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SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA, LEGON

FACTORS INFLUENCING SUSTAINABILITY OF COMMUNITY-BASED HEALTH VOLUNTEERS ACTIVITIES IN THE KASSENA-NANKANA EAST AND WEST DISTRICTS OF NORTHERN GHANA

BY

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DECLARATION

I, Tamti Acheampong Chatio, declare that except for other people's work which I have duly acknowledged, this dissertation was the result of my own original work carried out under supervision, and that this dissertation, either in whole or in part has not been presented elsewhere for another degree.

………………………… ……………………

Tamti Acheampong Chatio Date

(Student)

………………………… ……………………

Dr. Patricia Akweongo Date

(Academic supervisor)

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DEDICATION

This work is dedicated to my mother Mrs. Abadi Chatio and my family members for their relentless prayers and support and to my son Donald Chatio**.**

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ACKNOWLEDGEMENT

All thanks to the Almighty God for his guidance and protection throughout the programme.

My sincere thanks go to my supervisor Dr. Patricia Akweongo for your valuable guidance, contributions and support throughout this work. May almighty God continue to bless you! My heartfelt gratitude goes to Dr. Philip Baba Adongo for your wonderful advice and the support that you gave me throughout the program. I say God richly bless you! I will also like to thank my wife Aurelia Abapali for her prayers, encouragement and support.

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ABSTRACT

An increasing demand for health care services and getting health care closer to doorsteps of communities coupled with the shortage of professional health care providers has made health service managers resort to seeking greater collaboration with communities and the use of non-professional health workers to provide health care services to people in communities. Community volunteerism in Ghana has therefore, been identified as an effective strategy in the implementation of Primary Health Care (PHC) activities. The challenge however, is how to sustain volunteer activities. This study therefore, aims at exploring the factors influencing sustainability of health volunteer activities in the Kassena-Nankana East (KNE) and West (KNW) districts in the Upper East Region of Ghana. A cross-sectional survey design and qualitative research methods were used to gather primary data. A total of 200 structured interviews were conducted with volunteers and 14 in-depth interviews were conducted with health volunteers and health staff involved in volunteer activities in the two districts. The data was analyzed using STATA Version 11.2©. Bivariate and multivariate regression analysis was done to determine factors affecting performance and retention of health volunteers. The overall assessment of performance of volunteers showed that 45% of them scored high on performance. About 85.5% of volunteers reported means of transport as the main factor affecting their performance. Also 80.5% reported motivation or incentives such as raincoats, torch lights and wellington boots as retention mechanisms used to retain and sustain volunteer activities. Ninety-seven percent of volunteers reported that the desire to help community members and sick people at the community level attracted them to work as health volunteers. Eighty-six percent of volunteers were involved in health education while 67.5% carried out immunization activities.

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Providing basic means of transportation and non monetary motivation of raincoats torch lights and wellington boots will motivate volunteers to perform better, sustain their activities at the community level and sustain the primary health care vision.

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LIST OF ABBREVIATIONS

CBHVs:	Community-Based Health Volunteers
CHO:	Community Health Officers
CHPS:	Community-based Health Planning and Services
CHWs:	Community Health Workers
DHMT:	District Health Management Team
GHA:	Global Health Agency
IDIs:	In-Depth Interviews.
IMCI:	Integrated Management of Childhood Illnesses
KNED:	Kassena-Nankana East District
KNWD:	Kassena-Nankana West District
NDSS:	Navrongo Demographic Surveillance System
NGO:	Non Governmental Organization
NHRC:	Navrongo Health Research Centre
PHC:	Primary Health Care
UNICEF:	United Nations International Children's Emergency Fund
VHVs:	Village Health Volunteers
WHO:	World Health Organization

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DEFINITION OF TERMS

TERMS	OPERATIONAL DEFINITIONS
Sustainability	This refers to the ability to attract, retain and raise funds at the local level to maintain the CBHVs activities in community-based health directed interventions by health managers to improve performance.
Retention	The ability of programme managers at the local level to maintain CBHVs for five years or more.
Attrition	This refers to the rate at which CBHVs dropout or stop to work as health volunteers.
Attraction	What influence and motivate CBHVs to work as health volunteers in community directed health interventions.
Performance:	This refers to the level at which CBHVs are involved and carry out their roles and responsibilities as expected (attending meetings, submitting of reports, involvement in immunization activities and health education programs) both at the community and sub-district level.
CBHVs Activities	This refers to the roles and duties of volunteers in community health interventions.

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CHAPTER ONE

1.0. INTRODUCTION

This chapter presents the background, the research problem, aim of the study, justification of the study and the conceptual framework on factors influencing health volunteers' activities.

1.1 BACKGROUD

An increasing demand for health care services and the shortage of formal health care providers or professionals has made health service managers resort to seeking greater collaboration with communities and the use of non-professional health workers to provide health care services to people especially in remote or neglected communities. These non-professional health workers provide their services or time on a voluntary basis (UNICEF, UNDP, World Bank & WHO, 2008). These non-formal health workers at times may have single or many functions to carry out depending on the roles and responsibilities given by health managers. Though, there are different names given to these non-formal health workers depending on the context, they are often covered by the umbrella term as community health workers (CHWs). They are addressed differently in different countries for instance, they are called Village Health workers in Bhutan, Village Health Guides in India, Female Community Health Volunteers in Nepal, and Community Health Workers in Sri Lanka (UNICEF, 2004). CHWs are selected by their own community members and trained by health managers for a short period to provide basic health care services to their own people at the community level. They serve as a link between health managers or administrators and the community in which they serve to promote health to communities that traditionally lack access to adequate health care services as a result of shortage of formal health

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personnel (Bhattacharyya, Winch, LeBan & Tien, 2001; Barbir, 2010). They can identify community health needs and respond creatively to help solve local health problems (Witmer, Seifer, Finocchio, Jodi, & Edward, 1995; Bhattacharyya *et al*., 2001).

Over the years, studies have demonstrated that CHWs involvement in health care services can help reduce morbidity, mortality and fertility in certain settings. (Pence, Nyarko, Binka, Phillips, & Debpuur, 2001; Debpuur, Phillips, Jackson, Nazzar, Ngom & Binka, 2002). With the introduction of Integrated Management of Childhood Illnesses (IMCI), community health volunteers have been effective partners and have played an important role in helping to prevent diseases, promotion of healthy behaviors and case management of sick children (Bhattacharyya *et al*., 2001; Swider, 2002).

There are intrinsic and extrinsic factors that attract or motivate community health volunteers into community directed health interventions. Intrinsic factors such as willingness to help provide health care service to other community members, personal interest to help the sick and the satisfaction derived from working as a volunteer (Rahman, Ali, Jennings, Habibur, Seraji, Mannan…Winch, 2010). The extrinsic factors are peer approval, incentives, expectation of future paid employment, access to medicine, self-improvement through training, learning about health and hygiene issues, earning a name in the community, recognition by community members, the status attached to them as professionals health workers basically motivate Village Health Workers into community health interventions. (Rahman *et al*., 2010; Bhattacharyya *et al.*, 2001; Khan, Chowdhury, Karim & Barua, 1998).

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Despite the important role Village Health workers have been playing in health care delivery at the community level over the years, the problem however, has been how to retain volunteers and also to sustain their activities. Effective training, supervision, motivation, community support, interaction and appreciation by patients, family support are all factors that affect the retention and attrition rate of village health workers (Landon, Loudon, Selle, & Doucette, 2004; Argaw, Fanthahun & Berhane, 2007; Rahman *et al.*, 2010). Evidence shows 33% attrition rate among village health workers in Kenya (Olang'o, Nyamongo & Aagaard-Hansen, 2010). Lack of support from community members, lack of effective supervision and allowances to motivate village health volunteers are the factors reported to have influence on attrition rate among health volunteers (Olang'o *et al*., 2010). The workload, lack of time and interest, lack of support from program managers also contribute to attrition rate of volunteers (Khan *et al*., 1998).

Community-directed health interventions mostly fail because of lack of funds at the local level to continue to motivate CBHVs engaged in activities of these health interventions (UNICEF, 2004). Although volunteerism has been described as community members offering free services to their own people at the community level, there is a growing consensus as to whether CBHVs should be given allowances or non-monetary benefits such as bicycles, radios among other things. The level of institutional support in training and refresher training, programme management, supervision by formal health staff, community involvement in programme designing and implementation, selection processes of CBHVs and the workload by health volunteers greatly influence sustainability of CBHVs activities (UNICEF, 2004).

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Ghana among other developing countries recognized community involvement and the volunteerism concept in the 1970s as a key development goal (MOH, 1998). Community volunteerism was therefore, identified as a major and effective component in the implementation of Primary Health Care (PHC) activities. Volunteers were identified in their respective communities by the programme implementers or managers to help provide health care services at the doorsteps of the people in the implementation of the PHC (MOH, 1998). These volunteers were selected from the community, trained and allowed to practice with minimal supervision at the community level. (MOH, 1998; Debpuur *et al*., 2002). Despite many years of involvement of volunteers in health programmes in Ghana, the main challenge on the volunteer concept remains sustaining their activities. Therefore this study is to assess factors influencing sustainability of community-based health volunteers' activities in Northern Ghana.

1.2 PROBLEM STATMENT

In responding to the need to improve PHC through research, an experiment was launched in 1994 by the Navrongo Health Research Centre (NHRC) to improve health delivery at the community level (Debpuur *et al*., 2002; Nyonator, Awoonor-Williams, Phillips, Jones & Miller, 2003). Village health volunteers were recruited with the help of their own community members and trained to provide basic health services (Debpuur *et al*., 2002; Nyonator *et al*., 2003). As a result of the involvement of community health volunteers, fertility declines were pronounced, suggesting that volunteers contributed to family planning adoption and use (Debpuur *et al*., 2002).

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Since the introduction of community-based health volunteer concept, Kassena-Nankana East and Kassena-Nankana West districts have been using community-based health volunteers to carry out health interventions activities in the communities. Community-based surveillance volunteers and community-based health agents are the two main types of volunteers who are engaged in a number of health intervention programmes in the communities in the two districts. Among the intervention programmes the volunteers are involved in the two districts include polio immunization, health education campaigns, nutrition, case identification and reporting, Integrated Management of Childhood Illness (IMCI), immunization programmes, elephantiasis drugs distribution, Cerebro-Spinal Meningitis (CSM) programme among others. Although, these volunteers are carrying out a number of health care activities in the communities, evidence shows that it is difficult to successfully retain health volunteers and to sustain their activities in community directed health interventions (Olang'o *et al*., 2010). Although there is no documentary evidence on the attrition rate in the study districts, a study carried out by Olang'o *et al*., in 2010 indicates 33% attrition rate among Village Health Volunteers in rural Bondo district in Kenya, which poses a challenge to health service delivery in rural districts including Kassena-Nankana East and West Districts.

Studies have not been conducted in the district to assess the retention and sustainability of CBHVs activities and the factors influencing sustainability in the KNED and KNWD context. The main aim of this study therefore, is to explore the factors influencing sustainability of community-based health volunteer activities in the Kassena-Nankana East and Kassena-Nankana West Districts of Northern Ghana.

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1.3.0 OBJECTIVES

1.3.1 MAIN OBJECTIVE

To assess the factors that influence sustainability of CBHVs activities in the KNED and KNWD of Northern Ghana.

1.3.2 SPECIFIC OBJECTIVES

1. To describe community-based health volunteers activities in the KNE and KNW Districts
2. To explore factors that attract CBHVs into community health interventions
3. To assess the performance of CBHVs on community health interventions
4. To describe the retention mechanisms of CBHVs on community health interventions

1.4 JUSTIFICATION

In the face of shortage of professional health care workers, village health workers are being used to provide health care services and also mobilize their own community members for primary health care activities at the community level. In Ghana and elsewhere in the world, health programmes implementation and sustainability is key to the desired outcomes of volunteers activities. Thus identifying the factors influencing sustainability of CBHVs activities and highlighting ways of sustaining volunteers' activities can be useful information in promoting volunteer activities and improving health care delivery at the community level.

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This study therefore, is to provide relevant and needed information to stakeholders, health managers and the Ministry of Health on the activities of CBHVs, factors that attract or motivate them into health intervention programmes, the mechanisms to retain health volunteers and the best ways to sustain their activities.

1.5 Conceptual Framework: Factors Influencing Sustainability of CBHVs Activities

Evidence exists that certain factors influence sustainability of CBHVs activities (UNICEF, 2004; Bhattacharyya *et al*., 2001; Argaw *et al*., 2007). The framework (Figure 1.1) therefore explains the factors influencing sustainability of community-based health volunteer activities which emanate from managerial level, community level and individual level. At the managerial level, funding, involvement of other health staff and community members, training and supervision affect sustainability of community-based health volunteer activities. When there is no funding at the local level to continue to motivate health volunteers, their interest in the health programme might wane which can lead to high attrition rate. Again, when there are no funds, training and supervision may become difficult to undertake to improve competencies of the volunteers for effective service delivery. Where funding is available, continuous training and supervision may be elements for community health volunteer activities as poorly trained volunteers may not provide effective services. Supervision may motivate volunteers and keep them on the job. However where supervisory activities are not planned as part of the volunteer programme, that may also affect the retention of health volunteers and subsequently affect sustainability of their activities.

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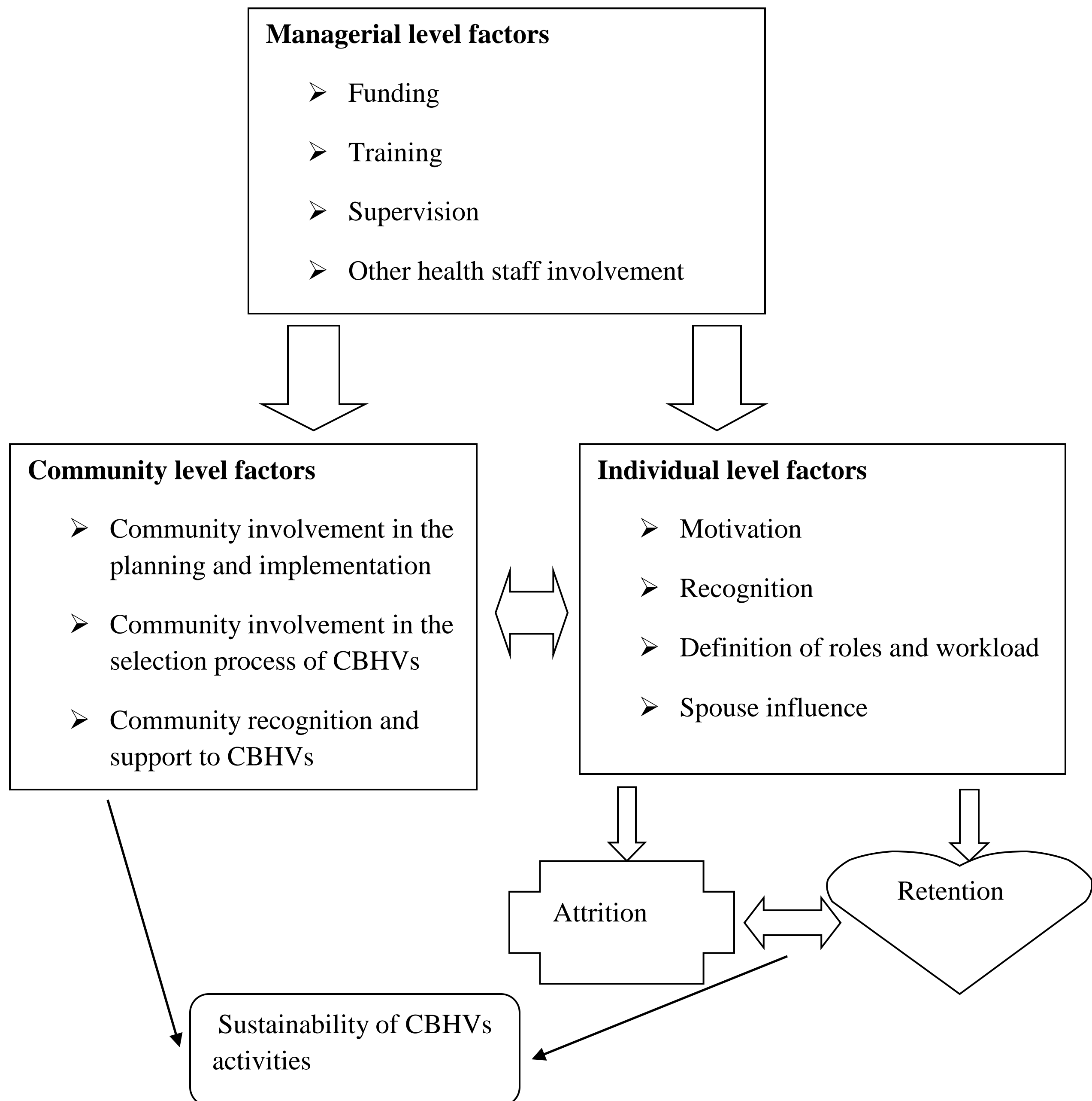
Fig 1.1: Conceptual Framework: Factors Influencing Sustainability of CBHVs Activities



At the community level, community involvement in designing and implementation of health intervention programmes, the selection processes of CBHVs and community recognition and support to the CBHVs are factors that can also affect sustainability of volunteer activities and

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health programmes. When community members are not involved in the designing and implementation stages to get them committed and interested in the programme, they might not show any interest and they may be less likely to support the health volunteers work and this can affect the interest of the CBHVs. Selection of health volunteers is also a factor that determines sustainability of health programmes and CBHVs activities. Where the community is not involved in the selection processes, people who may not be committed to the work might be selected. Quite apart from that where the selection is done by programme managers, there is a likelihood that the community members may find it difficult to work with such people and that can affect retention and the activities of health volunteers.

There are also individual volunteer level factors that can directly affect the retention and attrition of volunteers and subsequently affect the sustainability of their activities. Motivation, recognition, workload, spouse influence are all individual level factors that directly influence retention and attrition of CBHVs. When the volunteers are not motivated and are not getting the necessary support from their family members, their enthusiasm is likely to be affected. Recognition of their efforts and respect by programme managers and the community members also directly affect the retention and attrition of health volunteers. Where they feel that their efforts are not being recognized by their own community members and programme managers they are likely to dropout which can directly affect activities of the health programmes they are involved. Evidence suggests that all these factors lead to high attrition rate among health volunteers which can directly affect sustainability of their activities.

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CHAPTER TWO

LITERATURE REVIEW

2.1: INTRODUCTION

This chapter is divided into 7 sections. Sections 2.0 to 2.5 look at the historical perspective of the concept of the primary health care concept, CBHVs program in Ghana, who health volunteers are and the type of health activities they are involved and the selection and training of health volunteers. Sections 2.6 to 2.8 present literature on the performance of CBHVs in health programs, factors influencing sustainability of CBHVs activities and the summary of the issues found in the literature.

2.2: HISTORICAL PERSPECTIVE OF THE PRIMARY HEALTH CARE CONCEPT

The international agencies and experts during the mid-1970s started to examine different strategies and approaches to improve provision of health care services in developing countries (Magnussen, Ehiri, & Jolly, 2004). This initiative came as a result of countries like China, Tanzania, Sudan and Venezuela which successfully delivered basic but comprehensive primary health care services at the community level using community-based health volunteer system (Hall & Taylor, 2003). The new delivery of health care services raised a question of top down approach, the vertical system of health care, the use of curative rather than preventive strategy and the role of medical professionals in health care delivery (Cueto, 2004). The concept was undertaken by organizations such as WHO and UNICEF to help address the need for fundamental change in health service delivery in developing countries. To achieve health for all,

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Global Health Agencies (GHA) pledged support to work towards meeting the basic health needs of all people through comprehensive approach which led to Alma Atta declaration of Primary Health Care Concept (PHC) in an international conference in September 1978 (Cueto, 2004; WHO, 2008). The strategy was more equitable, appropriate and effective to basic health needs and also helped to address the social and economic causes of poor health. The emphasis of primary health care was on disease prevention, health promotion, community participation and in the spirit of self-reliance and self-determination (WHO, 2008).

The International Conference on Primary Health Care called for urgent and effective national and international action to develop and implement primary health care throughout the world and particularly in developing countries in a spirit of technical cooperation. Governments, WHO, UNICEF and other agencies were asked to support the commitment to primary health care activities. (Hall & Taylor, 2003).

The Alma Atta declaration requires that interventions are designed to help address community needs at the local level and that they must be led by community members themselves. This is because health problems cannot be solved by distance policymakers and health planers but the involvement of individuals and communities to mobilize local resources to deal with health problems at the local level (Magnussen *et al*., 2004). To achieve health for all, the primary health care declaration came out with the following strategies: meeting the basic health needs of the entire population especially those in the rural areas, involving community or village health workers, community participation in community health programmes and establishing health interventions outside health system (Cueto, 2004; WHO, 2008).

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The PHC is the first level of contact of individuals, the family and the community where health care services are brought to where the people live and work (Hall & Taylor, 2003). The concept emphasized on village health workers involvement in basic health services such as education on prevention and controlling health problems, sanitation, maternal and child health, family planning, vaccination, appropriate treatment of common diseases and provision of drugs (Hall & Taylor, 2003). The introduction of PHC concept brought about reduction of infant mortality in resource poor countries, vaccination of measles increased from 20% to 80% in 1980 which led to a fall in measles cases in the world (Hall & Taylor, 2003).

Therefore, health managers have over the years recruited and trained health volunteers to provide various basic health care services to communities they serve. The activities they mostly carry out include health and nutrition education, case management, provision of vitamin A capsules and de-worming, Antenatal home visits, provision of family planning services such as distribution of condoms and pills and polio eradication campaigns (USAID, 2007, Darmstadt, Walker, Lawn, Bhutta, Haws & Cousens, 2008). In addition, CBHVs offer health education at the community level on diarrhea, dysentery, fever, common cold, anemia, worm infection, promotion of immediate and exclusive breastfeeding and can offer basic curative services as well (UNICEF, 2004; Hossain, 1999, Darmstadt, Bhutta, Cousens, Adam, Walker & de Bernis, 2005; Bigirwa, 2009). Health volunteers also offer home based counseling and treatment of uncomplicated malaria and other childhood illnesses (Kelly, Osamba, Garg, Hamel, Lewis, Rowe… Deming, 2001).

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2.3: COMMUNITY HEALTH VOLUNTEER PROGRAM IN GHANA

In line with the Primary Health Care declaration, Ghana tried several strategies immediately after Independence in 1957 to make health care services available, accessible and affordable to the people especially those in the rural communities. The plan adopted was to promote community-based health care through community involvement and volunteerism concept in the late 1970s (MOH, 1998). The initiative was the government's plan to make health care services available at the doorsteps of people through community participation, ownership and volunteerism (MOH, 1998). The Ghana's Ministry of Health introduced the Village Health Worker (VHW) programme in the late 1970s to provide community based primary health care. These were volunteers selected from the community, trained, given essential drugs, and allowed to practice with minimal supervision. (MOH, 1998; Debpuur *et al*., 2002).

During the 1990s, more than 70% of all Ghanaians lived more than eight kilometers from the nearest health provider and rural infant mortality rates were 50% higher than the urban rates (MOH, 1998). Therefore, improving access to healthcare delivery became the primary focus of health sector reforms in the 1990s. Research on accessible health care remained a priority option in finding the appropriate strategies for quality health care delivery at the community level (Binka, Nazzar & Phillips, 1995; Nyonator *et al*., 2003).

In response to the need to improve PHC through research, an experiment was launched by the Navrongo Health Research Centre (NHRC) in 1994 to examine the impact of making health care

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services available to community members at the community level through the use of village Health Volunteer system (Binka *et al*., 1995; Debpuur *et al*., 2002; Nyonator *et al*., 2003).

2.4: CBHVs AND PROGRAMS THEY ARE INVOLVED IN

Community-based health workers are people who come from the communities where they work. They are normally selected by their own community members, trained, supervised and supported by the health system and their own community members to carry out their activities at the community level (WHO, 1990). CBHVs should have primary education to enable them read, write and to keep simple reports of their activities (WHO, 1990). They are non-formal health workers who work exclusively in community settings and serve as connectors between health managers on one hand and health care consumers on the other hand to provide health care services in communities traditionally lack access to adequate health care services (Witmer *et al*., 1995; Barbir, 2010). They can identify and respond effectively to local health needs (Witmer *et al*., 1995).

Among the activities or services they provide include mobilizing community members for health activities, health education on diarrhea, dysentery, fever, common cold, anemia, worm infection, care for diabetic patients and provision of family planning services to people at the community level (Hossain, 1999; UNICEF, 2004; Norris, Chowdhury, Van Le, Horsley, Brownstein, Zhang…Satterfield, 2006). CBHVs are best able to carry out clearly defined tasks such as national health campaigns like Vitamin A distribution, polio campaigns, distribution of condoms and pills, distribution of oral rehydration salts, and maternal and child health rather than carrying

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out broad-based activities such as health education. Increasing burden of work and excessive time commitment for multiple tasks could overwhelm volunteers and can negatively affect their performance (UNICEF, 2004; Ramirez-Valles, 2006).

2.5: SELECTION OF VOLUNTEERS

The basic criteria for selecting village health volunteers as reported in studies include being a member or leader of existing social groups and networks in the community, have proven record of active participation in communal work, having a stable voluntarism character, trustworthiness and honesty, long term residence in the community and ready to work under the supervision of the community leaders and the sub district health managers (Bhattacharyya *et al*., 2001; Sakeah, Akweongo, Williams, Alirigia, & Hodgson, 2007). Gender, age and others have also been mentioned as factors taken into consideration in the selection processes of health volunteers (Hossain, 1999).

2.6: TRAINING OF VOLUNTEERS

There is no report on standard training for health volunteers. Essentially, health volunteers once selected, are supposed to be trained by the health managers in close collaboration with the funding agency between five days to two weeks with refresher trainings at regular intervals (UNICEF, 2004; Sakeah *et al*., 2007; Khan *et al*., 1998; WHO, 2007). The training varies according to the type of programme and it may cover topics such as environmental sanitation and personal hygiene; health education; nutrition and nutritional disorders; water and sanitation, maternal and child health including immunization, treatment of minor ailments; family planning,

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sexually transmitted diseases and HIV/AIDS, simple book keeping, drug management and practical attachment in consulting room. The training gives health volunteers the requisite skills to provide basic health care services to their respective communities (Knippenberg, Levy-Bruhl, Osseni, Drame & Debeugny, 1990; Nyonator *et al*., 2003).

The content of the training varies according to the programme but can cover areas like preventive health, health education and first- aid. A strong focus on interpersonal communication and counseling skills including methods of adult participatory learning is emphasized during training to build skills of communication in volunteers. It also noted that continuous training is found to be an essential prerequisite for an effective CHW program and an important factor in motivating and retaining health volunteers engage in community health programs (UNICEF, 2004).

2.7: PERFORMANCE OF CBHVs IN COMMUNITY HEALTH PROGRAMS

With the introduction of Integrated Management of Childhood Illnesses (IMCI), community health volunteers have been very effective partners and have played an important role in helping to prevent diseases, promotion of healthy behaviors and case management of sick children (Bhattacharyya *et al*., 2001).

Evidence shows that CHWs involvement in health care services has helped to reduce morbidity, mortality and fertility in certain settings (Debpuur *et al*., 2002; Pence et al, 2001; Bigirwa, 2009).

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Community-based health volunteers activities and their role in health care services at the community level over the years have contributed significantly to caregivers knowledge in treating fever and diarrhea with the correct regimen in 40% and 11% cases respectively in communities where volunteers offer health education (Perez, Ba, Dastagire & Altmann, 2009). Again a comparative analysis was also conducted between households with and without CBHVs visits showed a positive influence of volunteers on family practices and knowledge on management of child fever (Perez *et al*., 2009). Community-based health volunteer over the years have contributed significantly in access and the use of health care services and have also played a role in immunization and outreach activities and treatment of tuberculosis (Haines, Sanders, Lehmann, Rowe, Lawn, Jan…Bhutta, 2007; Swider, 2002). Evidence suggests that community-based health volunteers' involvement in health activities has helped to reduce cost of care (Swider, 2002).

Community-based health volunteers' involvement in health care delivery at the community level has helped to increase exclusive breastfeeding to 70% in communities where volunteers were present as compared to 6% in communities where volunteer activities were absent (Bigirwa, 2009). Health volunteer activities have been effective in increasing access and uptake of Sulfadoxine Pyrimethamine (SP), have a positive impact on child vaccination, increase level of child growth monitoring, and increase in provision of iron tablets to pregnant women (Bigirwa, 2009). Evidence from Pakistan showed higher level of contraceptive use in areas where volunteers activities were introduced which answers the hypothesis that volunteers can play a role in increasing contraceptive use (Douthwaite & Ward, 2005). Community-based health

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volunteers also offer home based counseling to mothers and the treatment of uncomplicated childhood illnesses (Kelly *et al*., 2001).

Among the factors that contribute to the performance of CBHVs are positive family attitude, recognition and the influence they have at the community level, being opinion leaders at the community level among others are very important factors that can play a positive role in their performance (Robinson & Larsen, 1990; Alam, Tasneem, & Oliveras, 2011). However, if the volunteers are not getting the needed support from the community members and their own family members, lack of effective supervision and incentive can all directly affect performance of health volunteers (Alam *et al*., 2011). Other factors that can have negative influence on performance of health volunteers include inconsistent medical supplies, inadequate stipends, lack of career development structure, training, educational level, workload and previous experience (Bigirwa, 2009).

2.8: FACTORS INFLUENCING SUSTAINABILITY OF CBHVs ACTIVITIES

Sustainability is defined as continuation of health programme after the initial funding has come to an end (Altarum Institute, 2009). A UNICEF report shows that the failure of taking ownership of health programmes by programme managers or government and the discontinuation of financial support at local level mostly lead to the end of volunteer activities few years after the introduction (UNICEF, 2004; Argaw *et al*., 2007).

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The factors influencing retention and sustainability of Village Health Volunteers activities have been related to funding at the local level, selection, training and supervision of volunteers, other health staff involvement in community health programmes, community involvement in designing and implementation of health programme, community and local leaders recognition and support to CBHVs, motivation and definition of role and workload (UNICEF, 2004; Bhattacharyya *et al.*, 2001; Argaw *et al.*, 2007).

Evidence suggests that community and local leaders' involvement in community directed health programmes is key to sustainability of health interventions at the community level (Argaw *et al.*, 2007). For health programmes to be sustainable, the community members must be involved and participated in the activities of the programme (Bhattacharyya *et al.*, 2001; Argaw *et al.*, 2007). Where community members are not part of the selection processes of the volunteers, their interest in supporting the activities of health volunteers might be poor and this can affect the performance and retention of the volunteers (UNICEF, 2004).

Ideally, a community should be involved in all aspects of health program, including selection, training, and supervision but community members may not have the resources to invest in all these areas. Community involvement in selecting CHWs, and supporting them in their activities or services by contributing in-kind payments, appears to be critical to community directed health programs sustainability (Bhattacharyya et al, 2001; Sakeah *et al.*, 2007). Where community members are not involved, then there is little success in such programmes (UNICEF, 2004). Also where volunteers are selected by health staff to provide health services the community might not give its support and that can affect their activities (Bhattacharyya *et al.*, 2001). Supervision plays an important role in activities of health volunteers. Program organizers providing supportive

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supervision and technical advice to volunteers motivate them to stay. Where this is not done by programme staff and community members, it reduces the interest and enthusiasm of volunteers and this can affect the retention and sustainability of their activities (Hossain, 1999).

What attracts or motivates community health volunteers into community directed health interventions is basically driven by two broad elements; intrinsic and extrinsic factors. Intrinsic factors such as individual's work-related goals, interest of the person on health care activities, satisfaction derive from the work, knowledge on health issues and the person's sense of altruism (Rahman *et al*., 2010). The extrinsic factors include peer approval, incentives, expectation of future paid employment or job, recognition at the community level and the status attached to being a health volunteer basically motivate CBHVs into community health interventions (Rahman *et al*., 2010). These are similar to the factors found to affect motivation and retention of formal trained health workers in low income countries (Rahman *et al*., 2010). Community recognition is identified as the most important factor that motivates health volunteers and can sustain their activities (Argaw *et al*., 2007).

Other factors identified to motivate village health workers into community health interventions is to earn income, to have access to free medicine, to create people awareness on immunization services at the community level, self development, desire to improve own community members health needs and to learn about health and hygiene of own children and neighbors (Khan *et al*., 1998; Rahman *et al*., 2010). It serves as possible pathway for volunteers to get future employment because their involvement in health activities will give them some level of experience to get other opportunities or hoping it will lead them to getting employment (Olang'o *et al*., 2010). Others maintained that the primary motivation for them is to serve their

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communities but many other volunteers gave multiple reasons to include self-improvement through further training. The material expectations from volunteering is identified not to be the only means driving people to work as health volunteers but the satisfaction gained from helping their own community members (Bhattacharyya *et al*., 2001).

In a qualitative study by Bhattacharyya *et al*., (2001), the opportunity to work outside home and also to use idle time productively also came up as factors that attract health volunteers into health programmes at the community level. The volunteer programme gives young women an opportunity to work in an area which gives them social recognition, legitimates their moving around the locality, and identifies them with relatively high status health professionals. (Bhattacharyya *et al*., 2001).

Retention of village health volunteers in health intervention programmes greatly influence its sustainability because if the attrition rate among health volunteers is high, it will be difficult to sustain the programme (Olang'o *et al*., 2010). Factors that also directly influence retention and attrition rates of health volunteers apart from those mentioned earlier are respect from formal health workers, positive and supportive co-worker relationship, appreciation by patients and family members support (Landon *et al*., 2004). When spouses are not in support or show interest in their relations to become volunteers, it will be difficult for them to carry out their activities and this may lead to high dropout rate (Rahman *et al*., 2010). When there is also strong relationship among the health volunteers themselves where they are prepared to help one another, it will encourage and motivate them in the work. About 31% to 44% dropout rate in few years after the start of volunteers programme has also been reported by Khan *et al*., (1998). The

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factors responsible for attrition rate of health volunteers include lack of time, high targets set by programme managers, lack of support from spouses and other family members, termination of service by program managers due to poor performance, workload, lack of promotion and ambition to pursue higher education (Khan *et al*., 1998; Olang'o *et al*., 2010; Rahman *et al*., 2010).

Although volunteerism has been described as community members offering free services to their own people at the community level, there is a growing consensus by district official, NGO, health workers, and community members as to whether CBHVs should be given allowances or non-monetary benefits such as bicycles, radios etc. Such benefits are considered to have positive influence on the family's willingness to give permission and support women to serve as health volunteers. This would help to improve volunteer's status in the community, provide compensation from the time taken from the family and will be an incentive for long-term service (UNICEF, 2004). Quite apart from that, remuneration and incentives, community and local leaders recognition and public appreciation for the contribution of volunteers in the form of awards, certificates etc are things that could motivate and help sustain volunteer activities (Argaw *et al*., 2007). Evidence also suggests that regular meetings with health volunteers and building ownership at the community level for health programs will ensure continuity and can help to sustain health intervention programs and volunteer activities (Barbir, 2010)

2.9: SUMMARY

This review has highlighted that CHWs need to be adequately supported in order to successfully sustain their activities. Financial resources as well as engaging the communities adequately are

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factors that affect sustainability of community health programs. Factors influencing sustainability of CBHVs activities from the literature review include funding at the local level, selection, training and supervision of volunteers, health staff involvement in community health programmes. Community full involvement in designing and implementation of health programmes, community recognition and support for CBHVs, motivation, definition of role and workload are the other factors influencing volunteer activities. Community-based health volunteer concept has been going on for many years in Ghana and in the Kassena-Nankana East and West Districts in Northern Ghana.

This study therefore, seeks to identify factors influencing retention and sustainability of CBHVs activities in the context of KNED and KNWD focusing on cultural and social networking factors, health system factors and as well as explore extrinsic and intrinsic factors that may contribute to retaining and sustaining activities of CBHVs in the study areas and other districts with similar activities in Ghana.

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CHAPTER THREE

METHODOLOGY

3.1: INTRODUCTION

This chapter gives a detailed description of the methodology used in the study. It presents a description of the study design, study area, study population, sample size, sampling procedure, sampling strategy, and the content of survey instrument and data collection techniques. The chapter also explains how data was stored and managed, the quality checks that were implemented and how the data were analyzed. It concludes with the limitations of the study, ethical considerations and utilization of study results.

3.2: TYPE OF STUDY

This was an exploratory, cross-sectional study where both quantitative and qualitative methods of data collection were used to gather primary data.

3.3: STUDY AREA

The study was conducted in the Kassena Nankana East and West Districts. The District was initially one district known as Kassena-Nankana District (KND). It was about three years ago that the KND was divided into two now Kassena-Nankana East District (KNED) and Kassena-Nankana West District (KNWD) but for the research activities of Navrongo Health Research Centre (NHRC), it is still considered as one district because the background characteristics of the

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two districts including the population have not been separated. The Districts are located in the north-eastern part of Ghana, and borders with Burkina Faso in the north. The districts cover an area of about 1675 km^2 and an estimated population approximately 152,000 (Navrongo Demographic Surveillance System (NDSS), 2010).

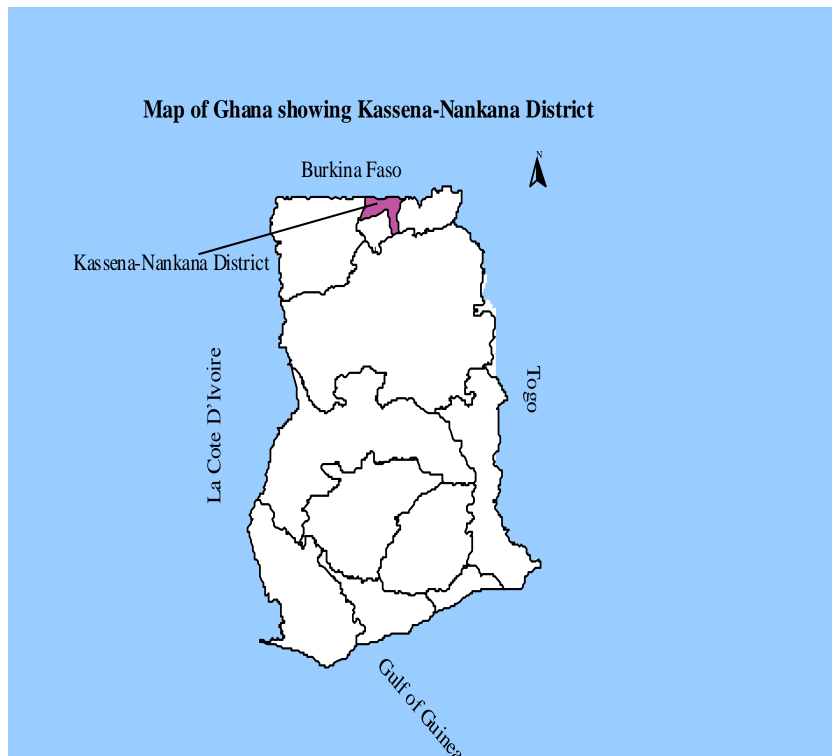

Figure 3.1: The above Map shows the study site

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The districts have two distinct seasons, a raining season that runs from May to September and a long dry season from October to April with hardly any rains. Majority of the people live in rural and sparsely scattered settlements. The compounds are made up of several small-connected huts surrounded by the compound's farming land. With the dispersed settlement pattern in the two districts, health care service delivering is often very difficult and compounded by the influence of extended family members in health seeking behaviors of the sick. There are two main ethnic groups in the two districts: the Kasem and Nankam speaking people. The people largely live on subsistence farming with the main crops being millet, sorghum, rice, maize and groundnuts. Vegetables like tomato and pepper are produced in the dry season around constructed dams and dugout wells.

Concerning health care services, there are five health centers, two clinics, and 27 functional Community-based Health Planning and Services (CHPS) compounds located in various villages in the two districts with resident Community Health Officers (CHOs) offering doorstep services to the people. There is also the War Memorial Hospital (the district hospital located at KNED capital Navrongo) a private clinic, a lot of private dispensaries, traditional providers, Traditional Birth Attendance (TBA), Community-Based Health Volunteers (CBHVs) and health research center located in the town of Navrongo.

3.4: STUDY POPULATION

All community-based health volunteers in the two districts constituted the study population for the quantitative study. For the qualitative interviews, Health staff in-charge of activities of the

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volunteers at the district and sub-district level, health volunteers who have worked for long (5 or more yrs) and dropout volunteers were interviewed.

3.5: SAMPLE SIZE

A study carried out in Bondo district in Kenya reported 33% attrition rate among community health volunteers (Olang'o *et al*., 2010). The district has similar characteristics with the KNE and KNW Districts, therefore the sample size for the quantitative survey was calculated based on 70% retention rate of health volunteers. Given an error margin of 5% and using a 95% confidence interval, the sample size was estimated at 188 health volunteers. However, in order to take care of mission data, the sample size was increased to 200 using the formula below.

The formula used to calculate the sample size is stated below:

$$N = \frac{Z\alpha/2 \text{ X } P\ (1-P)}{d^2}$$

Where N= sample size
p= expected proportion (0.7)
d=margin of error (0.05)

Level of confidence was taken to be 95% $Z\alpha/2$

3.6: SAMPLING METHOD/PROCEDURE

Kassena-Nankan East and West Districts have been divided into sub-districts and each sub-district has a number of communities with two health volunteers in each community. KNED has a total of six (6) sub-districts, one hundred and ten (110) communities with two hundred and

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twenty (220) community health volunteers. KNWD on the other hand has a total of seven (7) sub-districts, one hundred and twelve communities (112) with two hundred and twenty-four (224) community health volunteers. The study covered all the sub-districts in the two districts. The sample size calculation was done using the total number of health volunteers in the two districts. Comparing the total number of health volunteers in the two districts, the difference was small. Therefore, since the sample size for the study was two hundred, one hundred health volunteers were interviewed in each district.

A cluster sampling technique was used to select respondents. First of all, simple random sampling technique was used to select three sub-districts each in the two districts and all health volunteers in the selected sub-districts were invited to take part in the study. Then the total number of interviews per sub-district was compiled with the number of volunteers in each community. All volunteers in all the communities compiled in each sub-district were then interviewed to arrive at a sample of 200 participants.

For the qualitative interviews, purposive sampling technique method was used to select the health staff in-charge of volunteer activities and health volunteers who had worked for five years and above. Snowball sampling technique method was however used to identify dropout volunteers for the interviews.

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FIGURE 3.2: SAMPLING STRATEGY

KNED

Sub-district	No of communities	No of CBHVs
Navrongo East	17	34
Manyoro	18	36
Wuru	18	36
Pungu	12	24
Kologo	26	52
Navrongo Central	19	38
Total	**110**	**220**

Sub-sample 100

Total sample 200

KNWD

Sub-district	No of communities	No of CBHVs
Mirigu/Nabango	19	38
Sirigu	12	24
Navio/Nakolo	17	34
Katiu/Nakong/Kayoro	18	36
Chiana	14	28
Kandiga/Kurugu	14	28
Paga Central	18	36
Total	**112**	**224**

Sub-sample 100

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3.7: DATA COLLECTION TECHNIQUES AND TOOLS

A structured survey questionnaire was used to interview 200 community-based health volunteers engage in health intervention activities in the two districts. All communities compiled for each sub-district was visited and all volunteers within those communities were interviewed. The questionnaire covers knowledge on various activities community health volunteers in the study area were engaged in, the factors that attracted or motivated health volunteers to accept to work as community health volunteers, their performance, factors that influence sustainability of CBHVs activities and the best ways to sustain their activities.

The qualitative interviews were mainly IDIs. In all, 14 In-depth interviews were conducted with seven (7) interviews in each of the study districts. Six (6) interviews were conducted with health staff that is 2 interviews with health staff at the DHMT level in-charge of volunteer activities and 4 sub-district heads in-charge of volunteer activities at that level. Eight (8) IDIs were also conducted with the volunteers, 4 with volunteers who had worked for 5 years and above and 4 interviews with dropout volunteers. Appointments were made with the study participants before the interviews were conducted. All the In-depth interviews were tape recorded, transcribed and typed using Microsoft word.

The themes explored in the qualitative interviews included activities of CBHVs, type of health interventions CBHVs were involved in, what attracted them to work as health volunteers, the processes of selecting and training, their performance with regards to what they were trained to do, rate of retention, factors influencing sustainability of CBHVs activities and the best ways to

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help sustain activities of health volunteers engaged in community health interventions. CBHVs who have worked for five (5) years and above, shared their experiences on the things that motivated them to work for many years. For the dropout volunteers, the themes that were explored included factors that attracted them to work as volunteers, the reasons why they left and what they thought could be the best mechanisms to help retain and sustain CBHVs activities.

Records were also reviewed at the district office to help assess the retention rate of CBHVs in the two districts, how long individual volunteers have been committed to the health intervention activities in their respective sub-districts, the source of funding for community health intervention programmes among others.

3.8.0: QUALITY CONTROL

3.8.1: TRAINING

Two research assistants were recruited and trained for the data collection of the study. They were trained by the researcher for three days. The training covered areas like the purpose and objectives of the study, data collection techniques, translation of the questionnaire into the two main local languages (Kasem and Nankam) to help CBHVs who could not understand the English language very well to response to the questions in the local language of their choice. The research assistants also did role-play as part of the training which was to help them to better understand how to ask the questions appropriately during the actual interviews or data collection.

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3.8.2: SUPERVISION

At each stage of the data collection, the researcher supervised the work of the research assistants to make sure that the data collection was done very well. The researcher was also present in the field to help data collectors to clarify certain issues they were not clear with. All completed questionnaires were checked by the researcher to resolve all queries. All questionnaires with problems were given back to the identification field assistant to go back to the field and correct the problems before the forms were submitted for data entry. During data entry, verification was done to correct any inconsistencies. The qualitative interviews were conducted by the researcher himself.

3.8.3: PRE-TEST

At the end of the training, the questionnaire was pre-tested by the research assistants. The pre-test was done with CBHVs in zones or sub-districts that were not selected for the actual interviews. The essence of the pre-test was to help research assistants to understand the questions very well and to help reveal likely problems that might come up during the actual data collection. It was also to help the researcher to finalize the questionnaire before the actual data collection.

3.9: DATA PROCESSING AND ANALYSIS

The quantitative data was double-entered and verified using Epidata 3.1 with built in consistency checks to control data input. Data cleaning by way of checking for consistencies among variables were carried out by running frequencies and cross tabulations using STATA Version 11.2©.

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Descriptive analyses were used to describe socio-demographic characteristics of respondents. The statistical point estimates were computed and presented as means, proportions or percentages for all the background characteristics, factors affecting performance and retention mechanisms of volunteers.

A volunteer's performance was categorized as good if he 'always' performed the following activities; health education, submission of reports, attending meetings and taking part in immunization activities. The performance of a volunteer is rated as low if he fails to 'always' perform at least one of the activities.

Unadjusted and adjusted odds ratios with 95% confidence intervals were computed to assess the relationship between the performance of community volunteers and selected variables using bivariate and multivariate logistic regression models. Reference categories were defined as those usually associated with the lowest performance. All variables found to be significantly associated with performance were then included in a multivariate logistic regression model, and adjusted odds ratios with 95% confidence intervals were obtained.

Intermediate factors affecting volunteers' performance and retention mechanism factors of volunteer activities were also explored using logistic regression. Significance level was set at 5%.

The qualitative interviews were tape recorded and transcribed verbatim and entered into a computer. Guided by the objectives of the study and the themes of the discussions, a coding list

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was generated to guide the data analysis. Data was organized and analyzed using QSR Nvivo 8 software. This software allows one to code texts into broad and sub-themes and allows one to discern patterns emerging from the themes. The software therefore was used to highlight common themes in the interviews and quotes were selected and used either to support or refute these themes. The results of the study were presented using quotes from the interviews to illuminate specific themes. The qualitative data was used to complement and clarify findings from the quantitative data.

3.10: DATA LIMITATIONS

Because the sample size calculation was done using the total population of CBHVs in the two districts, it was not possible to analyze the data and compare retention rates across the two districts and also by sub-districts.

3.11: ETHICAL CONSIDERATIONS

The protocol was submitted to the Research Ethics Committee at the Ghana Health Service for approval before the study commenced. Approval was also sought at the Regional Health directorate and at the District health management offices in the two districts before data collection started. A written informed consent was administered to all CBHVs before they took part in the interviews. They were told about the purpose of the study, their rights as respondents and how they were selected to take part in the study. A written consent was sought for those who took part in the qualitative interviews. They were also told that their participation in the study was voluntary.

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CHAPTER FOUR

RESULTS

4.1: SOCIO DEMOGRAPHIC CHARACTERISTISC OF HEALTH VOLUNTEERS

The results showed that 53% (106) of volunteers who took part in the study were males while 47% (94) were females. Almost all the volunteers interviewed had ever attended school with majority 49.5% (98) of the volunteers completing middle/Junior High School level (Table 4.1). Most of the volunteers 76.4% (152) were Catholics. About 76.5% (150) were married/living together whilst 13% (26) were windowed or divorced. The results showed that 50% (100) of the volunteers were farmers, 19.5% (39) were traders and 16.5% (33) of them worked as health volunteers as their main occupation.

The majority of the volunteers who took part in the study 69% (137) were 35 years and above. The mean age of the volunteers was 41.5 years. The results also showed that majority 57.5% (115) of the volunteers were Kasenas (Table 4.1).

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Table 4.1: Socio- demographic characteristics of volunteers by performance

Variables	n(%)	High performance n (%)	Low performance n (%)
Age of respondents			
17-24	16 (8.0)	8 (50.0)	8 (50.0)
25-34	47 (23.5)	27 (57.5)	20 (42.6)
35+	137 (68.5)	55 (40.2)	82 (59.9)
Sex			
Male	106 (53.0)	57 (53.8)	49 (46.2)
Female	94 (47.0)	33 (35.1)	61 964.9)
Educational status			
No education	18 (9.0)	4 (22.2)	14 (77.8)
Primary/Middle/JSS	120 (60.0)	48 (40.0)	72 (60.0)
Secondary/Tertiary/Higher	62 (31.0)	38 (61.3)	24 (38.7)
Religion			
Traditional	41 (20.6)	15 (36.6)	26 (63.4)
Christian	152 (76.4)	72 (47.4)	80 (52.6)
Muslim	6 (3.0)	3 (50.0)	3 (50.0)
Ethnicity			
Kassem	115 (57.5)	42 (36.5)	73 (63.5)
Nankam	85 (42.5)	48 (56.5)	37 (43.5)
Marital status			
Never married	21 (10.5)	13 (61.9)	8 (38.1)
Married/living together	153 (76.5)	69 (45.1)	84 (54.9)
Windowed/divorce	26 (13.0)	8 (30.8)	18 (69.2)
Main Occupation			
CBHV	33 (16.5)	14 (42.4)	19 (57.6)
Trader/Housewife	53 (26.5)	19 (35.9)	34 (64.20
Civil servant	14 (7.0)	11 (78.6)	3 (21.4)
Farming	100 (50.0)	46 (46.0)	54 (54.0)

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4.2: TRAINING AND SUPERVISION OF HEALTH VOLUNTEERS

Most volunteers 65.5% (131) in this study were selected by their community chiefs and elders whilst 9.5% (19) were selected by the program officers/nurses (Table 4.2). Almost all the volunteers 99% (197) were trained before they started the voluntary work. About 48% (97) had less than one week training. Eighty two percent of the volunteers (164) reported having adequate training while 16% (32) did not have adequate training. Volunteers who reported that the training was not adequate assessed inadequacy based on the number of days for the training. Shorter than a week's training was perceived to be too short for volunteers to understand the issues they were trained on very well (Table 4.2).

Table 4.2: Training and supervision of health volunteers

Variables	Number of volunteers	Percent (%)
Selection of volunteers		
By chief/elders/group leaders	131	65.5
Assembly person	14	7.0
Community members/ Relatives	36	18.0
Program officers/nurses	19	9.5
Training of volunteers		
Yes	197	98.5
No	3	1.5
Length of training		
Less than one week	97	48.7
One week	66	33.2
Two week	31	15.6
Adequacy of training		
Yes	164	82.0
No	32	16.0
Frequency of supervision		
Once a week	11	5.6
Once a month	66	33.0
periodically	100	50.0
Supervision authority		
Sub-district head	51	25.5
Sub-district health staff	122	61.0
Grading of supervision		
Very effective	52	26.0
Effective	93	46.5
Somehow/Not effective	41	20.5
Effects of supervision		
Helps me do the work well	153	76.5
Motivate me to do the work	24	12.0
Frequency of reports submission		
Every week	4	2.0
Every month	177	89.9
Frequency of meetings		
Once a week/Once every two weeks	13	6.5
Once a month	68	34.2
Not regular	98	49.3

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Fifty percent (100) of volunteers who were interviewed reported that supervision of their work was done periodically and it was during health activities like polio immunization that the nurses supervised them. Thirty-three percent (66) of the volunteers reported that the supervision of their activities was done every month. Of those who were supervised, 47% (93) of them reported that supervision was effective. Majority of the volunteers 76.5% (153) reported that supervision assisted them to perform their activities better.

The health volunteers' reports to the supervisors included the generation of reports on child weighing, immunization activities, case identification, bed net distribution and the first aid drugs they were selling to community members. The results showed that 90% (177) of volunteers submitted reports to their supervisors' monthly (Table 4.2).

4.3.0: HEALTH ACTIVITIES OF COMMUNITY-BASED HEALTH VOLUNTEERS

The community-based health volunteers were involved in health activities such as health education, community mobilization for health activities, weighing of children, polio immunization, counseling services, provision of first aid, treatment of minor illnesses, case identification and reporting among other things. Almost eighty-seven percent (173) of the volunteers who took part in the study carried out health education at the community level (Table 4.3). The results showed that 68% (136) of the 200 volunteers who were interviewed mobilized mothers for immunization exercise at the community level. Fifty two percent (104) of the volunteers weighed children at the child welfare clinic. Health activities like counseling services,

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first aid services, treatment of minor illnesses and case identification and reporting were carried out by health volunteers and were reported separately by less than fifty percent of volunteers.

The other activities that health volunteers in the study carried out were elephantiasis drug distribution, birth and death registration, Cerebro-Spinal Meningitis (CSM) immunization and bed net distribution. These were done by 32% (64) of volunteers who were interviewed (Table 4.3).

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Table 4.3: Health activities of community-based health volunteers

Health Activities	No of volunteers	Percent (%)
Health education		
Yes	173	86.5
No	27	13.5
Mobilize mothers for immunization		
Yes	136	68.0
No	64	32.0
Weighing children		
Yes	104	52.0
No	96	48.0
Provide counseling		
Yes	47	23.5
No	153	76.5
Defaulter tracing/follow up		
Yes	31	15.5
No	169	84.5
Provide first aid		
Yes	70	35.0
No	130	65.0
Polio immunization		
Yes	135	67.5
No	65	32.5
Treating minor		
illnesses	59	29.5
Yes	141	70.5
No		
Case identification and reporting		
Yes	98	49.0
No	102	51.0
Other		
Yes	64	32.0
No	136	68.0

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In the qualitative interviews with health staff and volunteers, similar health activities carried out by volunteers were mentioned. The health staff and the volunteers reported that activities like health education during compound visits, weighing of children, mobilizing mothers for immunizations and durbars at the community level, weighing of children, first aid services, case identification and reporting, elephantiasis drug distribution and treatment of simple malaria were carried out by health volunteers. The following was extracted from the qualitative interviews by health staff:

> *R: Well, they are involved in almost all the health intervention programs or activities going on in this sub district. For example, they are involved in child welfare clinics, they help the nurses in the outreach programs in the communities, they help mobilize community members anytime there is health activity or weighing, they help take the weight of the children, they do compound visits to provide health education and also to inform mothers on weighing days for them to bring their children for weighing. In addition to that they also help to mobilize community members whenever there is durbar in the community. The volunteers also identify and provide first aid on simple malaria to children less than five years but are supposed to refer the serious cases that they cannot handle to the clinic for treatment* ***(IDI-health staff-KNWD)***

Similar view was expressed by a health volunteer.

> *R: When there is any health program that is to be carried out in the communities, I help in mobilizing the people for the nurses, whether immunization program or health talk I move from house to house to inform the people to come out for the program. I am involved in polio immunization, elephantiasis drug distribution and any other health activity that the nurses want to carry out in the community I am always involved. I also have first aid drugs that I give to people and when it is not better I ask them to come to the clinic. I also do house to house visits to do the health education and during that when I see that anybody whether adult or a child is sick I have to advice that the person or the child should be taken to the clinic for treatment. When there is outbreak of any disease in the community, I have to give a report to the nurses* ***(IDI-long serving volunteer-KNED).***

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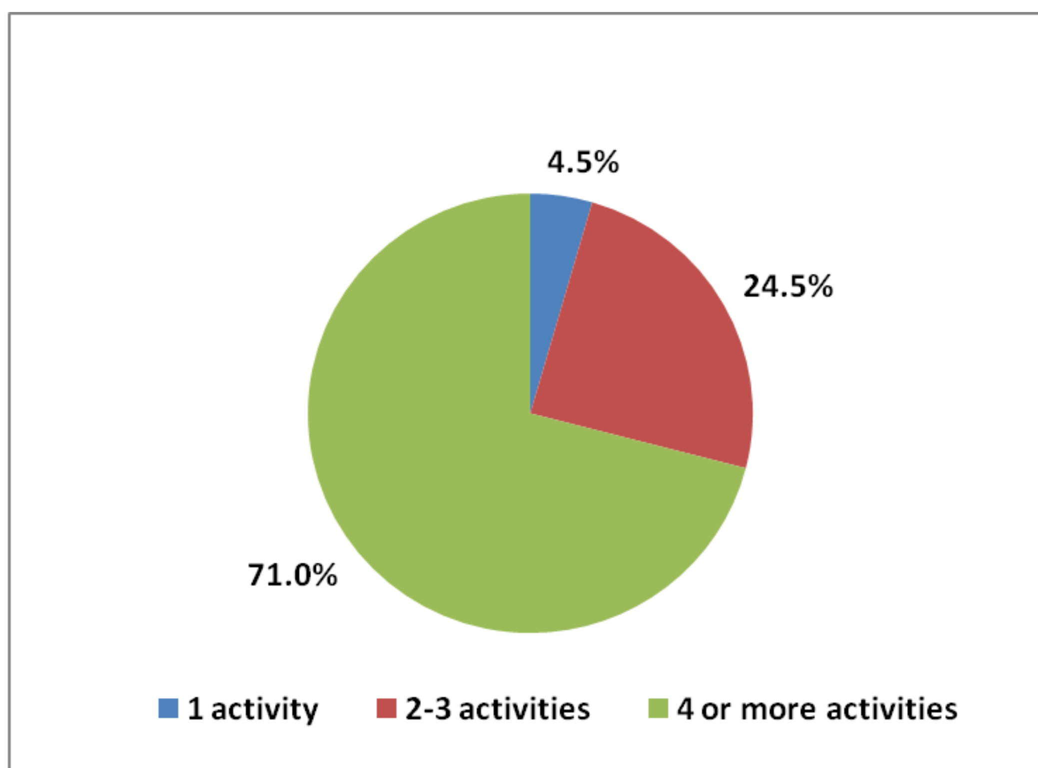
4.3.1: MULTI-TASK HEALTH ACTIVITIES OF VOLUNTEERS

Of the 200 volunteers in this study, 71% (142) were involved in four (4) or more health activities with less than 5% (9) of volunteers carrying out one health activity (Figure 4.1). These results showed that health volunteers undertook multi health activities at the same time.

Figure 4.1: Multi-task health activities of volunteers



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Similar views were expressed in the qualitative interviews by volunteers as.

> *Q: What exactly do you do as a health volunteer in the communities?*
>
> *R: The things I do are many, first of all when I wake up, I have to go round to see to it that people are healthy. I give health education on how they will keep their houses clean, how to preserve their food and water from contamination and also on the spread and prevention of CSM. At the same time too, I am with Integrated Management of Childhood Illnesses (IMCI) where they have given us some drugs for first aid. After talking to the people if they say a child has complained of stomach pain, diarrhea or headache then I have to give the first aid…. Also, when they is going to be a durbar in the community, I go round to inform the community members to come for the durbar and listen to the health authorities…. Some people are there when somebody is sick they will keep the person in the house without sending the person to the hospital so my duty also is to advice them in a sensible way so that they will take the person to the nearest clinic* ***(IDI-Long Serving Volunteer-KNWD).***

From the views expressed by health staff and volunteers on the activities of health volunteers, community health volunteers may be contributing to delivery of health activities at the community level. The next section explores the factors attracting volunteers into volunteer activities.

4.4: FACTORS ATTRACTING VOLUNTEERS INTO VOLUNTEER ACTIVITIES

On the factors that attracted health volunteers into volunteer activities, 98% (196) of the volunteers reported that it was the desire to help their own community members/sick people in the communities that motivated them to work as health volunteers. The desire to help one's own community members/sick people came up very strongly across all the age categories and by gender of the volunteers. Forty-six percent (92) of the volunteers were also described as doctors in the communities in which they served and this was one factor that motivated them to work as

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health volunteers (Table 4.4). The least popular factor volunteers mentioned as an attraction was the desire to earn income.

Table 4.4: Factors attracting health volunteers into volunteer activities

Variable	Number	Percent (%)
Help community members /sick people		
Yes	196	98.0
No	4	2.0
To earn income		
Yes	3	1.5
No	197	98.5
Prestige and respect		
Yes	40	20.0
No	160	80.0
Seen as doctor in community		
Yes	92	46.0
No	108	54.0
Enjoy working as health volunteer		
Yes	40	20.0
No	160	80.0
Help get paid job in future		
Yes	23	11.5
No	177	88.5
Use idle time		
Yes	4	2.0
No	196	98.0

In the qualitative interviews, both volunteers and health staff shared the same opinion that it was mainly the desire to help community members that attracted volunteers to offer their services voluntarily. A volunteer had this to say:

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R: What motivated me to do this work is to help my community members. If you say you will not do the work it means you do not want to help your own people. Though the work has no pay but if you refuse to work, it means that you do not have your community people at heart ***(IDI-long serving volunteer--KNWD).***

The health staff both at the district and sub-district levels reported that apart from the desire to help community members, the recognition volunteers were receiving from the community members and health staff made them feel to be part of the health system. The health staff also reported the allowances that the volunteers were receiving anytime volunteers carried out health activities also motivated them to work as volunteers. These views were supported by the following extract from the qualitative interviews.

R: Yes, first of all I think it is the recognizing and then also the frequent interaction with them by health staff makes them fell part of the health system. Then also once a while we organize some exercise for them and give them some small money also motivate them to work. But I think the most important thing is the recognizing both at the community level and on the part of the health workers. The money that we give them they normally complain that it is small and that they will stop but before you realize, they are there working. For example, these tropical diseases, we don't have enough money to meet their demands but upon discussion, they normally agree to do the work ***(IDI-Health staff-KNED)****.*

4.5.0: PERFORMANCE OF HEALTH VOLUNTEERS

Performance of volunteers was conceived in terms of number of times the volunteer attended meetings, submitted reports, participated in immunization activities and their involvement in health education. The results showed that many volunteers 77.4% (154) always attended meetings, 77.5% (155) of volunteers always submitted reports to their supervisors and 67.3%

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(134) always took part in immunization activities at the community level whilst 86.5% (173) of volunteers carried out health education.

The overall performance of the volunteers was then assessed on the combination of volunteers' ability to always attend meetings, always submit reports to their supervisors, always taking part in immunization activities and their involvement in health education campaign activities. Volunteers who reported always taking part in these four activities had a high performance rating whilst volunteers who reported that they somehow took part in these four activities were considered low performing volunteers. The results showed that 45% (90) of volunteers scored high on performance whilst 55% (110) of the volunteers scored low on performance.

In the qualitative interviews, health staff opinion of the performance of volunteers was positive. A health staff had this to say:

> *R: Well, I will say is great because people who will leave their work just to help the nurses to go round without pay or any allowance, I think they are doing well and I must say they are performing very well.*
>
> *Q: If you say they are performing very well I think that is general. Can you relate it with the work they do and concerning what they were trained to do and all that?*
>
> *R: Yes, when you call for meetings, they all attend and like when there is outreach program we inform them to mobilize the people and then they do exactly what you ask for. The compound visit, they go round and then they treat because at the end of the month, they bring reports to me showing what they have done. What I can say is that in every community they are bad nuts but I think most of them are performing very well.* ***(IDI-health staff-KNWD).***

Factors determining performance or non-performance were established in this study.

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4.5.1: FACTORS AFFECTING PERFORMANCE OF HEALTH VOLUNTEERS

The results showed that sex (P<0.009), educational status (P<0.006), ethnicity (P<0.005) and main occupation (P<0.030) were factors that affected performance of health volunteers (table 4.5). The four factors were statistically significant in the bivariate analysis but when the same factors were put in the multivariate analysis model, only educational status [OR=4.64 95% CI (1.22-17.45)], ethnicity [OR= 1.85 95% CI (1.00-3.41)] and main occupation [OR= 6.27 95% CI (1.39-28.26)] were the main determinants of volunteer performance (Table 4.5).

Table 4.5: Factors affecting performance of health volunteers

		Bivariate (Unadjusted)			Multivariate (Adjusted)		
Variable	**n(%)**	**OR**	**P-value**	**95% CI**	**OR**	**P-value**	**95% CI**
Age							
17-24	16 (8.0)	1					
25-34	47 (23.5)	1.35	0.605	0.43-4.21	NS		
35+	137 (68.5)	0.67	0.451	0.24-1.89			
Sex							
Male	106 (53.0)	2.15	0.009	1.22-3.80	1.56	0.187	0.81-3.00
Female	94 (47.0)	1					
Educational status							
No education	18 (9.0)	1					
Primary/JSS	120 (60.0)	2.33	0.156	0.72-7.52	2.05	0.251	0.60-7.00
Secondary/tertiary	62 (31.0)	5.54	0.006	1.63-18.83	4.64	**0.024**	1.22-17.45
Religion							
Traditional	41 (20.6)	1					
Christian	152 (76.4)	1.56	0.220	0.77-3.18	NS		
Muslim	6 (3.0)	1.73	0.531	0.31-9.70			
Ethnicity							
Kasem	115 (57.5)	1					
Nankam	85 (42.5)	2.25	0.005	1.27-4.00	1.85	**0.049**	1.00-3.41
Marital status							
Never married	21 (10.5)	1					
Married	153 (76.5)	0.51	0.153	0.20-1.29	NS		
Window/divorce	26 (13.0)	0.27	0.036	0.08-0.92			
Main occupation							
CBHV	33 (16.5)	1					
Trader/housewife	53 (26.5)	0.76	0.542	0.31-1.85	1.34	0.562	0.50-3.59
Civil servant	14 (7.0)	4.98	0.030	1.17-21.24	6.27	**0.017**	1.39-28.26
Farming	100 (50.0)	1.16	0.720	0.52-2.56	1.63	0.290	0.66-4.01

NB: NS means the variables were not significant in the bivariate analysis.

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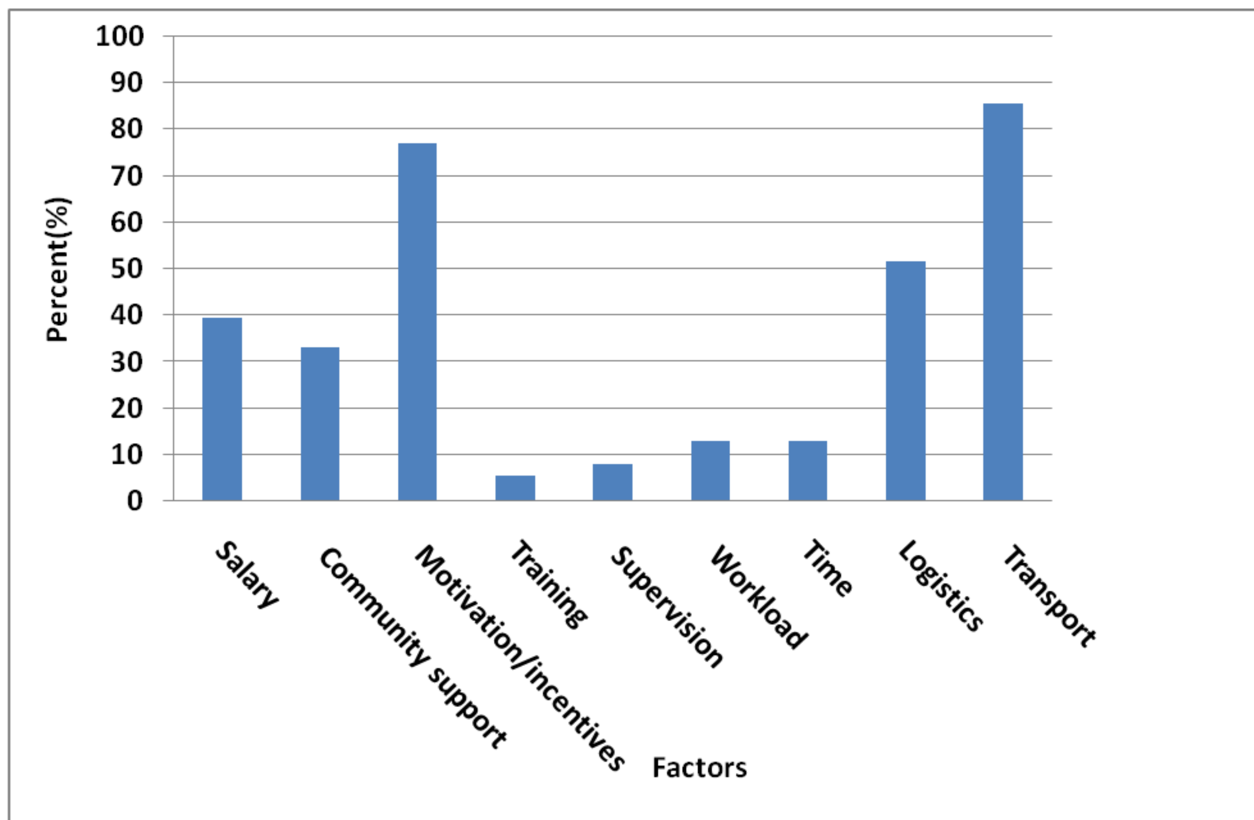
Other intermediary factors were reported by health volunteers that also affected volunteer activities. From the results, 85.5% (171) of the volunteers reported that lack of means of transport in the form of bicycles affected performance (Figure 4. 2). Seventy seven percent (154) of volunteers in the study reported lack of motivation or incentives as affecting performance while 51.5% (103) of volunteers highlighted the lack of logistics as intermediary factors that affected volunteer activities.

Figure 4. 2: Intermediary factors influencing performance of health volunteer activities



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The volunteers also reported that lack of logistics such as torch lights, wellington boots and raincoats as factors affecting performance in the voluntary work. The lack of bicycles as means of transport was reported to make it extremely difficult for volunteers to visit households to carry out their duties as health volunteers in the communities. The results of this study also showed that 39.5% (79) of volunteers reported no salary and 33% (66) of the volunteers reported no community support as factors that also affected their performance negatively (Figure 4.2). A bivariate analysis was used to test the significance of intermediary factors affecting volunteers' performance. The results showed that only means of transport [OR=3.70 95% CI (1.44-9.54)] was significant.

The qualitative interviews with health staff described effective supervision, logistics, financial motivation, community support and maintenance of bicycle as the factors that affected performance of health volunteers. The excerpt from a health staff explained this:

> *R: Sometimes, though they were given, means of transport, they were given some bicycles sometimes ago but they had to maintain the bicycles because they were not going to collect the bicycles from them and so they can use it for their own work and them also the work. So because they are not on salary it becomes difficult for them to maintain them when they break down. When that happens, they have to walk round which is not easy. Then also during the raining season, because they don't have raincoats, it becomes difficult for them to go round because it is not all the time that we get them rain coats…. Sometime when they have shortage of some of the drugs, they also feel reluctant going round without drugs…. And himmmm, as human beings at least they would need sometime like money to support them which is not there all the time. We only give them something small anytime there is workshop or any activity which involves money and I don't think it is enough…. It is not enough to help them solve some of their problems. I think these are the few I can mention* ***(IDI-Health staff-KNWD)***

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During the qualitative interviews with the volunteers, similar opinions were expressed as:

> *R: Yes the main problem we face is because we don't have bicycles to go round and do the work. The bicycles that they gave us kept long and they need replacement and we have been complaining to them if they can give us new bicycles. Quit apart from that even though we have agreed to work for free but at least if every quarter they can call us and give us something small for water that will also motivate us and encourage us in the work.* ***(IDI-Long serving volunteer-KNWD)***
>
> *Q: Do you think lack of effective training, supervision and others have negative effect on your work?*
>
> *R: Concerning training and other things there is no problem except that when we go for these trainings they don't give us anything* ***(IDI-Long serving volunteer-KNWD)***

In attempt to establish factors affected performance, this study also sought to assess factors that affected attrition of volunteers off volunteerism.

4.6: FACTORS INFLUENCING ATTRITION OF HEALTH VOLUNTEERS

Factors affecting attrition were similar to the factors affected performance. About 75% (150) of the volunteers reported that not being paid salary and given incentives or motivation 59% (118) led to attrition of volunteers. The majority of the volunteers were of the opinion that volunteers were more likely to drop out of the work if they were not paid salary or motivated (Table 4. 6).

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Table 4. 6: Factors influencing attrition of health volunteers

Variables	Number	Percent (%)
No salary		
Yes	150	75.0
No	50	25.0
Workload/difficulty		
Yes	73	36.5
No	127	63.5
No respect by community members		
Yes	67	33.5
No	133	66.5
No support by superiors		
Yes	21	10.5
No	179	89.5
No support by community members		
Yes	49	24.5
No	151	75.5
No time		
Yes	53	26.5
No	147	73.5
No motivation/incentives		
Yes	118	59.0
No	82	41.0
Old age		
Yes	49	24.5
No	151	5.5
Got job elsewhere		
Yes	34	17.0
No	166	83.0
No means of transport		
Yes	57	28.5
No	143	71.5
No effective supervision		
Yes	46	23.0
No	154	77.5

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The qualitative interviews with the volunteers however showed that old age, inability to combine the voluntary work with their own private activities were factors that led to attrition. The attitude of community members where other members did not respect and recognized the work of the volunteers also influenced attrition of health volunteers. These were views expressed by volunteers who dropped out:

> *R: The reason why I left or stopped the work is because it came a time I could not combine the work with my own activities and that is why I had to stop not that I did not want to do the work. Once the people know that I was helping them, once in a while somebody will get up and come to me and complain and I have to assist the person get to the hospital. The main reason is that they have transferred me to a different place and as a result I could not do the voluntary work again. The other people I know have left has to do with the fact that they are old and weak that is why they have also left* ***(IDI-drop out volunteer-KNWD)***

> *R-Sometimes it comes from the community; they make some volunteers drop from the program and say after all they are not paid. The community thinks they are being paid and so when the volunteers go on compound some people talk nonsense to them. They tell them, "You are paid to work, if they were not paying you, would you be working?" If they say such things to you and you are quick tempered, there will be a fight and the volunteer will stop doing the work* ***(IDI-Drop out volunteer KNED).***

Though, several factors were mentioned in both the quantitative and qualitative interviews that influenced sustainability of volunteer activities, views from the qualitative discussions with the volunteers suggested that the retention rate in the two districts was still high. A volunteer had this to say;

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R: Retention is very high here because those who are normally selected do not stop the work because they want to help their own people and that is why they have agreed to do the work in the first place. The only person I know and who have left the work is one man and he left to take up a course to become a pastor and so when he left they recruited someone to replace him ***(IDI-long serving volunteer-KNWD).***

The health staff also expressed their views that though the volunteers complained about not being motivated, they were still always available to work. Health staff reiterated that the attrition rate was very low among volunteers in the districts and it was only the younger volunteers who left for furthering their education. A health staff had this to say;

R: For that one it does not happen except maybe they are young and they are going to school or they want to go to the south to look for job, yes. When you recruit them it is difficult for them to leave because we have some who have served up to 20 years…. The other thing is that some of them will not leave, they are there but not very active. They are there and waiting for certain programs to come up for them to take part for a short period and get something. But for them to be doing their routine work as volunteers they will not be serious with that one….But what usually we do is that we tell them that it is their own community members you are helping and your own child is part of it, yeah ***(IDI-health staff KNED).***

The health staff and volunteers in the qualitative interviews reported that the retention rate of health volunteers in the two districts was high. Annual reports for two year period from the two districts showed that the retention rate for 2010 in the KNED and KNWD was 96.4% (212) and 95.5% (214) of 220 and 224 volunteers. The retention rate for 2011 for KNED and KNWD was 94.5% (208) and 95.1% (213) of 220 and 224 volunteers. The average number of years worked by volunteers was 10 years. Funding for volunteer activities was not mentioned as one of the factors that could influence volunteer activities by health staff. The health staff used internally

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generated funds at the sub-district level with occasional support from the district level to continue the activities of health interventions.

On the sources of funding for health interventions activities, United Nations International Children's Emergency Fund (UNICEF), World Food Program, World Vision and sometimes the District Assembly gave funding to carry out health intervention activities.

4.7: RETENTION MECHANISMS OF HEALTH VOLUNTEER ACTIVITIES

Similar factors that affected performance and attrition of health volunteers were also reported as retention mechanisms for sustaining volunteer activities. The results showed that majority 80% (161) of volunteers reported that motivation or incentives was the main mechanism used to retain volunteers and sustain their activities (Figure 4. 3).

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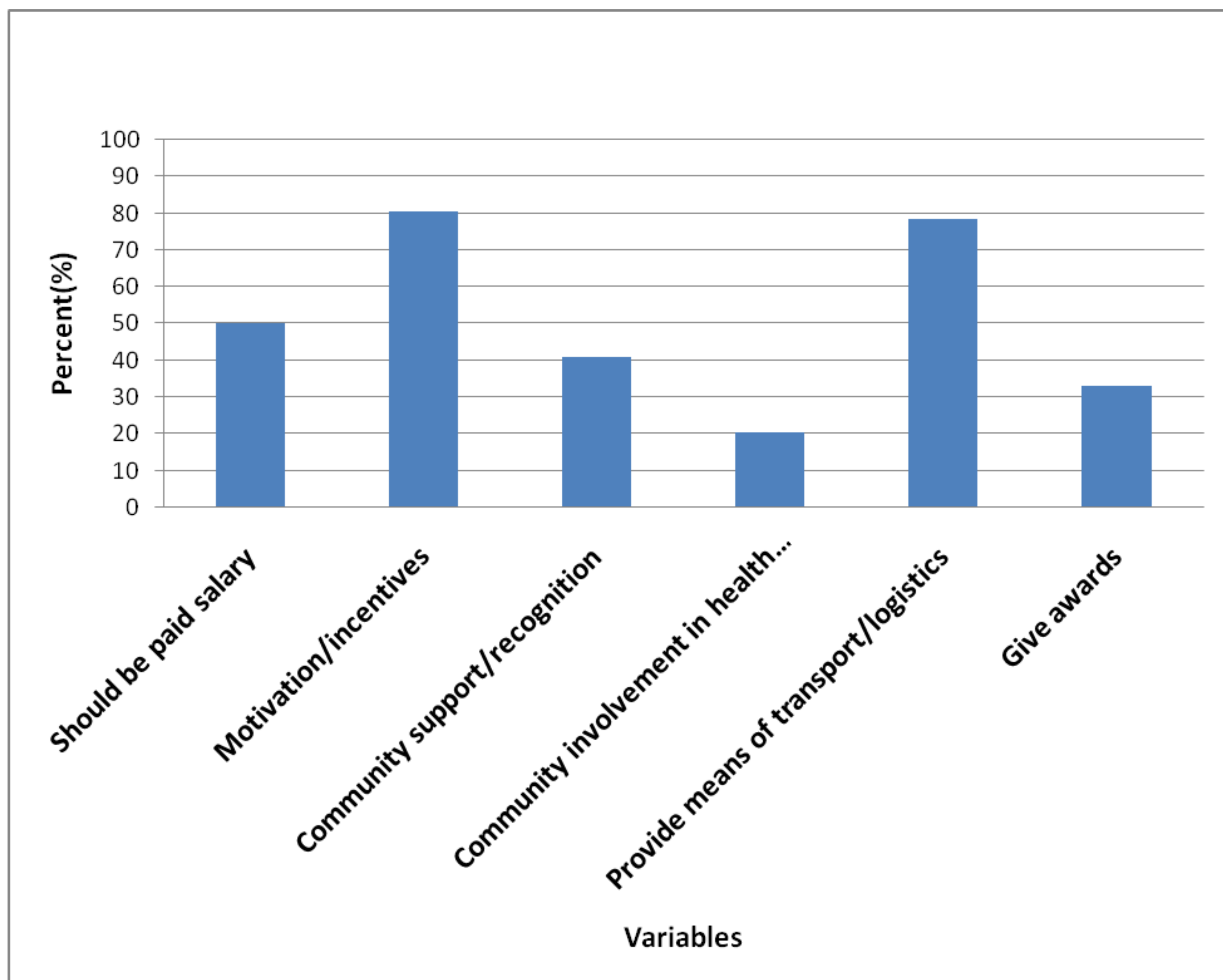
Figure 4. 3: Retention mechanisms of health volunteer activities



About 78.5% (157) of volunteers mentioned provision of means of transport or logistics whiles 50% (100) of reported payment of salaries as mechanisms to retain and sustain activities of volunteer at the community level. Forty-one percent (82) of the volunteers mentioned community support and recognition of volunteer activities as ways that could also motivate volunteers to remain committed to volunteer work (Figure 4. 3).

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The number of years worked by volunteers was categorized into less than 5 years, 5 to 10 years and 11 years and above. This was used to determine among the three groups the kind of retention mechanisms influencing volunteer activities. A bivariate regression analysis showed that only means of transport [OR= 3.30 95% CI (1.26-8.68)] was significant in retaining volunteers who have worked for less than 5 years. Means of transport was 3.30 times more likely to influence retention of volunteers among the less than 5 years working experience category than those who had worked for 11 years and above. On the other hand it meant that if means of transport was not provided, volunteers who had worked for less than 5 years were more likely to leave the voluntary work than those who had worked for 11 years and above.

Similar views were expressed in the qualitative interviews on mechanisms to retain and sustain volunteer activities. The volunteers mentioned that the allowance that was given them was small. The volunteers reported being given GH₵5.00 for transport during refresher training or meetings and GH₵ 8 if they carried out immunization exercise. A volunteer had this to say:

> *R: In fact they should give us incentives to also encourage us to do the work although it is voluntary but at least something small for us to use and buy soap, it is enough for us. They should call us every quarter for refresher training…. If you don't have bicycle, you cannot walk round all the communities to do the work. The bicycle that they gave me since 1995 it is very old and cannot be used again for the work…. For salary, we know that it is voluntary and we know that we are just to help our own people and our blessings will come from God more than even alary but they should encourage us with something small, yes. For the community members, during the raining season, they should at least come and help me on my farm for one day so that I will also get time to go round and do the work…but they have not been doing that* ***(IDI- long serving volunteer-KNWD)***

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The health staffs on the other hand were of the view that effective supervision, quarterly meetings with volunteers and community support where community members would organize to help volunteers on their farms were all mechanisms to retain and sustain volunteer activities. The following were views of health staff from the qualitative interviews:

> *R-I think the best thing is that whatever is due to the volunteers should be given to them. If they go and the...is thirty, they should let them know that you have forty and not thirty and with volunteers you must be frank with them. When they get to know your weakness, you cannot work with them. So they should make sure whatever that is due the volunteers they should give them. Then we should also intensify our supervision, we should have frequent meetings at least quarterly with them. When we sit and we even buy pure water to drink they will know that we have them at heart that is why we sit with them. But when we just leave them, we will not supervise them, you won't go there, you won't ask of their problems, any time you call them, then you are asking for reports. They will not listen to you* ***(IDI-Health Staff-KNWD).***

> *R-The community level as I said, some of them are farmers so if the community can set a small farm for the volunteers so that during the rainy season the community can engage in farming for the volunteer to support him or her. I think that is also good* ***(IDI-Health Staff-KNWD).***

From the views expressed by health staff and volunteers in this study, monetary incentives may not always be an efficient approach to retaining volunteers.

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CHAPTER FIVE

DISCUSSION

5.1: INTRODUCTION

This chapter discusses the results of the study and it involves an assessment of the extent to which the study objectives have been met.

The main aim of the study was to assess the factors influencing sustainability of community-based health volunteers' activities in Northern Ghana by assessing the kind of health activities health volunteers are involved in, the factors that motivate volunteers into health activities, their performance and mechanisms to retain and sustain activities of health volunteers.

5.2: HEALTH ACTIVITIES HEALTH VOLUNTEERS UNDERTAKE

Many health volunteers (86.5%) carry out health education campaign, community mobilization for health activities (68%), polio immunization (67.5%) and weighing of children (52%). Similar findings have been reported by Hossain (1999); UNICEF (2004); Norris *et al*. (2006). These studies reported that volunteers mobilize community members for health activities, distribution of polio immunization, provide health education on diarrhea, dysentery, fever, common cold, anemia, worm infection at the community level. Health volunteers also offer home based counseling and treatment of uncomplicated malaria and other childhood illnesses. This finding was reported by Kelly *et al*. (2001). Other activities like care for diabetic patients, distribution of

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oral rehydration salt, Vitamin A distribution and provision of family planning services have been reported by Hossan (1999); Norris (2006) which this study did not find.

Health volunteers in this study perform multi health activities. A greater proportion 71% of the volunteers does four (4) or more task. This corroborates with the literature reviewed by (Kelly *et al*. (2001); Bhattacharyya *et al*. (2001); UNICEF, (2004) that showed that health volunteers could be trained to either carry out single or multi task depending on the role and responsibilities given to them by health managers.

5.3: FACTORS ATTRACTING VOLUNTEERS TO VOLUNTEER ACTIVITIES

The desire to help community members and the sick in the communities 96.8% motivates health volunteers to do the voluntary work. This finding is consistent with results reported by Bhattacharyya *et al*., (2001) which found that the material expectations is identified not to be the only means driving people to work as health volunteers but the satisfaction gained from helping their own community members motivates volunteers to do voluntary work. This means there is cohesiveness and interest in helping one another at the community level and that basically attracts health volunteers into health voluntary work. Studies by Khan *et al*. (1998); Rahman *et al*. (2010) reported that the desire to improve community members health needs and to learn about health and hygiene of children and neighbors motivate health volunteers into volunteer activities. Very few of the volunteers in this study report they are recognized as ‘doctors’ at the community level and the prestige and respect given by community members attract them to volunteer activities. Similar factors were found by Rahman *et al*. (2010) that recognition at the

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community level and the status attached to being a health volunteer basically motivate volunteers into community health interventions. Some volunteers mention that volunteer activities gives them the opportunity to get paid job in future. This is also consistent with a report by Olang'o *et al*. (2010) which found that health volunteer activities is a possible pathway for volunteers to get future employment because their involvement in health activities will give them some level of experience to get employment in future. The results also highlight that very few volunteers in this study use their idle time to work as health volunteers. A report by Bhattacharyya *et al*. (2001) showed that what motivates health volunteers to health voluntary work was for them to use their idle time in the volunteer activities. Other factors which this study did not find which are reported by Rahman *et al*. (2010); Bhattacharyya *et al*. (2001) are access to free medicine, opportunity for women to work outside home, peer approval, incentives and knowledge on health issues as factors attracting health volunteers into health voluntary work.

5.4: PERFORMANCE AND FACTORS AFFECTING VOLUNTEER PERFORMANCE

The performance of the volunteers is assessed on the combination of volunteers' ability to always attend meetings, always submit report to their supervisors, always taking part in immunization activities and their involvement in health education campaign activities. Volunteers who always take part in these activities are performing better than volunteers who are somehow taking part in these activities. The performance of health volunteers have been reported by Bhattacharyya *et al*. (2001) that community health volunteers have been very effective partners and have played an important role in helping to prevent diseases, promotion of healthy behaviors and case management of sick children. Qualitative findings of this study indicate the

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work of the volunteers and their performance is key as health volunteers' involvement in growth promotion and vaccination of children helps to improve health of children in the districts. This is consistent to similar findings by Bigirwa (2009) where it is reported that health volunteers' involvement in health care delivery at the community level has helped to increase exclusive breastfeeding to 70% in communities where volunteers were present as compared to 6% in communities where volunteer activities were absent. The study also reported that Health volunteer activities have been effective in having a positive impact on child vaccination, increase level of child growth monitoring, and increase in provision of iron tablets to pregnant women. A report by Haines *et al*. (2007); Swider (2002) found that health volunteers have contributed significantly in access and in the use of health care services and have also played a role in immunization and outreach activities and treatment of tuberculosis.

Socio-demographic factors like educational status, ethnicity and main occupation significantly associate with performance of health volunteer activities in this study. Volunteers with higher education are more likely to perform better than those without education or with primary education. This means that higher education makes volunteers able to do the work better. The Nankam ethnic speaking volunteers are more likely to perform better than the Kasem speaking volunteers. The reason for this finding is that the Nankam ethnic speaking volunteers in this study have higher education than the Kasenas and since higher education makes volunteers to perform better explains why the Nankem ethnic speaking volunteers perform better than the Kasem ethnic volunteers. The ethnic, educational status and main occupation factors were not found in the literature as factors affecting performance of health volunteer activities.

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Giving allowances to motivate volunteers directly affect their performance in this study. A similar finding was reported by Alam *et al*., (2011); Bigirwa (2009) except that means of transport was not found to be a factor affecting performance of health volunteers in their studies. Other factors like workload, ineffective supervision, lack of community support or recognition and inadequate training have been reported by Bigirwa (2009); Alam *et al*., 2011) as factors influencing performance of health volunteers. These factors were not significant in this study. The negative family attitude, lack of career development structure and educational level were factors reported by Bigirwa (2009); Robinson & Larsen (1990); Alam *et al*., (2011) that influenced performance of health volunteers but are not findings that this study found.

This study also reports that means of transport is significantly associated with performance of health volunteers which is not found in the literature as a factor affecting performance of health volunteer activities.

5.5: FACTORS INFLUENCING ATTRITION AND SUSTAINABILITY OF HEALTH VOLUNTEER ACTIVITIES

The main factors influencing attrition and sustainability of volunteer activities in this study are salary and motivation or incentives for health volunteers. These highlight importance managerial and individual level factors in sustaining health volunteer activities affirming the conceptual framework of this study. Seventy five percent of volunteers in this study who want to be paid a salary they were more likely to drop out of the voluntary work. Fifty nine percent of volunteers wanting to be motivated were also more likely to abandon volunteerism. Study findings by

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Argaw *et al*., (2007) found that remuneration and incentives, community and local leaders' recognition and public appreciation for the contribution of volunteers in the form of awards and certificates are things that would motivate and help sustain volunteer activities. The volunteers in this study report that though the work is voluntary, it is necessary they are at least given an allowance for protective clothing for their work. Similar findings have been reported by UNICEF (2004) that allowances or non-monetary benefits such as bicycles and radios are considered to have positive influence on the family's willingness to give permission and support women to serve as health volunteers. This would help to improve volunteer's status in the community, provide compensation from the time taken from the family and will be an incentive for long-term service.

Lack of respect for volunteers and support from community members and superiors are reported by few volunteers in this study as factors that influence volunteer activities. These are the community level factors that influence volunteer activities in the conceptual framework but these factors were however not significant in this study. The only significant factor influencing volunteer activities in this study is means of transport. A report by Khan et al., (1998) and Olang'o *et al*. (2010) also found similar factors that influenced attrition and sustainability of volunteer activities. This was also reported by Rahman *et al*., (2010) and Landon *et al*., (2004) where factors like respect from formal health workers, positive and supportive co-worker relationship, appreciation by patients and family members support also directly influenced retention and attrition rates of health volunteers. The only difference in Rahman *et al*., study is that they found other factors like lack of family support, high target set by program managers,

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lack of promotion and termination of service by program managers to have an influence on volunteer activities but these factors were not found in this study to be influential.

A report by Argaw *et al*., (2007) also suggested that lack of community and local leaders' involvement in community directed health programme as key to sustainability of health interventions at the community level but this did not appear a significant factor in this study.

Selection, training, supervision of volunteers and other health staff involvement in health intervention activities at the community level did not influence volunteer activities in the study as managerial and community level factors as proposed in the conceptual framework. Though results from other studies indicated community involvement in selecting of volunteers (67%) and supporting them in their activities by contributing in-kind payments appears to be critical to community directed health programs sustainability. These studies reported that where community members are not involved, then there is little success in such programmes. Also where volunteers are selected by health staff to provide health services the community might not give its support and that can affect their activities. This was reported by UNICEF (2004); Bhattacharyya *et al*., (2001); Argaw *et al*., (2007). The reason is that the selection of health volunteers in this study is done by community chiefs and elders and trained by health staff or program managers at the district or the sub-district levels and hence the difference in the findings of this study to these earlier studies. A report by Hossain (1999) indicated that inadequate training and lack of effective supervision reduces the interest and enthusiasm of volunteers and this could affect the retention and sustainability of volunteer activities. About 31% to 44% dropout rate in few years after the start of volunteers programme has also been reported by Khan

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et al. (1998); Olang'o *et al*. (2010). The factors reported by these studies responsible for attrition rate of health volunteers include lack of time, high targets set by programme managers, termination of service by program managers due to poor performance, workload, lack of promotion and ambition to pursue higher education. These are not significant factors influencing volunteer activities in this study.

The findings of this study show that motivation or incentives, means of transport or logistics are the main mechanisms that retain and sustain volunteer activities. Similar retention mechanisms were reported by UNICEF (2004); Argaw *et al*. (2007). These studies found that motivation, definition of role and remuneration and incentives are retention mechanisms of volunteer activities.

For retaining health volunteers, the only significant retention mechanism is means of transport for volunteers working for less than five years in this study. A report by Rahman *et al*. (2010) found that remuneration (95%), community recognition (86%) and expectation of getting job in future (86%) were reported as the main retention mechanisms to retain and sustain volunteer activities. The findings of this study however show that means of transport (85.5%), motivation or incentives (77%) are main retention mechanisms of volunteer activities.

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CHAPTER SIX

CONCLUSION

6.1: CONCLUSION

The importance of health volunteers in health care delivery systems cannot be over emphasized. Despite the important role health volunteers play in health care delivery. Key factors influencing health volunteer activities are means of transport and motivation. Effective supervision (47%) improves performance of health volunteers. Though the work is voluntary, when volunteers are provided with non monetary incentives like bicycles, raincoats, torch lights and wellington boots it will motivate them to continue to provide health care services to their own people at the community level. These are the same factors that can retain and sustain volunteer activities. From the views expressed in this study, monetary incentives may not always be a necessary efficient approach in retaining and sustaining volunteer activities.

6.2: RECOMMENDATIONS

District level

1. For health volunteers to be retained, managers of volunteer programmes at district level should provide volunteers with appropriate means of transport for their work. This will help improve on their performance as health volunteers.

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2. Non-monetary incentives such as raincoats torch lights and wellington boots should be provided by the district in-charges to the health volunteers. This will motivate volunteers to be more committed in their role of providing health care services to the door steps of their own community members.

3. Effective supervision and monthly meetings with volunteers should also be strengthened by health staff both at the district and sub-district level. This will make volunteers feel they are important stake holders in the health delivery system at the community level.

6.3: FURTHER RESEARCH

1. There is need for future research on community members' knowledge and understanding of volunteerism.

2. Future research should be carried out to assess the quality of health care delivery and the impact of volunteer activities on health of community members who receive their services.

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APPENDICES

APPENDIX A: STUDY QUESTIONNAIRE

DEPARTMENT OF BEHAVIOURAL SCIENCE, SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCE, UNIVERSITY OF GHANA, LEGON

SURVEY QUESTIONNAIRE

FACTORS INFLUENCING SUSTAINABILITY OF COMMUNITY-BASED HEALTH VOLUNTEERS ACTIVITIES IN THE KNED AND KNWD

SECTION 1: IDENTIFICATION

Name of interviewee____ RNAME

COMPOUND NAME/ID.							CMPNAID
DATE OF INTERVIEW							DAINT
FIELDWORKER CODE							FWCODE
FIELD SUPERVISOR CODE							FSCODE
RESULT OF INTERVIEW:							RESULT
COMPLETE, INTERVIEW						1	
INCOMPLETE, REFUSED						2	
INCOMPLETE, OTHER________________________ (SPECIFY)						3	

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SECTION 2: BACKGROUND CHARACTERISTICS OF RESPONDENTS

No	Questions and filters	Coding Categories	Skip to ≠
1.	How old are you now?	[ ][ ]	Q1AGE
2.	Sex of volunteer	Male……………………………………1 Female…………………………………2	Q2SEX
3.	Have you ever attended school?	Yes...1 No...2	Q3EVESCH
4.	What is the highest level of school you attended?	Primary..1 Middle/JSS...2 Secondary/SSS…..................................3 Tertiary/.higher....................................4 Other (specify).......................................5	Q4LEVEL
5.	What is your religion?	Traditional..1 Christian..2 Muslim..3 Other (specify).......................................4	Q5RELIG
6.	What is your ethnicity?	Kasem...1 Nankam..2 Buli...3 Other (specify).......................................4	Q6ETHNIC
7.	What is your marital status now?	Never married...1 Married..2 Living together.......................................3 Devoiced...4 Widowed...5 Separated...6 Other (specify).......................................7	Q7MARIT
8.	What is your main occupation?	CBHV..1 Trader..2 Housewife...3 Civil servant...4 Farming……….......................................5 Other (specify)…………………………6	Q8OCCUPA

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SECTION 3: ACTIVITIES OF CBHVs AND ATTRACTION

9.	How long have you been working as a health volunteer in this community? **Write 00 if less than one year**	[ ] [ ]	Q9WKLONG
10	What health intervention programs are you involved in this community?	1__________________ 2__________________ 3__________________	Q10HPROG
11.	What exactly do you do as a health volunteer in this community? **CIRCLE ALL THAT APPLY**	**Yes No**	
		Health education/talk.................1 2	Q11HEDU
		Mobilizing mothers for immunization..............................1 2	Q11IMMU
		Weighing children…..…………1 2	Q11WEIGH
		Provide counseling services…....1 2	Q11COUNS
		Defaulter tracing/follow up.........1 2	Q11FOLLO
		Provide first aid.........................1 2	Q11FAID
		Distribute polio drugs................1 2	Q11PDRUG
		Treatment of minor illnesses.......1 2	Q11MILL
		Case identification and reporting/referral........................1 2	Q11CREPO
		Other…………………………..1 2	Q11OTHER
		(specify)..	Q11SPECI
12.	What motivated you to work as a health volunteer? **CIRCLE ALL THAT APPLY**	**Yes No**	
		Help com. Members/sick people......1 2	Q12HSICK
		To earn income...............................1 2	Q12INCOM

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		Prestige and respect..........................1 2	Q12PREST
		Seen as doctor in community 1 2	Q12SDOC
		Enjoy working as health volunteer…1 2	Q12ENJOY
		Help get paid job in future…………1 2	Q12PJOB
		Use idle time………………………..1 2	Q12UTIME
		Other ………………………………1 2	Q12OTHER
		(specify)..	Q12SPECI
13.	What will make you/somebody refuse to work as a health volunteer? **CIRCLE ALL THAT APPLY**	**Yes** **No**	
		No salary...1 2	Q13NSALA
		Workload/Difficult..........................1 2	Q13WLOAD
		No respect by comm. members........1 2	Q13NRESP
		No support by superiors 1 2	Q13NSSUP
		No support by community...............1 2	Q13NSCOM
		Spouse/family members refusal…..1 2	Q13FREFU
		No effective supervision…………..1 2	Q13NESUP
		No time…………………………...….1 2	Q13NTIME
		Other……………………………...1 2	Q13OTHER
		(specify)…………………..........................	Q13SPECI
14.	What will make you/somebody agree to work as a volunteer and later dropout? **CIRCLE ALL THAT APPLY**	**Yes** **No**	
		No salary...1 2	Q14NSALA
		Workload/Difficulty........................1 2	Q14WLOAD
		No respect by community................1 2	Q14NRESP
		No support by superiors..................1 2	Q14NSSUP
		No support by comm. members…...1 2	Q14NSCOM
		Spouse/family members refusal…...1 2	Q14FREFU

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		No effective supervision…………...1 2 Old Age……………………………1 2 No Motivation/Incentives………..…1 2 No time……………………………1 2 Got job elsewhere...………………..1 2 Other………………………………1 2 (specify)…………………………………	Q14NESUP Q14OAGE Q14NTIME Q14GJOB Q14OTHER Q14SPECI
15.	What do you think should be done to attract people to accept to work as health volunteers?	Should be paid salary..................................1 Community helping in their farm……………………………................2 Respect by community members…………3 Motivation/Incentives...............................4 Provide logistics for the work……………5 Provide bicycles/boots/rain coat…………6 Awards…………………………………...7 Other (specify)..8	Q15ATRAC

SECTION 4: SELECTION, TRAINING, SUPERVISION AND PERFORMANCE

16.	How are health volunteers selected?	By the chief/elders..1 By the assembly person................................2 Community members...................................3 Community group leaders............................4 Relatives/family members............................5 Program officers/nurse……………............6 By choice…………………………………7	Q16SELEC

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		Other (specify)……………………………8	
17.	How were you selected?	By the chief/elders...1 By the assembly person................................2 Community members...................................3 Community group leaders..............................4 Relatives/family member..............................5 Program officer/nurse………………………6 By choice……..………………………........7 Other (specify)..8	Q17OWNSE
18.	What qualities must one have before you are selected as a health volunteer? **CIRCLE ALL THAT APPLY**	**Yes** **No**	
		Hard working person......................1 2	Q18HWORK
		Come from the community.............1 2	Q18FRCOM
		Understand the local language.........1 2	Q18ULANG
		Have patience/respect for people.....1 2	Q18PAT
		Read and write...............................1 2	Q18RWRIT
		Have interest in the work................1 2	Q18INTER
		ready to work without pay..............1 2	Q18NPAY
		Trustworthy person………………..1 2	Q18TRUST
		Others……………………………..1 2	Q18OTHER
		(specify)..	Q18SPECI
19.	Did you receive training when you were first recruited?	Yes..1 No..2 →	Q19TRAIN **Q25**
20.	How long were you trained?	Less than one week................................1 One week...2 Two weeks...3 Three weeks...4 Other (specify).......................................5	Q20HLONG

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		NA……………………………….……..88	
21.	What were you trained on? **CIRCLE ALL THAT APPLY**	**Yes** **No** Health education strategy…………1 2 Identify/treat simple malaria……...1 2 Mobilize people for health programs……………………..1 2 Counseling services……………...…1 2 How to weight children…………...1 2 Other……………………………….1 2 (Specify)……………………………………. NA…………………………………..88	 Q21HEDU Q21TREAT Q21MOBIL Q21COUNS Q21WEIGH Q21OTHER Q21SPECI
22.	Do you think the training was adequate to help you do the work well?	Yes...1 → No...2 NA……………………………………..88	Q22TENGH **Q24**
23.	If No, why? (please, write two reasons on the lines provided)	____________________ ____________________ NA……………………………………..88	Q23WHY
24.	Where were you trained?	DHMT...1 At the sub-district ……………….................2 Outside the district..4 Other (specify)..5 NA…………………………………………88	Q24WHTRA
25.	Are you supervised?	Yes...1 No...2 →	Q25SUPER **Q30**
26.	How often are you supervised?	Once a week..1 Once in two weeks...................................2 Once a month...3	Q26OFSUP

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		Twice a month..4 Once every three months...........................5 Other (specify)..6 NA……………………………………..88	
27.	Who supervises you?	No supervision……………………………..1 Community members..................................2 The Sub-district head..................................3 Someone from DHMT.................................4 Sub-district health staff…………………….5 Other (specify)……………………………...6 NA………………………………………...88	Q27WHOSU
28.	How will you grade the supervision your receive for your work	Very Effective…………………..………..1 Effective………………………………….2 Somewhat effective……………………….3 Not-effective……………………………..4 NA………………………………………88	Q28GRADS
29.	How does supervision help in the work that you do?	Helps me do the work well………………..1 Motivate me to work harder……….……...2 Makes me feel important…………….........3 Makes me more committed………………..4 Other (specify)………………………….....5 NA………………………………………..88	Q29SUPHE
30.	How often do you do your work as a health volunteer?	Daily……………………………………..1 Once every week…………………….…..2 Twice a week……………………………3 Once every two weeks…………………..4 Once every month……………………….5	Q30OFTWK

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		Other (specify)……………………………..6	
31.	Do you give reports to your supervisor?	Yes…………………………………………..1 No………………………………………...2	Q31GREPO → **Q34**
32	How often are you supposed to submit reports to your supervisor?	Every week…………………..……………….1 Every two weeks……………….…………….2 Every month…………………………............3 Every quarter………………………………..4 Other (specify)………………………………5 NA……………………………………..….88	Q32OFSUB
33.	How often are you able to submit your reports to your supervisor?	Always………………………………..….1 Somehow…………………………………..…2 Rarely……………………………….……..…3 NA……………………………………..…88	Q33OFTSU
34.	Are there regular meetings?	Yes……………………………………..….1 No……………………………………...….2	Q34REGUM → **Q37**
35.	How often do you meet?	Once every week………………………….…....1 Once every two weeks………………………2 Once a month………….…………………….3 Other (specify)…………………….............4 NA………………………………………88	Q35OFMET
36.	How often are you able to attend these meetings?	Always…………………………………….…1 Somehow……………………………….........2 Rarely…………………………..………......3 NA……………………………….............88	Q36OFMET
37.	Do you take part in immunization activities all the time?	All the time………………………..............1 Sometimes.…………………………..……2 Rarely……………………………...……3 Not part of immunization activities……........4	Q37IMMUZ

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38.	What benefits does the community get from your work? **(Write three benefits on the lines)**	____________ ____________ ____________	Q38BENEF
39	What are the factors that affect your performance in the work? **CIRCLE ALL THAT APPLY**	**Yes** **No** No salary………………………..…..1 2 No community support/ recognition………………………1 2 Lack of motivation/incentive…….1 2 No enough training…...................1 2 No effective supervision…............1 2 Workload……………………..........1 2 No time…………………………..1 2 No logistics………………………1 2 No means of transport……………1 2 Other……………………………..1 2 (specify)…...	 Q39NSALA Q39NCSUP Q39NMOTI Q39NTRAN Q39NESUP Q30WLOAD Q39NTIME Q39NLOGI Q39TRANS Q39OTHER Q39SPECI
40.	What do you think if done will help you do the work well? **CIRCLE ALL THAT APPLY**	**Yes** **No** Should be paid salary……...............1 2 Community support/recognition......1 2 Motivation/incentive………………1 2 Enough training……………………1 2 Effective supervision....……………....1 2 Reduce workload…………………..1 2	 Q40PSALA Q40CSUPO Q39MOTI Q40ETRAI Q40ESUPE Q40RWORD

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		Provide means of transport………..1 2	Q40PTRAN
		Provide logistics…………………..1 2	Q40LOGIS
		Other……………………………....1 2	Q40OTHER
		(specify)…..	Q40SPECI

SECTION 5: RETENTION AND SUSTAINABILITY OF CBHVs ACTIVITIES

41.	Are people sometimes selected and trained as volunteers and later leave the work?	Yes…..1 No…..2	Q41VLIVE →**Q45**
42.	Do you know of any volunteer who has left the job?	Yes…………………………………..…1 No……………………………………..2 NA…………………………………..…..88	Q42KLIVE
43.	In the past two years, how many volunteers do you know have left the job in this sub-district?	[ ][ ] NA……………………………………….88	Q43NLIVE
44.	What in your opinion makes them leave? **Circle all that apply**	**Yes** **No**	
		No salary…………………………...1 2	Q44NSALA
		No comm. support/recognition …...1 2	Q44NCSUP
		Old age………….…......................1 2	Q44OAGE
		No motivation/incentive…………...1 2	Q44NMOTI
		Illness/death…...................................1 2	Q44ILL
		No enough training…......................1 2	Q44NTRAN
		No effective supervision…...............1 2	Q44NESUP
		Work is difficult/workload...............1 2	Q44WLOAD
		Got job elsewhere……....................1 2	Q44GJOB

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		No time…………………………..…1 2 Other……………………………….1 2 (specify)….. NA……………………………………88	Q44NTIME Q44OTHER Q44SPECI
45.	What in your opinion affects or influences sustainability of CBHVs activities in this sub-district? **Circle all that apply**	**Yes No** No salary……………………………1 2 No motivation/incentives...................1 2 No community support/recognition....1 2 No effective supervision....................1 2 No enough training……...................1 2 No com. Involvement in activities…..1 2 No family/spouse support…………..1 2 Got job elsewhere……………...……1 2 Other ……………………………….1 2 (specify)…...	Q45NSALA Q45NMOTI Q45NCSUP Q45NESUP Q45NETRA Q45NCINV Q45NFSUP Q45GJOB Q45OTHER Q45SPECI
46	What do you think should be done to retain CBHV? **Circle all that apply**	**Yes No** Should be paid salary……….............1 2 Com. support/recognition.................1 2 Community involvement in program activities…..........................1 2 Motivation/incentives…..…………1 2 Give Awards………………………..1 2 Means of transport…………………1 2 Other……………………………….1 2 (specify)……...	Q46PSALA Q46CSUPP Q46CINVO Q46MOTIV Q46AWARD Q46TRANS 246OTHER Q46SPECI

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47.	Name of sub-district	Wuru……………………………………….1 Kologo……………………………………..2 Pungu……………………………………….3 Paga……………………………………..….4 Navio/Nakolo……………………………..5 Mirigu/Nabanbo……………………...…6	Q47NSUBD

THANK YOU FOR YOUR TIME!!!

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APPENDIX B: IN-DEPTH INTERVIEW GUIDE FOR HEALTH STAFF

SECTION 1: Health interventions, CBHVs activities and attraction of CBHVs into health programs

1. What are the health intervention programs you have in this district/sub-district? **Probe:** how long have these interventions been going on in this district
2. What role do you play on these health intervention programs in this district/sub-district? **Probe:** Role on the activities of the CBHVs, how many staff are involved in the health interventions in the district or sub-district?
3. What are the health interventions CBHVs are involved in this district/sub district?
4. What are the activities that the volunteers are expected to carry out?
5. What are the things that you think attract people to accept to work as health volunteers in this district/sub-district? (what motivated them to become health volunteers)

SECTION 2: Selection, training, supervision and performance of CBHVs

6. How were the community volunteers selected? Probe for the processes involved in the selection
7. How were they trained and deployed into the community?
8. What do you have to say regarding the level of supervision of volunteer activities?
9. What would you say concerning the performance of the health volunteers in this district/sub-district? **Probe:** are community needs met, are the aims and objectives of the interventions achieved, CBHVs commitment to the work, competencies, attending meetings etc.
10. What general barriers do you think volunteers face when trying to do their job
11. What responsibility does the community have towards the health volunteers? **Probe:**
    a. What do they do to help them
    b. What do they do that affect their work

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SECTION 3: Funding Retention mechanisms and sustainability of CBHVs activities

12. What are the main sources of funding for the health intervention in this district? **Probe:** any alternative funding sources locally, what do you do to sustain these health interventions when the main funding ends?
13. How are the programs designed and implemented in this district or sub-district? **Probe:** What is the level of involvement of the community and stakeholders, what is the level of involvement of other health staff in the activities of community health programs in this district or sub-district?
14. What are the factors in your opinion affect retention and sustainability of CBHVs activities in this district or sub-district? (things that will make them stay or dropout as health volunteers) **Probe:**
    a. Management level factors
    b. Community level factors
    c. Individual volunteer factors
15. What do you think is the best way to sustain
    a. Community-based health intervention programs
    b. The activities of CBHV in your district.
16. What is the rate of retention of health volunteers in this district? **Probe:**
17. What are the mechanisms put in place to retain health volunteers in your district or sub-district?

Do you have any questions? Thank you very much for your time

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APPENDIX C: IN-DEPTH INTERVIEW GUIDE FOR VOLUNTEERS

SECTION 1: Activities and attraction

1. What exactly do you do or were you doing as health volunteer in this community?
2. What attracted or motivated you to accept to work as health volunteer?
   a. What exactly motivated you to work for these number of years as health volunteer
   b. Why did you have to stop (for those who are not working again)

SECTION 2: Selection, training and performance

3. How were you selected and trained as a health volunteer?
4. What responsibility does the community have toward your work as a volunteer?
   a. What does the community do to help you work well?
   b. What does the community do that affect or affected your work as a volunteer?
5. How often do you do or were you doing your work as a volunteer?
6. What other thing do you do apart from working as a volunteer? Probe: do you think that has an effect on your performance as a volunteer? Why?

SECTION 3: Sustainability factors and retention mechanisms

7. What is the level of sustainability of CBHVs activities in this community/sub-district?
8. What general factors do you think affect sustainability of volunteer activities in this community? Probe
   a. Management level factors (Funding, training, supervision)
   b. Community level factors
   c. Individual level factors
9. What do you think are the best ways to help sustain health interventions and activities of CBHVs in this district or sub-district?
10. In your opinion what are the reasons why people who are recruited as health volunteers sometimes leave the job?
11. What do you think can be done to help retain health volunteers in this district or sub-district?

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APPENDIX D: CONSENT FORM FOR QUANTITATIVE INTERVIEWS WITH HEALTH VOLUNTEERS

SCHOOL OF PUBLIC HEALTH,

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA, LEGON.

TITTLE: ASSESS FACTORS INFLUENECING SUSTAINABILITY OF COMMUNITY-BASED HEALTH VOLUNTEERS ACTIVITIES IN THE KNEWDs OF NORTHERN GHANA .

PURPOSE OF STUDY

We are inviting you to take part in a study, which is being conducted by the School of Public Health University of Ghana, Legon and the Navrongo Health Research Centre. The purpose of the study is to assess the factors influencing sustainability of CBHVs activities in the Kasena-Nankana East and West districts. A random sample of health volunteers in the two districts was drawn and you happened to be one of those selected to participate in the survey. We hope that the results of this study will be used to inform the district directorates of health in the two districts and Ghana health service on the best ways to sustain CBHVs activities.

STUDY PROCEDURE

If you agree to take part in this study, one of our trained staff will interview you. The interview will be about thirty minutes long and you will be asked questions on activities of health volunteers, their motivation to work as health volunteers, processes of selection, training and performance of CBHVs and factors affecting sustainability of their activities . You can choose not to answer any question you do not want to answer.

RISKS AND DISCONFORTS

You will not be exposed to any physical danger when you take part in this study. If at any time, you do not want to answer the questions you are obliged to do so.

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BENEFITS

Your participation in this study will help inform the district health directorates and Ghana health service on the factors influencing sustainability of community-based health intervention programs and activities of CBHVs .Even though the study will not benefit you directly, but it may benefit the whole community and other communities in the future.

CONFIDENTIALITY

The questionnaires will be destroyed after we have worked with them. Your name will not be mentioned in any written document. Nobody will be able to trace any information you will give us in this discussion.

RIGHT TO REFUSE OR WITHDRAW

Your participation in the study is voluntary. You do not need to answer any question or participate in the research if you do not want to. If you decide not to be part of this study, your decision will not affect your relationship with the interviewers and the NHRC in anyway. You will also not lose any benefits that you are entitled to.

If at any time in this interview you have any questions or would like to speak to someone involved in this study, please feel free to contact Mr. Tamti Acheampong Chatio, who will be at the NHRC on telephone number 0242187042, Dr. Patricia Akweongo at the School of Public Health University of Ghana, Legon on number 0243138376 or the Administrator, Ghana Health Service Research Ethical Committee on number 0244516482.

STATEMENT OF CONSENT

I have read or have had the above read to me and I have asked questions and received answers and I am willing to participate in this study. I will not have waived any of my rights by signing/thumb printing this consent form.

Do you agree to participate in the study? Yes ☐ No ☐

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CERTIFICATE OF INDIVIDUAL SEEKING CONSENT

I, the undersigned, have explained to the participant in a language she/he understands the procedures to be followed in the study and the risks and benefits involved.

Name: of individual obtaining consent_____________________________________

Signature________________ Date___________________________

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APPENDIX E: CONSENT FORM FOR IN-DEPTH INTERVIEWS WITH HEALTH STAFF

SCHOOL OF PUBLIC HEALTH,

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA, LEGON.

TITLE: ASSESS FACTORS INFLUENECING SUSTAINABILITY OF COMMUNITY-BASED HEALTH VOLUNTEERS ACTIVITIES IN THE KNEWDs OF NORTHERN GHANA.

PURPOSE OF STUDY

We are inviting you to take part in a study, which is being conducted by the School of Public Health University of Ghana, Legon and the Navrongo Health Research Centre. The purpose of the study is to assess the factors influencing sustainability of CBHVs activities in the Kasena-Nankana East and West districts. A purposive sampling of health staff involved in the activities of health volunteers in the two districts has been done and you happened to be one of those selected to participate in the in-depth interviews. We hope that the results of this study will be used to inform the district directorates of health in the two districts and Ghana health service on the best ways to sustain CBHVs activities.

STUDY PROCEDURE

If you agree to take part in this study, one of our trained staff will have a short discussion with you. The discussion will last for about thirty minutes and you will be asked questions on activities of health volunteers, their motivation to work as volunteers, processes of selection, training and performance of CBHVs, funding of health volunteers activities and factors affecting sustainability of their activities. I will like to ask for your consent to use a tape recorder to record the discussion so that I can be able to get all the issues raised in this discussion. In order to ensure confidentiality, the information obtained will be used purposely for this research work and after which the cassettes will be destroyed so that nobody else can get access to the information.

RISKS AND DISCONFORTS

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You will not be exposed to any physical danger in taking part in this study. If at any time, you do not want to continue with the discussion, you can feel free to do so.

BENEFITS

Your participation in this study will help inform the district health directorates and Ghana health service on the factors influencing sustainability of community-based health intervention programs and activities of CBHVs. Though it will not benefit you directly, but it may benefit the whole community and other communities in the future. Your participation in the study is voluntary.

If at any time you have any questions or would like to speak to someone involved in this study, please feel free to contact Mr. Tamti Acheampong Chatio, who will be at the NHRC on telephone number 0242187042, Dr. Patricia Akweongo at the School of Public Health University of Ghana, Legon on number 0243138376 or the Administrator, Ghana Health Service Research Ethical Committee on number 0244516482.

STATEMENT OF CONSENT

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Do you agree to participate in the study? Yes ☐ No ☐

CERTIFICATE OF INDIVIDUAL SEEKING CONSENT

I, the undersigned, have explained to the participant in a language she/he understands the procedures to be followed in the study and the risks and benefits involved.

Name: of individual obtaining consent_______________________________________

Signature_________________ Date____________________________

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APPENDIX F: CONSENT FORM FOR IN-DEPTH INTERVIEWS WITH VOLUNTEERS

SCHOOL OF PUBLIC HEALTH,

COLEGE OF HEALTH SCIENCES

UNIVERSITY OF GAHAN, LEGON.

TITLE: ASSESS FACTORS INFLUENECING SUSTAINABILITY OF COMMUNITY-BASED HEALTH VOLUNTEERS ACTIVITIES IN THE KNEWDs OF NORTHERN GHANA.

PPURPOSE OF STUDY

We are inviting you to take part in a study, which is being conducted by the School of Public Health University of Ghana, Legon and the Navrongo Health Research Centre. The purpose of the study is to assess the factors influencing sustainability of CBHVs activities in the Kasena-Nankana East and West districts. A purposive sampling of health volunteers in the two districts was done and you happened to be one of those selected to participate in the in-depth interviews. We hope that the results of this study will be used to inform the district directorates of health in the two districts and Ghana health service on the best ways to sustain CBHVs activities.

STUDY PROCEDURE

If you agree to take part in this study, one of our trained staff will have a short discussion with you. The discussion will last for about thirty minutes and you will be asked questions on activities of health volunteers, their motivation to work as volunteers, processes of selection, training and performance of CBHVs and factors affecting sustainability of their activities. I will like to ask for your consent to use a tape recorder to record the discussion so that I can be able to get all the issues raised in this discussion. In order to ensure confidentiality, the information obtained will be used purposely for this research work and after which the cassettes will be destroyed so that nobody else can get access to the information.

RISKS AND DISCONFORTS

You will not be exposed to any physical danger in taking part in this study. If at any time, you do not want to continue with the discussion, you can feel free to do so.

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BENEFITS

Your participation in this study will help inform the district health directorates and Ghana health service on the factors influencing sustainability of community-based health intervention programs and activities of CBHVs. Though it will not benefit you directly, but it may benefit the whole community and other communities in the future. Your participation in the study is voluntary.

If at any time you have any questions or would like to speak to someone involved in this study, please feel free to contact Mr. Tamti Acheampong Chatio, who will be at the NHRC on telephone number 0242187042, Dr. Patricia Akweongo at the School of Public Health University of Ghana, Legon on number 0243138376 or the Administrator, Ghana Health Service Research Ethical Committee on number 0244516482.

STATEMENT OF CONSENT

I have read or have had the above read to me and I have asked questions and received answers and I am willing to participate in this study. I will not have waived any of my rights by signing/thumb printing this consent form.

Do you agree to participate in the study? Yes ☐ No ☐

CERTIFICATE OF INDIVIDUAL SEEKING CONSENT

I, the undersigned, have explained to the participant in a language she/he understands the procedures to be followed in the study and the risks and benefits involved.

Name: of individual obtaining consent_______________________________________

Signature_________________ Date_____________________________