phase 1 of the study²² while the tasks were derived from the common health activities undertaken by volunteers in Kenya. Data collection was performed using self-administered questionnaires to be filled by the participants under the supervision of the researcher and research assistants. The preference of the respondents for each of the tasks was recorded on a 1-5 Likert scale. Comparative analysis was undertaken for assessing the task preference among volunteers on the basis of motives and volunteer status.

The questionnaire was based on a volunteer assessment framework with eight motive constructs developed by Ochieng B.M and her colleagues.²² The respondents were gathered at one center in each of the sub-counties for them to fill out the questionnaires. The tool presented the participants with descriptions of 13 common Kenyan health volunteer tasks and asked them to rank the tasks in the order of their preference for performing them, indicating the "most preferred choice" and "least preferred choice." Their level of preference in performing each of the tasks was then measured on a 1-5 Likert scale.

Data Analysis

The data was analyzed using Scientific Package for Social Sciences (SPSS® version 16) computer package to describe the outcome variables for each of the study groups. The comparative analysis was performed for cases and controls, where the comparison was centered on the association between motives and task preference. Bi-variate descriptive analysis was undertaken to compare the relationship of motives for volunteering to task preference between the cases and the controls.

The comparative pooled analysis method was used to compare the association of motives with tasks preferred among volunteers. A Poisson regression model was used to assess the effect of volunteer motives on task preference. The Poisson regression model was used because the outcome of interest was considered as count data and the data was analyzed on a population level. The study also used mean scores to compare between volunteers and non-volunteers by the use of pooling of "means".

RESULTS

Socio-Demographic Characteristics

The targeted respondents filled the questionnaires yielding a 100% response rate. The majority of the respondents were female 648 (59%), equally distributed between the volunteers and non-volunteers. A majority of the respondents were aged between 36 to 50 years. Almost all the respondents had a good level of education with almost 540 (50.8%) having completed primary education and 510 (48.2%) having finished secondary level of education. The respondents were evenly distributed geographically as has been reported in Table 1.

Table 1: Distribution of Sample Population by Age, Sex, Education and Residence.

	Nyakach		Rarieda		Butere		Total
	Volunteer	Control	Volunteer	Control	Volunteer	Control	
Age	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	N (%)
20-35	49 (27.7)	49 (27.7)	32 (18.1)	32 (18.1)	42 (23.7)	42 (23.7)	246 (23.2)
36-50	121 (68.4)	121 (68.4)	125 (70.6)	125 (70.6)	107 (60.5)	107 (60.5)	706 (66.5)
>50	7 (0.4)	7 (0.4)	20 (11.3)	20 (11.3)	28 (15.8)	28 (15.8)	110 (10.4)
Total	177 (96.5)	177 (96.5)	177 (100)	177 (100)	177 (100)	177 (100)	1062 (100)
Sex	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	N (%)
Male	86 (44.1)	86 (44.1)	70 (39.5)	70 (39.5)	69 (39)	69 (39)	450 (41)
Female	109 (55.9)	109 (55.9)	107 (60.5)	107 (60.5)	108 (61)	108 (61)	648 (59)
Total	195 (100)	195 (100)	177 (100)	177 (100)	177 (100)	177 (100)	1098 (100)
Educ.	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	N (%)
None		7 (0.4)			3 (.2)	2 (.1)	12 (0.01)
Prim.	104 (58.8)	100 (56.5)	72 (40.7)	76 (42.9)	92 (52)	96 (52)	540 (50.8)
Sec.	73 (41.2)	70 (39.5)	105 (59.3)	101 (57.1)	82 (46.3)	79 (44.6)	510 (48.2)
Total	177 (100)	177 (96.4)	177 (100)	177 (100)	177 (98.5)	177 (96.7)	1062 (100)

Although, a majority of the non-volunteers showed a limited experience in the volunteers' service, a third (31.5%) of them had a volunteering experience of over 1-5 years. Two thirds of the volunteer population had prior experience of over five years with a large proportion, nearly 40%, having more than ten years of experience (Table 2).

Association of Task Preference to Long Serving Volunteers

Comparing the mean scores of task preference by volunteers and non-volunteers, the findings showed that the level of preference for tasks described was statistically significantly higher among volunteers than non-volunteers ($p=0.00$) except for emergencies and community surveys, where the difference was minimal (Figure 1). The results identified two categories of tasks: first, the long-term tasks that were strongly preferred by the long serving health volunteers than non-volunteers. These were typical health tasks such as maternal child health, tuberculosis/human immunodeficiency virus (TB/HIV) defaulter tracing, identification and referral of people with chronic cough and provision of curative services (Figure 1).

The second category included long-term tasks such as community household surveys, and attending community dialogue meetings, and short-term emergency tasks that were preferred equally by all the participants, both volunteers and non-volunteers. The proportion of respondents preferring the short-term tasks was not statistically significantly higher among volunteers than non-volunteers (Figure 1). The tasks that were

either short-term or of an emergency nature, required an urgent response for relatively short periods such as campaigns, spraying of houses with insecticides to protect them from malaria, disaster and emergency response to floods, famine and disease outbreaks. These were tasks that demanded urgent participation of the volunteers and non-volunteers. Though preferred slightly more by volunteers, non-volunteers expressed substantial preference as well (Figure 1).

Association of Task Preference to Volunteer Motive Constructs

Comparing mean scores of task preference by core motive constructs, altruistic and self-seeking, the findings of the study showed that the level of preference of tasks described was statistically significantly higher among participants with altruistic than those with material gain motives except for emergency tasks, where the difference was minimal (Figure 1). We tested the association of tasks with core motives using the Chi-square test. The long-term health tasks such as maternal child health, TB/HIV defaulter tracing, identification and referral of people with chronic cough (Table 3) were strongly preferred more by people with altruistic than self-seeking motives. Non-health long-term tasks such as community household surveys and attending community dialogue meetings, were almost similar to short-term emergency tasks in that they were preferred equally by all the study participants, (volunteers and non-volunteers) irrespective of their motives (Table 3). The tasks that were either short-term or of an emergency nature, demanded response for relatively shorter periods such as in campaigns, spraying of

Table 2: Length of Voluntary Service by Volunteer Status.

Length of service			
	Volunteers	Non-Volunteers	Totals
<1 year	0 (0%)	354 (67%)	354 (33%)
1-5 years	201 (38%)	164 (31.5%)	365 (34%)
6 to 10 years	122 (23%)	6 (1%)	128 (24%)
>10 years	208 (39%)	7 (1%)	215 (20%)
Total	531 (100%)	531 (100%)	1062 (100%)

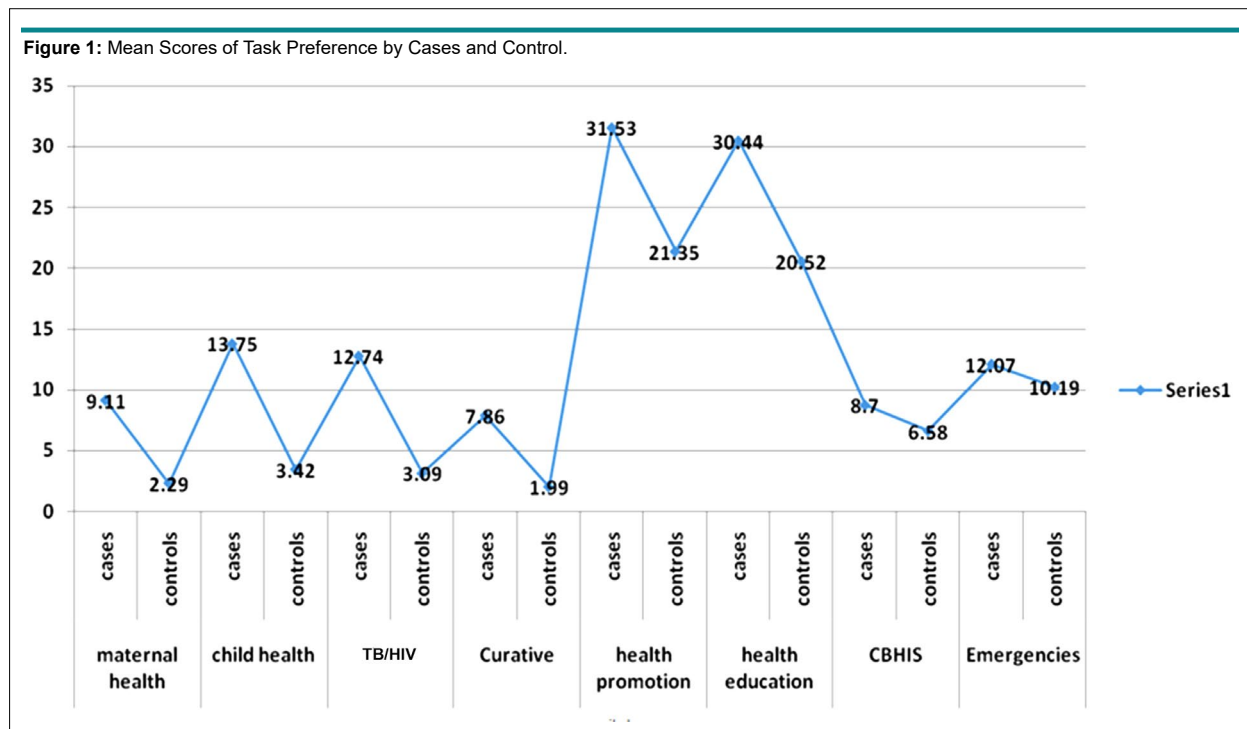


Table 3: Association of Volunteer Tasks with Core Motive Constructs.

Volunteer Tasks	Altruistic Motive		Material gain Motive	
	B (co-efficient determinant)	p Value	B (co-efficient determinant)	p value
Maternal Health	0.061	0.00	-0.033	0.07
Child Health	0.087	0.00	-0.048	0.08
Curative Care	0.044	0.00	0.007	0.73
TB/HIV care	0.063	0.00	-0.045	0.13
Home visits for HE	0.123	0.00	0.000	0.99
Family Planning	0.016	0.13	0.012	0.39
Care of OVCs	0.017	0.01	0.000	0.98
Meetings/Dialogues	0.013	0.00	-0.004	0.53
Campaigns	0.011	0.92	-0.013	0.11
Disaster activities	0.025	0.00	-5.320	0.99
Out Breaks	0.017	0.02	0.021	0.12
Emergencies	0.056	0.01	0.02	0.37

houses with insecticides to protect them from malaria, disaster and emergency response to floods, and disease outbreaks, though preferred slightly more by people with altruistic motives, those with self-seeking motives showed substantial preference as well (Table 3).

Findings of the study showed that most of the tasks such as maternal health, child health, curative care, home visits for health education, TB/HIV defaulter tracing, taking care of orphans and vulnerable children, holding dialogue meetings with community members, helping in disasters, emergencies and outbreaks were significantly associated with altruistic values more than material gain motives ($p=0.00$). The only tasks that were not significantly associated with altruistic than mate-

rial gain motives were family planning and immunization campaigns ($p=0.92$) (Table 3). Emergency tasks were preferred by all motives categories. Tasks did not demonstrate a clear pattern of relationship with the additional motive constructs beyond altruistic and material gain.

The non-core motive constructs did not demonstrate consistent association with task preference; however, we note that, spirituality demonstrated a relationship with the largest number of tasks: home-visits for health education, disasters and emergencies (Table 4).

Development of understanding demonstrated a relationship only with campaigns; career enhancement, only with

the care of orphans and vulnerable children, and the social constructs (esteem enhancement and social adjustment) demonstrated a weak relationship with meetings and dialogues (Table 4). Altruistic motive constructs were associated with the largest number of tasks, followed by esteem enhancement motive. Curative care task was associated with the largest number of motives followed by emergency tasks (Table 3). The less preferred tasks were family planning and community-based health information system.

DISCUSSION

This paper presents an assessment framework that can be used to identify CHVs according to their task preference, for use in recruitment and deployment of volunteers and thus improve the cost-efficiency of the programs. The task preferences associated with volunteer motives were identified. The results seemed to suggest that task preference was most consistently associated with the two core volunteer motives (altruistic value and material gain) described by Ochieng and colleagues.²² The results indicated that altruistic motive was the reason behind volunteering with over 80% of the volunteers preferring 11 out of the 12 tasks (Table 4). The rest of the motives related inconsistently with task preference. Thus, the study identified the same core motives and how they could be applied for the classification of tasks to help categorize and deploy CHVs for efficient task shifting. Using the existing framework, individuals could be matched to the tasks they were likely to find most rewarding and thus help promote retention among the CHVs.

Individuals with altruistic motives preferred all tasks whether long-term or short-term. Whereas, individuals with material gain motives tended to prefer short-term emergency tasks. It is important that they are identified at recruitment so that they are not assigned and trained for long-term health tasks since they are likely to drop out. Task preference for all the 13 health tasks examined was higher among the known long serving volunteers than non-volunteers.

Finkelstein in 2008 reported a positive correlation between time spent in volunteering and motives.²³ This observa-

tion is consistent with the finding in this study that all long-term health tasks requiring considerable investment of time were preferred significantly more by known volunteers than non-volunteers. Penner and Finkelstein²⁴ also found that altruistic motives predicted the amount of time individuals spent in volunteering. These findings provided a basis for linking the motives to task categories. According to functional analysis,²⁵⁻²⁸ people volunteer in order to satisfy one or more needs or motives that relate to task categories.

The tool developed by Ochieng and colleagues²² provides a method for describing the CHVs tasks and ranking them in the order of their preference. The functional approach underlies the importance of matching volunteer motivations to the benefits that volunteerism provides. Clary et al²⁶ found that undergraduate students with matching benefits were more satisfied with their volunteering experience and had greater intentions to continue volunteering. Hence, the importance of considering task preference in task allocation was elucidated. Furthermore, when given a choice, individuals preferred tasks with benefits that matched their personally relevant motives. Houle et al²⁹ found that individuals chose volunteer tasks that they perceived would satisfy the motives that were most important to them.

Thus, individuals who satisfied altruistic tests were the best suited for recruitment and training as CHVs. They could be deployed for implementation of intervention programs to reduce child mortality, such as neonatal care and promotion of exclusive breastfeeding³⁰ recognition and treatment with antibiotics of sick newborns,⁷ as curative care was among the tasks preferred in this study. Delivery of interventions in the home by CHWs was viewed as a critical aspect³¹ and visiting homes was identified among the preferred tasks in this study. Maternal care was strongly preferred by long serving volunteers. Syed and colleagues found that CHVs were effective in tracking pregnant women through the postnatal period and in raising awareness about appropriate maternal and newborn care practices.³² This, in turn, required greater investment towards programs for CHV selection and training.

Researchers assert that a favorable evaluation of an ex-

Table 4: Association of Volunteer Tasks with Additional Volunteer Motives.

Volunteer tasks	Development of understanding		Career Development.		Esteem		Social		Spiritual	
	B (co-efficient determinant)	p value	B (co-efficient determinant)	p value	B (co-efficient determinant)	p value	B (co-efficient determinant)	p value	B (co-efficient determinant)	p value
Maternal health	0.000	0.95	0.008	0.77	-0.020	0.43	-0.023	0.32	0.015	0.57
Child health	-0.004	0.97	0.017	0.66	-0.041	0.26	-0.034	0.32	0.016	0.68
Curative care	0.018	0.33	-0.030	0.33	-0.040	0.17	0.018	0.50	0.023	0.46
TB/HIV care	0.035	0.17	-0.006	0.89	-0.046	0.24	-0.038	0.29	0.45	0.27
Home visits for HE	0.041	0.35	0.028	0.70	-0.080	0.23	0.035	0.57	0.161	0.02
Family planning	0.002	0.89	0.003	0.88	-0.029	0.12	0.032	0.06	0.013	0.50
Care of OVCs	0.011	0.17	-0.030	0.02	0.013	0.30	0.008	0.48	0.009	0.51
Meetings/dialogues	0.004	0.43	0.014	0.11	-0.015	0.06	0.014	0.06	0.011	0.20
Campaigns	0.023	0.00	-0.004	0.73	-0.011	0.32	0.016	0.13	0.001	0.93
Disaster activities	0.001	0.09	-0.012	0.45	0.003	0.84	-0.008	0.54	0.050	0.00
Out breaks	0.005	0.54	-0.013	0.34	0.008	0.54	0.000	0.98	0.021	0.12
Emergencies	0.015	0.55	-0.029	0.49	-0.014	0.71	-0.014	0.70	0.117	0.00

perience is a robust and reliable predictor of repeated engagement in that experience.³³ This study added the dimension of identification and use of motives to predetermine their task preferences and therefore the need for training. This would improve the efficiency of the program by targeting training in content and length according to the realistic expectations of workers according to the categories defined in this paper. In this way long serving volunteers could be identified at recruitment for training, targeting preferred tasks.

Home visiting for health education, was among the most critical tasks for volunteers. It was associated with more than five motives. CHVs thus play an important role in helping to achieve the universal health coverage and sustainable development goals reported by many researchers.^{4,11-16} To these would be added emergency and data management tasks, focusing on volunteers with altruistic values. Finkelstein, and his co-workers demonstrated that the fulfillment of motives was a good predictor of volunteer tasks and longevity.^{20,23,35}

One chief characteristic of volunteerism in community health was that it needed to be sustained, long-term. This study demonstrated that it may be possible to classify tasks according to the motives they satisfy. Other workers have reported that when volunteering met the motives for helping, individuals reported greater satisfaction in volunteering.^{25,26,36} This study added to the specific categories relevant to the health volunteers: long-term health, and developmental and short-term tasks required in disasters and emergencies.

If the managers of volunteer programs develop a list of tasks in the implementation of activities at the community level, that satisfy various motives suggested in this paper, they would be able to recruit from a larger pool of individuals, the appropriate volunteers. Volunteer recruits would be better able to find tasks with benefits that match their personal motives resulting in higher satisfaction and commitment to serve their communities. As shown in these studies, people prefer tasks they think will satisfy motives important to them.^{24,35,37}

The view expressed by the findings of Houle, Sagarin, and Kaplan²⁹ found that “people do differentiate tasks based on the volunteer motives they satisfy”. A task can be classified in terms of the motive(s) it does or does not satisfy. The results from this study were based on this idea and offered a classification of tasks. Further, psychological and sociological research suggested that experiences encountered while volunteering were the primary determinants of whether people decided to continue volunteering and hence the tasks that community volunteers preferred to undertake.^{27,38,39}

CONCLUSION

The study concluded that the volunteer assessment framework developed by Ochieng and her colleagues is useful, not only in the identification of volunteers likely to volunteer long-term but also in the assignment of tasks they are likely to prefer and that

would satisfy their motives for volunteering. It is noteworthy that the two constructs, altruistic value and material gain are adequate, both to identify long-term volunteers and to allocate them the most appropriate tasks. This would contribute to sustainability of volunteer initiatives.

The study demonstrated that it is possible to classify tasks according to the motives they satisfy. The results suggest that maternal child health, curative care, household visits lie in one class; community health surveys, and community meetings are within another and emergency tasks are in a third cluster. This will help volunteer recruiters to align them to tasks with benefits that match their personal motives resulting in higher satisfaction and commitment to serve their community for long. The proposed volunteer assessment framework (VAF) can thus be used to align volunteers to tasks, short-term (emergency), and long-term as CHVs.

COMPETING INTERESTS

The authors declare no competing interests.

REFERENCES

1. World Health Organization: The Global Shortage of Health Workers and its Impact. 2006. Web site. <http://www.who.int/mediacentre/news/releases/2013/health-workforce-shortage/en/>. Accessed August 13, 2017.
2. Hermann K, Van Damme W, Pirayo GW, et al. Community health workers for ART in sub-Saharan Africa: Learning from experience—capitalizing on new opportunities. *Hum Resour Health*. 2009; 7: 31. doi: [10.1186/1478-4491-7-31](https://doi.org/10.1186/1478-4491-7-31)
3. Lehmann U, Sanders D. *Community Health Workers: What Do We Know About Them? The State of the Evidence on Programmes, Activities, Costs and Impact on Health Outcomes of Using Community Health Workers*. Geneva, Switzerland: World Health Organization; 2007.
4. Schneider H, Hlophe H, van Rensburg D. Community health workers and the response to HIV/AIDS in South Africa: Tensions and prospects. *Health Policy Plan*. 2008; 23: 179-187. doi: [10.1093/heapol/czn006](https://doi.org/10.1093/heapol/czn006)
5. Zachariah R, Ford N, Philips M, et al. Task shifting in HIV/AIDS: opportunities, challenges and proposed actions for sub-Saharan Africa. *Trans R Soc Trop Med Hyg*. 2009; 103(6): 549-558. doi: [10.1016/j.trstmh.2008.09.019](https://doi.org/10.1016/j.trstmh.2008.09.019)
6. WHO. Declaration of Alma Ata. Paper presented at: International Conference on Primary Healthcare, Alma-Ata, USSR; 6-12 September, 1978; Geneva, Switzerland.
7. Walt G. *Community Health Workers in National Programmes: Just Another Pair of Hands?* Maidenhead, UK: Open University Press; 1990.

8. Chopra M, Munro S, Lavis JN, Vist G, Bennett S. Effects of policy options for human resources for health: An analysis of systematic reviews. *Lancet*. 2008; 371(9613): 668-674. doi: [10.1016/S0140-6736\(08\)60305-0](https://doi.org/10.1016/S0140-6736(08)60305-0)
9. World Health Organization. The Global Shortage of Health Workers and its Impact. 2006. Web site. https://www.globalhealthlearning.org/sites/default/files/page-files/Global_Shortage_of_Health_Workers.pdf. Accessed August 13, 2017.
10. World Health Organization. Everybody's Business-Strengthening Health Systems to Improve Health Outcomes – WHO's Framework of Action. 2007. Web site. http://apps.who.int/iris/bitstream/10665/43918/1/9789241596077_eng.pdf. Accessed August 13, 2017.
11. Chen L, Evans T, Anand S, et al. Human resources for health: Overcoming the crisis. *Lancet*. 2004; 364(9449): 1984-1990. doi: [10.1016/S0140-6736\(04\)17482-5](https://doi.org/10.1016/S0140-6736(04)17482-5)
12. Filippi V, Ronsmans C, Campbell OM, et al. Maternal health in poor countries: The broader context and a call for action. *Lancet*. 2006; 368(9546): 1535-1541. doi: [10.1016/S0140-6736\(06\)69384-7](https://doi.org/10.1016/S0140-6736(06)69384-7)
13. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L; Lancet Neonatal Survival Steering Team. Evidence-based, cost-effective interventions: How many newborn babies can we save? *Lancet*. 2005; 365(9463): 977-988. doi: [10.1016/S0140-6736\(05\)71088-6](https://doi.org/10.1016/S0140-6736(05)71088-6)
14. Heins HC Jr, Nance NW, Ferguson JE. Social support in improving perinatal outcome: The Resource Mothers Program. *Obstet Gynecol*. 1987; 70(2): 263-266.
15. Lehmann U, Sanders D; Community health workers. What do we know about them? The State of the Evidence on Programmes, Activities, Costs and Impact on Health Outcomes of using Community Health Workers. Geneva, Switzerland: World Health Organization; 2007.
16. Lewin S, Munabi-Babigumira S, Glenton C, et al. Lay health workers in primary and community healthcare for maternal and child health and the management of infectious diseases. *Cochrane Database Syst Rev*. 2010; 3(CD004015). doi: [10.1002/14651858.CD004015.pub2](https://doi.org/10.1002/14651858.CD004015.pub2)
17. Black M. Community Participation: Taking part or taking over? *UNICEF News*. 1981; 110: 3-4.
18. Bryce J, Boschi-Pinto C, Shibuya K, Black RE; WHO Child Health Epidemiology Reference Group. WHO estimates of the cause of death in Children. *Lancet*. 2005; 365(9465): 1147-1152. doi: [10.1016/S0140-6736\(05\)71877-8](https://doi.org/10.1016/S0140-6736(05)71877-8)
19. Kaseje MA, Kaseje DC, Spencer HCP. The training process in community based healthcare in Saradidi, Kenya. *Ann Trop Med Parasitol*. 1987; 81(Suppl 1): 67-76.
20. Snyder M, Clary EG, Stukas AA. The functional approach to volunteerism. In: Maio GR, Olson JM, eds. *Why We Evaluate: Functions of Attitudes*, eds. Mahwah, NJ, USA: Erlbaum; 2000: 365-393.
21. Hongoro C, McPake B. How to bridge the gap in human resources for health. *Lancet*. 2004; 364: 1451-1456. doi: [10.1016/S0140-6736\(04\)17229-2](https://doi.org/10.1016/S0140-6736(04)17229-2)
22. Ochieng BM, Duma S, Ochieng JN, Kaseje DCO. Development and testing a volunteer screening tool for assessing community health volunteers' motives at recruitment and placement in Western Kenya. *Psychol Cogn Sci Open J*. 2016; 3(1): 6-16. doi: [10.17140/PCSOJ-3-119](https://doi.org/10.17140/PCSOJ-3-119)
23. Finkelstein MA. Volunteer satisfaction and volunteer action: A functional approach. *Social Behavior and Personality: An International Journal*. 2008; 36: 9-18. doi: [10.2224/sbp.2008.36.1.9](https://doi.org/10.2224/sbp.2008.36.1.9)
24. Penner LA, Finkelstein MA. Dispositional and structural determinants of volunteerism. *J Pers Soc Psychol*. 1998; 74(2): 525-537. doi: [10.1037/0022-3514.74.2.525](https://doi.org/10.1037/0022-3514.74.2.525)
25. Clary EG, Snyder M. The motivations to volunteer: Theoretical and practical considerations. *Curr Dir Psychol Sci*. 1999; 8(5): 156-159. doi: [10.1111/1467-8721.00037](https://doi.org/10.1111/1467-8721.00037)
26. Clary EG, Snyder M, Ridge RD, et al. Understanding and assessing the motivations of volunteers: A functional approach. *J Pers Soc Psychol*. 1998; 74(6): 1516-1530. doi: [10.1037/0022-3514.74.6.1516](https://doi.org/10.1037/0022-3514.74.6.1516)
27. Omoto AM, Snyder M. Sustained helping without obligation: Motivation, longevity of service, and perceived attitude change among AIDS volunteers. *J Pers Soc Psychol*. 1995; 68(4): 671-686. doi: [10.1037/0022-3514.68.4.671](https://doi.org/10.1037/0022-3514.68.4.671)
28. Omoto AM, Snyder M. Considerations of community: The context and process of volunteerism. *Am Behav Sci*. 2002; 45(5): 846-867. doi: [10.1177/0002764202045005007](https://doi.org/10.1177/0002764202045005007)
29. Houle BJ, Sagarin BJ, Kaplan MF. A functional approach to volunteerism: Do volunteer motives predict task preference? *Basic Appl Soc Psych*. 2005; 27: 337-344. doi: [10.1207/s15324834basps2704_6](https://doi.org/10.1207/s15324834basps2704_6)
30. Schellenberg JA, Victora CG, Mushi A, et al; Tanzania Integrated Management of Childhood Illness MCE Baseline Household Survey Study Group. Inequities among the very poor: healthcare for children in rural southern Tanzania. *Lancet*. 2003; 361(9357): 561-566. doi: [10.1016/S0140-6736\(03\)12515-9](https://doi.org/10.1016/S0140-6736(03)12515-9)
31. Rowe A. Entry on 'friendship'. In: Jewkes Y, Bennett J, eds. *Dictionary of Prisons and Punishment*. Cullompton, UK: Wil-

lan; 2007.

[sbp.2005.33.4.403](#)

32. Macro International Report 1998. Web site. <https://forum.cee1.org/content/baseline-market-assessment-energy-star-high-efficiency-residential-windows>. Accessed August 13, 2017.

36. Stukas AA, Daly M, Cowling MJ. Volunteerism and social-capital: A functional approach. *Australian Journal on Volunteering*. 2005; 10(2): 35-44.

33. Harrison AE, McMillan MS, Null C. US multinational activity abroad and US jobs: Substitutes or complements? *A Journal of Economy and Society*. 2007; 46(2): 347-365. doi: [10.1111/j.1468-232X.2007.00471.x](https://doi.org/10.1111/j.1468-232X.2007.00471.x)

37. Finkelstein M, Brannick MT, Warburton J, Chambers B. Older Indigenous Australians: Their integral role in community and culture. *Australas J Ageing*. 2007; 26: 3-7.

34. Bartel C. Social Comparisons in boundary-spanning work: Effectiveness in community outreach on members organization identity and identification. *Administrative Science Quarterly*. 2001; 46: 376-413. doi: [10.2307/3094869](https://doi.org/10.2307/3094869)

38. Finkelstein MA, Penner LA, Brannick MT. Motive, role identity, and prosocial personality as predictors of volunteer activity. *Social Behavior and Personality: An International Journal*. 2005; 33: 403-418.

35. Finkelstein MA, Penner LA, Brannick MT. Motive, role identity, and prosocial personality as predictors of volunteer activity. *Soc Behav Pers*. 2005; 33: 403-418. doi: [10.2224/sbp.2005.33.4.403](https://doi.org/10.2224/sbp.2005.33.4.403)

39. Grube JA, Piliavin JA. Role identity, organizational experiences and volunteer performance. *Personal Soc Psychol Bull*. 2000; 26: 1108-1119. doi: [10.1177/01461672002611007](https://doi.org/10.1177/01461672002611007)