

Integration of Community Health Workers into a Formal Health System of Tanzania-Measuring Satisfaction on the Training Program using Kirk Patrick Model

Pius Chaya¹ and David Urassa²

¹ Institute of Rural Development Planning

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Abstract

This study aimed at assessing the satisfaction of Community Health Worker (CHW) -students with the training programme from Kahama and Shirati Health Institutes. It employed Kirkpatrick's Model- focusing on Level 1 and a cross- sectional design. The study sampled a total of 153 Community Health(CHWs) by Simple Random Sampling, and a total of 14 tutors from Kahama and Shirati Health Institutes by purposively sampling. Data were collected using i) CHW survey-using questionnaire-Kirkpatrick tool ii) Focus Group Discussion (FGD) - for the tutors. Quantitative data were processed, edited and descriptively analyzed using SPSS version 20. The Likert scale (1-5) was used for the computation of weighted scores. The majority (66

Index terms— community health, health systems, community health worker, kirkpatrick model, satisfaction.

1 I. Introduction

ommunity Health is now becoming a public policy agenda. This is also triggered by a shift from treatment to prevention, promotion and education. Tanzania and other countries have invested heavily in the area of capacity building of Community Health Workers (CHWs) as part of WHO recommendations to integrate them into the Health systems. Measuring satisfaction of the training process of Community Health Workers (CHWs) who are integrated into the formal health system cannot be ignored in this era of formalizing the Community health worker cadre. While numerous studies have attempted to measure CHW students reaction to training programmes in the context of learning and teaching environment, the content of the curriculum and its relevance to the career, tutors competence and adaptability to changing world (iHeed Institute (2013); Asnake and Tilahun (2010); Lehmann and C Sanders (2004) and Lim et al., 2002), yet there are still gaps in terms of evidence on CHW reactions to the learning. In Tanzania, frontline CHW are uniquely positioned to bridge the country's critical shortage of human resources for health.

The CHWs have increasingly been recognized as an important frontline cadre in improving access to basic healthcare services, and mobilizing community actions to address health needs is of great concern once they have graduated and been deployed into the health system (Javanparast et al, 2012). The Primary Health Care (PHC) approach, identified in the Alma Ata conference in 1978, has put also more emphasis on the role of CHWs in addressing community health needs (WHO, 1978). Training and evaluation of CHWs practice is becoming one of the key aspects that generally seek to develop new knowledge and skills related to specific tasks and to increase CHWs' capacity to communicate with and serve local people across marginalized communities and underserved areas. Countries that have been delegating tasks to community level health workers have more recently been considered as a response to the global shortage in human resources for health and a key strategy to improve access to quality health services (WHO, 2008).

Massive training of CHWs that take place globally is driven by acute shortage of health workers. The World Health Organization (WHO) also estimates that more than 57 countries face critical health worker shortages, of

which the majority (63%) are in sub-Saharan Africa (WHO, 2006), that calls for the deployment of Community Based Health approaches. Evidence also suggests that globally, about 1 billion people will never see a health worker during the course of their lives (Bhutta et al., 2010) and this is still exacerbated by shortage of human resources for health. There is further a current deficit of about 7.2 million skilled health professionals globally. A projection model driven by population growth would lead to a global deficit of about 12.9 million by 2035 (WHO, 2014) if no serious investments are made on Human Resources for health. The shortages on human resources for Health globally have prompted many countries not only to Abstract-This study aimed at assessing the satisfaction of Community Health Worker (CHW) -students with the training programme from Kahama and Shirati Health Institutes. It employed Kirkpatrick's Model-focusing on Level 1 and a cross-sectional design. The study sampled a total of 153 Community Health(CHWs) by Simple Random Sampling, and a total of 14 tutors from Kahama and Shirati Health Institutes by purposively sampling. Data were collected using i) CHW survey-using questionnaire-Kirkpatrick tool ii) Focus Group Discussion (FGD) -for the tutors. Quantitative data were processed, edited and descriptively analyzed using SPSS version 20. The Likert scale (1-5) was used for the computation of weighted scores. The majority (66%; weighted score =4.5) were strongly satisfied with the course content. Call for curriculum review should go hand in hand with putting in place on job training programmes for tutors to enhance their teaching methodology skills. of the integration of CHWs into the health systems and it is widely recognized as part and contribution to the WHO health systems strengthening building blocks. Despite the fact that, CHW initiative is commonly government run and countries like Ethiopia, Gambia, Malawi, as well as other countries like Kenya, Niger, South Sudan, Tanzania, and Uganda rely entirely on for CHW training (Funes et al., 2012;Giwa and Shirazi 2011), yet most countries in Africa still struggle to make it formal and mostly the deployment of CHW has been donor driven to a large extent.

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In Tanzania, ratio of the health worker per population is around 14.5 per 10,000 population something that is still far below the WHO recommended ratio of 22.8 per 10,000 population (MOH, 2014a). In addition, the shortage of HRH in the country stands at 52% where rural areas are mostly underserved (MOH, 2014b). This shortage has necessitated Tanzania to support the Community Based Health care programme through community health worker initiatives. Despite the fact that many NGOs and other health stakeholders have been using the CHWs in many of their interventions, yet the type of training that they have been providing for so long has not been well coordinated. Moreover, every partner has been using different contents and curricula to train CHWs and there has been some inconsistent systems of measuring the capacity of trained CHWs.

In Tanzania, while the support on training CHWs started since independence, yet there has been insignificant improvement on CHW capacity to provide health services over decades. A number of initiatives such as Mtu ni Afya (Health for People) campaign of 1972, the Arusha Declaration of 1967 and the Ottawa Charter of 1986 put the Community health initiative into a good position. All of these also supported the implementation of the Primary Health Care (PHC) initiatives. In all these initiatives, the CHW cadre though was streamlined in addressing health issues, yet received little capacity building and recognition in the employment systems. In 2000, and following the MDGs, the community based health care was still well emphasized, however, little attention was given to the training of the CHWs and their promotion.

In the same note, Tanzania Poverty Eradication strategy I and II have taken care of the need for supporting the primary health care through use the CHWs. Also, the Primary Health Care Strengthening Programme (2007-2017) commonly known as MMAM an acronym adopted from Kiswahili words Mpango wa Maendeleo ya Afya ya Msingi has reiterated the need of CHW in the primary health care delivery. In addition, there has been a number of policies, strategies and acts formed to date to support the implementation of Millennium Development Goals(MDGs), and recently the Sustainable Development Goals(SDGs) namely Health Policy (1990 Policy (, 2003 Policy (, 2007)) In 2014, Tanzania decided to nationally address these challenges by formalizing and integrating the practice of CHWs into a national CHW cadre that will be trained for nine months (1 year). Since 2014 there are more than 3000 students in health schools who pursue certificate in Community Health. Despite these efforts undertaken by the Ministry of Health and its Task Force since 2014 to date, yet there are limited studies on the satisfaction of the CHWs who are either in school or they have graduated on the way the training programme has been conducted. This study therefore aimed at investigating the satisfaction of CHWs students and alumni with the training programme by taking the case of Kahama and Shirati Health Institutes.

3 II. Theoretical Framework

This paper utilizes the Kirk Patrick Model level 1 to assess the level of satisfaction among CHW with the training contents and tutors competence. The use of Kirkpatrick's (1976) training has had at an organizational level. This includes changes in health outcomes.

Despite the such value addition of the model, it still has the following limitations: Specifically, Kirkpatrick (1977) reports that the usefulness of stage one evaluation depends upon the honesty of the learners who complete the questionnaire and feel comfortable to tell the truth about the programme whether it has been successful or not. There is also the potential issue of social desirability whereby the learners feel that they have to respond in a particular way (Darby, 2006) especially if they are asked to complete their evaluation in front of the trainer

or fellow learners. There is also a risk that the evaluation focuses too heavily on enjoyment rather than on how useful the training has been to them ??Hamblin, 1974) which is most frequently in the form of 'happiness sheets (Bramley and Kitson, 1994).

4 III. Methodology a) Study Area

This study was carried out in two institutes and covered 230 CHW students who were in year 1 and those who had graduated (out of school). The researcher decided to choose two institutes namely Kahama (Public) and Shirati (Private) from Lake Zone due to the fact that there had been more promotion of update of Community Health Course in Lake Zone. It is expected that, those from Lake Zone are more informed about the programme than those from other Zones in the country. In addition, most of the donors are supporting students for the scholarship from Lake Zone compared to other regions, and Kahama and Shirati have been receiving some CHWs who are under the sponsorship scheme (Kahama Institute Database, 2016; Shirati Institute Database, 2016).

5 b) Study Design

The study used cross sectional design to collect data only once at a point of time among the CHW students and alumni (Kothari, 2006). This design was chosen since it is capable of describing the characteristics of units of inquiry and be able to compare them.

6 c) Study Population

This study covered 193 CHWs in the two institutes apart from those 20 used in the pre testing from Kahama for on-going CHWs. There were 114 CHWs and 99 CHWs enrolled at Kahama and Shirati respectively who were in school and those who had graduated. Out of these, 42 and 70 students had already graduated from Kahama and Shirati Institutes respectively, while 72 and 29 students were in the first year of their study from Kahama and Shirati schools respectively. The study also covered 16 tutors, of whom 8 came from each institute.

7 d) Sampling and Sample Size

For the students to participate in quantitative part of the evaluation, a simple random sampling was used whereby the sampling frame for this was the list of all CHW students except those picked for pre testing at the respective school. For quantitative data, sampling used the target population of 193 active students in two schools to estimate sample size without the pre testing units. The formula proposed by Kothari (2006) for the estimation of sample size for simple random sampling was proposed. $n = N / 1 + N (e)^2$ Where: n = Sample size N = Sampling frame e = Desired precision of 5% (0.05). Thus, $n = 193 / 1 + 193(0.05)^2 = 139$

After adjusting for non-respondents by using the formula $n * 10/100$, that gives $139 * 10/100$. Then, a sample size was adjusted to a minimum sample size of 153 of CHW students and graduates in the two institutes. In order to get the sample size in each school, the proportion from each school was calculated based on the number of students in the school. Thereafter, for Kahama, the sample size was $114/213 * 153 = 82$ while for Shirati was $99/213 * 153 = 71$

The sampling interval for the students was also computed based on the fact that the list of the students was known i.e $213/153 = 2$, so two students were skipped in the sampling based on the register of students who were serially ordered. Since the CHW out of schools were difficult to trace, the study used the list and contacts of graduated students from the school. The telephone interview was used to get the CHW alumni satisfaction on the programme. In case the mobile numbers provided by the schools were not reachable, the researcher used the contacts of their classmates to trace them.

8 e) Sampling School Administrators

In order to triangulate the study findings, the study sampled purposively 8 tutors from each school to be part of the study. The tutors to be sampled are those who are engaged in the training programme of Community Health.

9 f) Data Collection Methods and Tool

The study collected primary data from the students, and graduates. The quantitative data were collected through self-administered interview with the Kirkpatrick Model collection tool for students while qualitative data were collected using focus group discussion (FGD) from tutors. There were two FGDs done throughout the course of the study, where one from each school. This study has limited cases of ethical considerations. However, in order to monitor issues of confidentiality and consent to participate in the data collections, the consent form was designed and handled to the respondents to sign before they participated in the study. In addition, the researcher obtained clearance form from the MUHAS before embarking on data collection. The researcher also requested permission from the respective institutes before embarking on data collection.

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11 h) Data Processing and Analysis

Prior to data analysis, data were cleaned by the researcher while still in the field. Thereafter, data from questionnaire were entered into SPSS amenable for analysis. Quantitative data were classified and organized according to institute in order to make comparison association to other demographic characteristics.

Moreover, completeness and consistency of data were inspected so as to rectify missing information and any outliers. For qualitative part, data from focus group discussion were transcribed and coded. Transcription was done by experienced transcriptionists. Data coding and analysis were facilitated by the use of Nvivo 8, a computer software package specifically designed to manage, search, and retrieve qualitative data.

12 i) Computation of Weighted Score or Mean

Quantitative data were analyzed by SPSS version 20. The Likert Scale of 1-5 was used and it was divided into 1-Strongly Dissatisfied (SD), 2-Dissatisfied (D), 3-Neutral (N), 4-Satisfied(S) and 5-Strongly Satisfied (SS). Descriptive analysis was performed to get weighted score/mean and percentages. The cut off point was 3 where above this it implied that students were satisfied with the programme based on the parameters of interest such as content, tutors capacity etc and the magnitude of satisfaction tended to increase based on the scale. In addition, any weighted score above 4.5 was rounded off to 5 and vice versa was true.

The step wise approach for the computation of weighted score as from Likert scale 1-5 (Kothari, 2006) was as follows:

Step 1: Decide on the size of the likert scale(LS), let say 1-5(LS-D, SD, N, S, SS)

Step 2: Find out the responses for each satisfaction aspect for each respondent (F)

Step 3: Multiply the sum of the aspect with the likert scale for each aspect (LS*F)

Step 4: Sum the product in step 3(sum of LF*F)

Step 5: Divide the sum in step 4 with the total of the frequencies of the parameters of interest to get the weighted score(Sum of LF*F /Sum of F)

Step 6: Find the over all weighted score for the training aspect e.g Content, etc by finding the average of all individual weighted score (Sum of weighted score/ Number of aspects).

Step 7: Decide on the decision rule as per Likert scale of 1-5 Strongly satisfied=5, Satisfied=4, Neutral =3, Dissatisfied=2, Strongly dissatisfied =1: In case the Weighted score are in decimals, the following decision rule and cut off points were used: 3=Neutral; Less than or equal to 1 =strongly dissatisfied; 2-3 =Dissatisfied; At least 3 to 4 =Satisfied; At least 4 to 5 =Strongly satisfied

13 j) Content Analysis for Qualitative Data

The qualitative data from FGDs were transcribed. Transcripts were carefully read to identify themes, followed by summarizing and regrouping the data and interpreting them looking for similarities and differences and describing them. Data analysis started during data collection procedures, by reading the transcripts and discussing the data with the research team. At the end of the data collection, transcripts were finalized and the research team analyzed them. Data were analyzed using content analysis with the aid of matrices.

14 IV. Findings and Discussion

15 a) Characteristics of the Respondents

Findings on demographic characteristics of respondents show that 53.6% (n=82) and 46.4% (n=71) of students were contacted from both Kahama and Shirati health institutes respectively. Gender wise, 44% (n=78) and 56% (n=85) of the respondents were males and females respectively. Also, in terms of age, 92.2% (n=141) and 7.8 % (n=12) had ages ranging between 16-24 years and 25-30 years respectively. In terms of whether the respondents were in school or had graduated, the findings show that 32% (n=49) and 68% (n=104) of the respondents were in school and those who had graduated respectively. On the basis of those still in college, 57% (n=28) and 43%(n=21) of the respondents were from Kahama and Shirati institutes respectively. For those who had graduated, 51%(n=54) and 49% (n=50) of the respondents were from Kahama and Shirati institutes respectively.

Despite the fact that this study focused on the satisfaction of students pursuing Community Health Course, yet understanding their social and demographic characteristics was key. Based on the students that the study managed to contact for the self-administered questionnaire and telephone interview, majority of them were from Kahama Health institute compared to Shirati Health Institute (HI). In terms of gender, majority of the students interviewed were males compared to females. Age wise, the majority of the respondents were between 16-24 years old, and most of these were those who had just completed form four or completed form four in the past few years. In addition, majority of the respondents interviewed were those had completed school, with the reason that the first batch of the enrolment to CH course was receiving many applicants. with 5 points Likert scale it is evident that most of the students who were doing the CH programme had a feel that the course content of the programme would meet their expectations. This implies that the course content was well prepared in such a way that the theories and principles that were presented demonstrated the critical issues occurring in the community.

More specifically, the course content that was then in use was prepared in such a way that presented clearly the materials that could be applied. Furthermore, the content was well prepared to enhance learning, and to support or address critical issues in the community; well-structured and so it added value in terms of the needed skills. Evidence from FGD conducted among tutors still implied training process went well for the first batch, though it was the first time for the tutors to teach such a programme. The time for the programme was too short given the nature of the curriculum which unfortunately missed some relevant topics like palliative, preventive, curative, rehabilitative courses. The current curriculum covers three areas namely community health, social welfare and medical attendants that seem to be over ambitious and not focused. The career progression of this course is not clear, like progressing to diploma and degree level, this has affected the enrolment of students for the second batch. One tutor was noted saying:-"There are some competences such as preventive skills which were missing in the curriculum. We are however happy to be part of teaching this first batch though we are not familiar with the curriculum. There is a need for the government to invest in orienting tutors on how to best teach this new cadre. (Tutor-Shirati, 2017).

By comparing those who were from Shirati, majority of them were satisfied with the programme in terms of the content, the way the curriculum was structured and the duration of the course. In the same analysis, graduates and those still in the college were both satisfied with the programme. For Kahama, half of the graduates were satisfied with the programme, though this number appeared to be almost the same to those who were not satisfied with the programme. This might have been contributed by the fact that there were challenges with the accommodation for the students compared to Shirati, and that was the time when the government ceased to provide meal in school, so students started to pay out of their pockets for the accommodation.

These findings relate to what was reported by Partners in Health (2001), Minnesota International Health Volunteers (2004) and Pathfinder International (2005, 2011) and Jim et al., (2002) in other countries that CHWs who had been trained using short term programme, had strong feel that the programme was useful and the training content and manual were prepared in such a way that the knowledge and skills had been imparted to help them do better.

16 b) Satisfaction of CHW Students with the Content of the Programme

Using a five point Likert scale (1)(2)(3)(4)(5), weighted score for the satisfaction of CHW students with the content of the programme was 4.5 . This means that most of the students were strongly satisfied with the CH programme content. Using specific parameters of the content, it was found out that most of the students (66%) were strongly satisfied with the course content of the programme (Table ??). To be specific, 64.1% (weighted score=3.3) and 83% (weighted score=5) of students were strongly satisfied with the fact that the course content was well prepared to present the needed theories and included critical issues currently occurring in the community. In the same analysis, results show that 71.9% (weighted score=4.7) and 75.8% (weighted score=4.7) of the respondents had the opinion that the course content managed to significantly present materials that could be applied and the curriculum itself was provided to students as a reference document. In addition, 54.2% (weighted score=4.5) of the students reported that the course content was well prepared to enhance learning and 69.9% (weighted score=4.7) of the students were strongly satisfied with the content since it was prepared to support or address critical issues in the community. On the other note, the study found out that about 64.1 % (weighted score=4.6) of the students had strong opinion that the course content was well structured to add value in terms of the needed skills. It is only 42.5 % (weighted score=3.9) of the students who were satisfied with the materials provided during learning.

In addition, out of 21 students who were from Shirati institute, 71.4 % (n=15) were satisfied with the programme while 28.6% (n=6) were strongly satisfied with the programme. For those who had graduated from Shirati 52% (n=26) were strongly satisfied with the programme, 38% (n=19) were satisfied while the rest were not satisfied. In Kahama, for those still in college, 61.1 % (n=33) were satisfied, 3.7%(n=2) were strongly satisfied, 29.6%(n=16) were dissatisfied and only 5.6% (n=3) were strongly dissatisfied with the programme. For those who had graduated from Kahama, the satisfaction was as follows: 42.9%(n=12) of the students were dissatisfied, 39.3%(n=11) were satisfied with the programme , 14.3%(n=4) of the students were strongly satisfied and only 3.6%(n=1) was strongly dissatisfied).

Since the inception and formalisation of the Community Health Programme and its associated one year training, there have been a number of initiatives undertaken to understand whether the programme is effective or not. Using the Kirk Patrick Model for level 1, Volume XVIII Issue I Version I Using a five point Likert Scale, it was generally found out that most students were strongly satisfied (weighted score of 4.6) with the tutor's capacity and their teaching approaches. But, to be specific, about 72.% (weighted score=4.8) of students were strongly satisfied with the way tutors managed to state the course objectives well, 42.5% (weighted score=3.9) of the students were satisfied with the adequacy of the course objectives 72.5% (weighted score=4.7) of the students were strongly satisfied with the well preparedness of the tutors 85% (weighted score=4.9) of them had opinion that the tutors had the capacity to teach and 77% (weighted score= 4.8) of the students reported strongly that the tutors used participatory methods of teaching inside and outside the classes. For those still in school and those who had graduated and using the cross tabulation, results show that -for those from Shirati, 66.7 % (n=14)

of those still in college had an opinion that the tutors had the capacity to train them and 33.3 % (n=7) of them reported to be satisfied with the tutors' competence. For those who had graduated from the such institutes, the results show that 84 %(n=42) of them were strongly satisfied with tutors' capacity while 16%(n=8) of them were satisfied with the programme. For Kahama, those who were still in school, 92.6% (n=50) were strongly satisfied with tutors' competence and 7.4 % (n=4) had an opinion that the tutors had capacity to train them. For the CHWs who had graduated from Kahama, the results show that 85.7 % (n=24) of them had the strong opinion that the tutors had the capacity to train while 14.3%(n=4) of them had the opinion that the tutors had the capacity to train their students.

It is therefore a matter of fact that students' competence and mastery of the subject matters depends on a number of factors including the presence of tutors who are eager and motivated to work hard. Most CHW students were happy with the capacity of the tutors and their teaching methodology in a way that where the tutors managed to triangulate approaches in teaching such as group work, simulations, games, role model and guest speaker as well as practical sessions. The capacity of tutors is not only a matter of experience but also the entry and recruitment criteria set by National Council on Technical Education (NACTE) that make all institutes to abide. Tutors were capable to stimulate learning among CHWs and this eventually contributed to their overall good performance. Even though the tutors managed to do their best to make CHW learn and perform well, yet majority of them had not received any refresher course on how to teach this new course, and few of them were part of the curriculum development.

17 V. Conclusion

Investment of Tanzania in Community Health is now underscored. The shift from treatment to prevention and control has to do with the way Ministry of Health prepares Health work force that can work in the community on either voluntary mode or on salary mode. This study that was carried out in six months to understand the reaction of CHW students who are in the pursuit of CH course on the program. It is a matter of fact that there is a strong sense of satisfaction and motivation among the CHW students with the community health programme in particular the way the training is run, and the competence and motivation of the tutors. Despite these success stories, yet the programme is constrained by having a curriculum that does not capture all required contents, some tutors not well oriented on teaching the new programme. The success of Community Based Health Programme and Policy (CBHP) in Tanzania calls for strong Public and Private Partnership. In addition, the need for curriculum review should go hand in hand with putting in place on job training programmes for tutors so as to enhance their teaching methodology skills. ¹

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Figure 1:

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