THE ROLE OF VOLTA RURAL WATER SUPPLY AND SANITATION PROJECT IN PROMOTING HEALTH AND HYGIENE EDUCATION IN THE RURAL AREAS OF THE VOLTA REGION

by

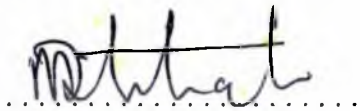
Douglas Etse Titiati

A Dissertation submitted to the Institute of Adult Education, University of Ghana in partial fulfilment of the requirements of the Degree of Master of Arts in Adult Education

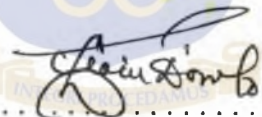
MAY, 1997

DECLARATION

It is hereby declared that the work herein described was carried out solely by me under supervision, and has neither wholly or partially been presented elsewhere for another degree.



.....
(DOUGLAS E. TITIATI)
CANDIDATE



.....
(MR. L.K.T. DORVLO)
SUPERVISOR

.....
(MR. KOFI SIABI-MENSAH)
SUPERVISOR

DEDICATION

This dissertation is dedicated to the memory of my brother, the late Frederick Besah Titiati, who could not live to see the fruit of his moral and material support.

May his soul rest in peace.

ACKNOWLEDGEMENT

I owe a debt of gratitude to the following individuals and organisation for helping me in diverse ways in the collection of data for this dissertation as well as the final write up.

My first `thanks' goes to my two resourceful supervisors, Messrs. L.T.K. Dorvlo and Kofi Siabi-Mensah, for their patience, guidance and constructive criticism, without which this work would never have been produced.

I am also grateful to the Management and staff of the Volta Rural Water Supply and Sanitation project for accepting me into their fold and giving me access to every single material or verbal information that I needed. during the data gathering stage of this dissertation.

I would also not forget Miss Grace B. Annan of the Department of Economics, University of Ghana, who diligently typed this manuscript from the draft stage to the final print out.

Finally, but not the least, I thank the Almighty God, for giving me the strength and wisdom to carry out this task.

TABLE OF CONTENTS

CHAPTER FOUR

ACTIVITIES OF VRWSS PROJECT WITH SPECIAL REFERENCE TO HEALTH AND HYGIENE EDUCATION

CHAPTER FIVE

ANALYSIS AND DISCUSSION OF DATA

CHAPTER SIX

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

LIST OF TABLES

ABSTRACT

The Volta Region is faced with many health hazards that are brought about by the absence of safe drinking water, sanitation facilities, and an effective health education mechanism.

This study aims at finding out the contributions of the Volta Rural Water Supply and Sanitation project to the promotion of health and hygiene education in the rural areas of the region.

The study found out that in the area of community health, the project has made a significant impact on the people so far as community mobilisation and participation in health and hygiene activities are concerned. Members of the communities are now able to assess their health and hygiene needs and draw action plans for the satisfaction of these needs. Besides, they implement their action plans with minimum external supervision.

The school health component of the programme has also brought about positive behavioural changes in pupils with regards to hygienic practices. Some of the indicators of this change in behaviour are washing of hands with soap and water, the use of individual cups and the hygienic handling of food by food vendors who sell on school premises.

In addition, the project has put in place adequate mechanism for capacity building and sustainability of the health education programme after the withdrawal of donor support.

CHAPTER ONE

INTRODUCTION

Background to the Study:

The people of the Volta Region in Ghana are faced with numerous problems relating to the shortage of potable water and sanitation.

According to the Annual Statistical Report of the Ministry of Health (1991), four out of the ten leading causes of hospitalisation in 1990 directly relate to water and sanitation. These are malaria, diarrhoea diseases, skin diseases and intestinal worms. Bilharzia, guinea worm and yaws are also prevalent. The situation is not very different at the national level.

Against this background, and in recognition of the needs of the people, the Government of Ghana entered into development co-operation agreement with the Government of Denmark (DANIDA) for a ten year aid package known as the Volta Rural Water Supply and Sanitation Project. It is being implemented by the Ghana Water and Sewerage Corporation and Kruger Consult, a Danish Consulting Engineering Company.

The objective of the project is to contribute towards better living and health conditions of the target population in the project area through:

(a) The provision of reliable and easily accessible potable drinking water, managed and sustained by the community, and

(b) The reduction in water and excreta related diseases by improving sanitation and sanitation related health behaviours, through health education and household adoption of improved latrines.

The project took off in March 1993, and has several components such as provision of low cost water supplies and sanitation facilities, training, community mobilisation and health education.

THE PROBLEM

The purpose of health education is to promote behaviours which are conducive to health. Hitherto, health education in the region has been externally developed and implemented by environmental health officers of the Ministry of Health and the School Health Unit of the Ghana Education Service.

This study tries to find out the extent to which the Volta Rural Water Supply and Sanitation Project (VRWSS) which is sponsored by a Non-governmental Organisation, and adopts a demand driven approach and community participatory methods of education,

is contributing to the promotion of health and hygiene education in the Volta Region.

In studying this problem the writer would try to answer the following specific questions:

(1) What role did the Rural Water Supply and Sanitation project play in intensifying the growth of health education in its areas of operation?

(2) What logistics and organisational structures have been put in place to enhance the implementation of the health education programme?

(3) What training programmes are initiated for both the project staff and volunteers involved in the programme for capacity building to sustain the project after it has been handed over to the District Assemblies?.

(4) What health messages are being formulated that will bring about some behavioural changes that might cut the cycle of some water and sanitation related diseases in the long run?

(5) What other activities did the project engage in to promote health and sanitation in the region?

THEORETICAL FRAMEWORK

The study is based on Maslow's "Hierarchy of Human Needs" theory. According to Knowles (1980:28) Maslow sees the needs and desires of people as a series of hierarchical steps that must be taken in ascending order.

These are:

(1) Physiological or survival needs;

(2) Safety Needs;

(3) Love, Affection and Belongingness Needs;

(4) Esteem Needs;

(5) Need for Self-Actualisation.

Maslow therefore sees human needs as starting from the basic physiological need for food, clothing and shelter. After these are satisfied, the safety needs are tackled. These include protection from danger to the body through physical aggression or sickness as well as job security and tenure.

The social needs of love, affection and belongingness surface if both the physiological and safety needs are satisfied to some extent.

The next need which is self esteem follows the social needs. These include achievement, mastery of a task, self confidence, social recognition and independence.

The final and ultimate human need according to Maslow is self-actualisation. Here the individual realises his ambitions and assesses what he or she is capable of achieving.

Maslow argues that needs at the lower level of the hierarchy are the most basic and until these are satisfied, the higher ones cannot be attended to. However, needs at different levels of the hierarchy can motivate the individual simultaneously.

Knowles (1980:83-88) differentiates between basic needs and educational needs. He postulates that the basic needs have relevance to educational needs and for that matter developmental needs because they form the basis for motivation to learn new skills, knowledge and attitudes as well as spelling out certain principles that educators and learners must take into account.

The study is therefore being conducted on the theoretical framework that since good health forms one of the basic human needs, the provision of health education would help the people of the Volta Region to attain this (good health) and this would subsequently lead to the attainment of the other social and material needs in the hierarchy as postulated by Maslow.

RESEARCH METHODOLOGY

The main method of data collection for this study was participant observation. Twumasi (1986) defines participant observation as "a method of data collection whereby the field worker goes to live and participate in the daily activities of the

people he is studying ... He participates in some of the activities of the people which will allow him to get a relevant insight into his problem".

Twumasi noted that "studies which employ the method of participant observation involve genuine social relationship and interaction with the social actors in the scene of activities. The researcher becomes part of the situation and part of the data gathering process. This method gives him an "inside look".

In line with the above definition, the researcher participated in a number of training workshops for the members of the project staff. He also participated in the training of members of local communities on health and hygiene issues by the Environmental Health Assistants as well as the training of members of the Water and Sanitation (WATSAN) Committees and District Management Committees (DMC).

The researcher also undertook study tours of the project areas to observe the impact of the health education programme at the community level in terms of participation, attitudinal change and hygienic practices. He also examined facilities like improved toilets and potable water that are provided by the project to see how the people are making use of them to improve their health. He interacted with the project staff at both the Regional, district and community levels, as well as members of the communities to obtain the needed information through informal interviews. In addition to the above primary sources of information, the researcher also used secondary resources like books on hygiene

education, Project Training Manuals, reports of Focus Group studies, Project Information Booklets, journals and other publications that provide general information on the project.

SETTING

Population:

Out of the ten regions in Ghana the Volta Region is the fourth largest in terms of population. According to the 1984 census, the population of the region was 1,473,222. It has an annual growth rate of 1.8%. Ho district had the largest population of 234,206, followed by Ketu with a population of 181,031. South Tongu had the lowest population of 83,644. Population density was 72 inhabitants per square kilometer but the distribution is not even. The southern and middle sectors are more densely populated than the northern sector. Table 1 indicates population distribution by the districts.

Table 1

POPULATION DISTRIBUTION OF THE VOLTA REGION ACCORING TO DISTRICTS

Total Population, Target Populations and Sq.Km per District

TARGET POP	KPANDU DIST.	NKWANTA DIST.	KADJEBI DIST.	JASIKAN DIST.	HOHOE DIST.	KPANDO DIST.	HO DIST.	ADDO-E DIST.	AKATSI DIST.	DENU DIST.	SOGAKOPE DIST.	KETA DIST.	REG'NAL TOTAL
Children 0-11mths	3,384	5,210	3,852	4,522	3,709	5,105	9,368	4,312	3,609	7,241	3,346	5,282	58,929
Child'n 12-23mths	3,384	5,210	3,852	4,522	3,709	5,105	9,368	4,312	3,609	7,241	3,346	5,282	58,929
Child'n 24-60mths	10,152	15,630	11,557	13,565	11,127	15,314	28,105	12,935	10,826	21,724	10,037	15,845	176,787
Child'n 5-14 yrs.	22,842	35,166	26,004	30,521	25,035	34,457	63,236	29,037	24,358	48,878	22,584	35,651	397,770
Women 15-49 years	16,920	26,049	19,262	22,608	18,545	25,524	46,841	21,509	18,043	35,206	16,729	26,408	294,644
Men 15-49 years	16,920	26,049	19,262	22,608	18,545	25,524	46,841	21,509	18,043	35,206	16,729	26,408	294,644
Men/Women 50-60yrs.	6,768	10,420	7,705	9,043	7,418	10,210	18,736	8,604	7,217	14,482	6,692	10,563	117,858
Men & Women 60+	4,230	6,512	4,816	5,652	4,636	6,381	11,710	5,377	4,511	9,052	4,182	6,602	73,661
TOTAL POP.	84,630	130,246	96,311	113,089	92,727	127,619	234,205	107,544	90,216	181,031	83,644	132,089	1473,222
Sq. Km per Region													20,570
Pop/Sq. Km													72

SOURCE: MINISTRY OF HEALTH ANNUAL REPORT 1995.

Boundaries

The region forms the eastern boundary of Ghana with a surface area of 20,570 square kilometres (approximately 8.6% of the national surface area). It is bounded in the north by the Northern Region, South by the Gulf of Guinea, west by the Volta Lake and east by the Republic of Togo.

Topography:

The region is divided into three geographical belts, namely, the southern, middle and the northern belts. The middle and northern belts are mainly mountainous, spotting the highest point in the country, namely, Mountain Afadzato. The south is relatively flat with marshy and sandy portions along the coast.

Rivers:

The northern and middle belts are drained by rivers Oti, Asukawkaw, Menu, Dayi all of which flow into the Volta Lake. The southern belt is drained by rivers Alabu and Tordzi.

Two rainfall regimes occur in the middle and coastal belts as follows:

(i) Major season - April/July with peak in June

Minor season - September/November with the peak in October.

The north has one season - May to October, with the peak in August.

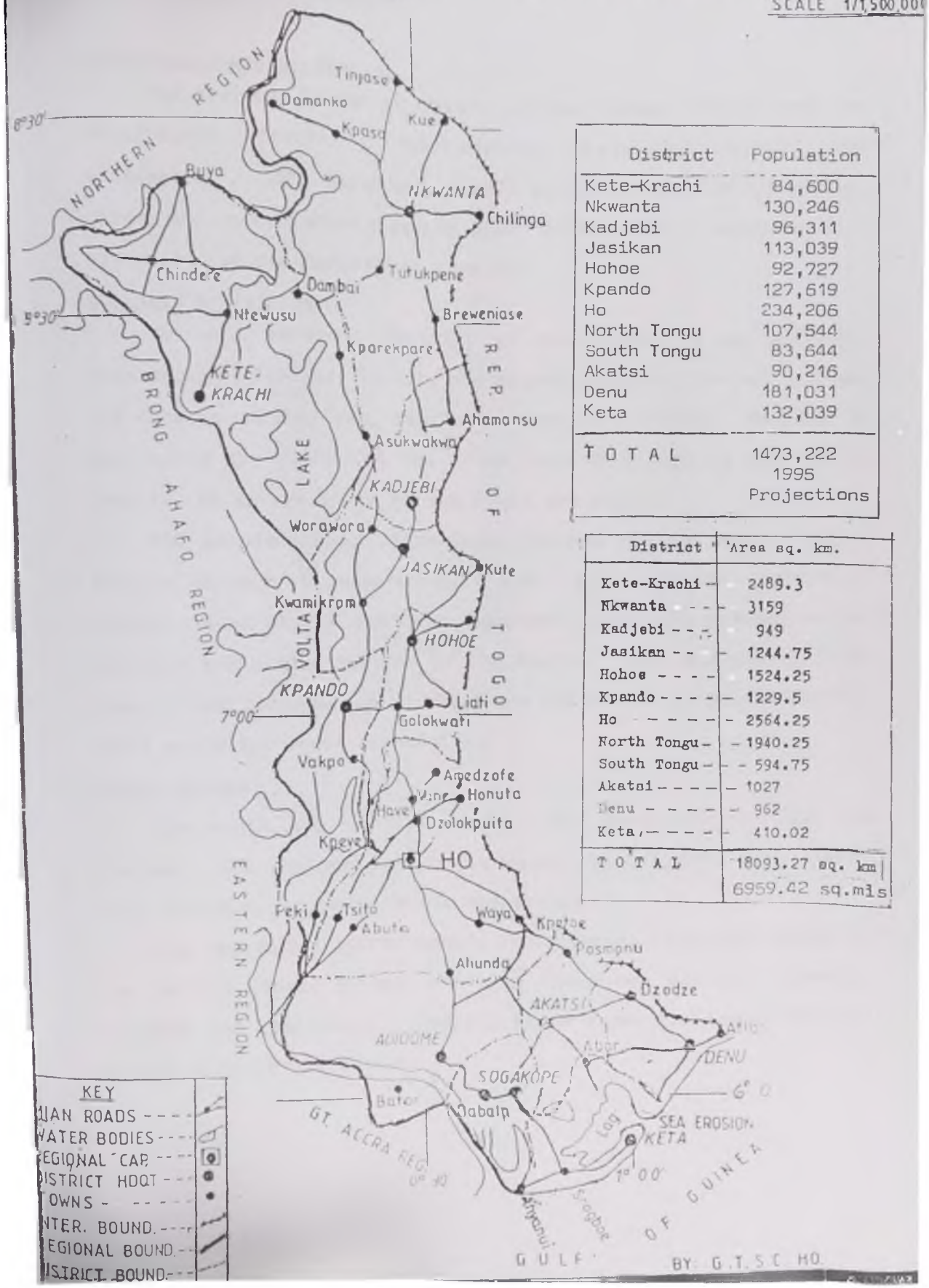
Civil Administration

The region has 12 administrative districts, each with its own capital and district assembly. The regional capital is Ho, which lies in the sourthern part of the middle belt is more developed than the other belts.

The Rural water supply and sanitation project has so far covered eight of the twelve districts, with the remaining four earmarked for the next four years. (See Figure 1 for an administrative map of the study area).

ADMINISTRATIVE MAP OF VOLTA REGION — (GHANA)

SCALE 1/1,500,000



District	Population
Kete-Krachi	84,600
Nkwanta	130,246
Kadjebi	96,311
Jasikan	113,039
Hohoe	92,727
Kpando	127,619
Ho	234,206
North Tongu	107,544
South Tongu	83,644
Akatsi	90,216
Denu	181,031
Keta	132,039
TOTAL	1473,222

1995 Projections

District	Area sq. km.
Kete-Krachi	2489.3
Nkwanta	3159
Kadjebi	949
Jasikan	1244.75
Hohoe	1524.25
Kpando	1229.5
Ho	2564.25
North Tongu	1940.25
South Tongu	594.75
Akatsi	1027
Denu	962
Keta	410.02
TOTAL	18093.27 sq. km
	6959.42 sq.mls

KEY

MAIN ROADS
WATER BODIES
REGIONAL CAP.
DISTRICT HQQT.
TOWNS
INTER. BOUND.
REGIONAL BOUND.
DISTRICT BOUND.

Traditional Administration:

The Regional House of Chiefs is the highest ruling body on chieftaincy affairs. The various traditional areas have paramoncies. The Paramount chiefs preside over the Divisional chiefs who in turn supervise the clan chiefs. Family heads control activities of the individual families.

Economic Activities:

The main economic activity of the region is agriculture, consisting of farming, fishing and animal rearing. The major crops are cassava, maize, yam, shallots, cocoa and coffee. Fishing is done along the shore and the Volta Lake while cattle rearing is done in the savana belts of the south and north.

The manufacturing industries located in the Region are a Textile factory at Juapong and a small scale biscuit factory at Sokode. Some people are also involved in pottery making in the southern and middle sectors of the Region. Gun smithing is also done in some communities in the Hohoe and Kpando Districts on very small scale for local consumption.

Ethnic Groups:

The south and central sectors are predominantly Ewe and Avatime. The northern sector is mainly occupied by Akan, Buem, Guan, Kokomba, Nchumuru, Adele and Krachi.

The region has approximately 17 different languages spoken by the various ethnic groups who have their own distinct customs, cultures and traditions. Table 2 below shows the socio-cultural distribution of the Region.

Table 2

THE SOCIO-CULTURAL DISTRIBUTION OF VOLTA REGION

ZONE	COMMON CHARACTERISTICS	DISTRICT
1 North	Made up of several ethnic groups viz: Guan, Akan and Ewe	Nkwanta and Krachi
2 Central North	Made up of Akan and Ewe speaking groups. Viz: Lolobi, Likpe, Akpafu, Santrokofi, Buem, Logba and Tafi	Jasikan, Kadjebi
3 Central South	Mainly Ewes of the central Togo ethnic groups viz: Avatime, Logba, Nyangbo-tafi and Awudome, Asogli, Gbi.	Ho, Kpandu, Hohoe
4 South	Mainly Ewe, Anlo, Some Tongu Avenor	Adidome, Sagokofe, Keta, Ketu, Akatsi

Source: Report of focus group study, Rural Water Supply and Sanitation Project, 1993.

Significance of the Study:

It is hoped that this study will throw light on the role played by the VRWSS in the prevention of water and excreta related diseases in the Volta Region

It will also help in assessing the roles of International NGO's working in the water sector in the country in supplementing Ghana Government efforts.

By this study, both the achievements and short comings of the projects would be highlighted for corrections if found necessary.

Finally, the study will help especially the Community Water and Sanitation Division of the Ghana Water and Sewerage Corporation, and other NGOs in the same field to pick valuable lessons from the VRWSS project's experience.

Problems of the Study:

The major constraint that faced the study was the lack of enough time for the study. The researcher had only twelve weeks officially to gather data in the field, analyse and present them for scrutiny by his supervisors. Looking at the size of the project area and accessibility to transportation as well as the fact that the researcher has to travel all the way from Legon to these areas and back, the problem of time was very critical.

It is against this background of inadequate time that the researcher could not do a more in depth study of the project as he would have liked.

Organisation of the Study

The dissertation is divided into five main chapters. Chapter one deals with a background to the study, statement of the problem, theoretical framework of the study, methodology, the geographical and demographic setting of the project as well as the significance and limitation of the study.

Chapter two deals with a review of related literature on the research topic and statistical data.

Chapter three discusses the knowledge, attitudes beliefs and practices of the people of Volta Region in relation to health and sanitation issues and the how the project intends to address these issues.

Chapter four takes a look at the administrative and operational set up, as well as the activities of the project and chapter five deals with the analysis of data on health and hygiene education in relation to the objectives of the project.

Chapter six deals with summary, suggestions and conclusion on the research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 The Concept of Health Education

According to WHO (1988:22), health education is the part of health care that is concerned with promoting healthy behaviour among people. Through health education, people could be helped to understand how their behaviour affects their health. They could also be encouraged to make their own choices for healthy life. One must therefore work with families, communities and even regional and national authorities to make sure that resources and support are available to enable each individual lead a healthy life.

WHO (Ibid), differentiates between health information and health education. According to it "correct information is certainly a basic part of health education, but health education must also address the other factors that affect behaviour such as availability of resources, effectiveness of community leadership, social support from family members and levels of self help-skills. Health education therefore uses a variety of methods to help people understand their own situations and choose actions that will improve their health. Health information on the other hand, involves merely telling people to follow good health behaviour"(Ibid).

These views are shared by Davis (1983:127), who also defines health education as "the process of persuading people to accept measures which will improve their health and to reject those which will have an adverse effect". Davis asserts that, it is now possible for any person to improve his own life prospects and those of his children by his own behaviour. He however notes two different factors which can influence our reactions and decisions. These are, the home, and school, which are powerful influences in any person's life, and both can condition the ability of that person to make the right or wrong decision with regard to health matters. He cautions that because the standards accepted as normal constantly vary, "the science of health education itself must also be concerned with change in the behaviour and attitudes of people". Davis concludes that successful health education is that which succeeds in persuading an individual by a process which influences not only that person but those places which shape his attitude, namely, his home, school, or work place.

In a similar vein, Holmes (1964:10) also sees health education as "the methods of teaching and affecting changes of habit". According to him, people can have good health and live fuller and richer lives if they learn more about their present customs with regard to health. He explained that this can be achieved by changing the beliefs, attitudes and behaviour of the people by teaching them in a way that they

can understand how to achieve good health, and how to put this teaching into practice.

From the foregoing, one can deduce that the concept of health education involves certain basic elements, namely, felt need or want, understanding and acceptance of any new idea in relation to health, and putting it into practice.

2.2 The Role of the Health Educator

Holmes (Ibid) empahsises that the teacher trained in health education can be of great help to the public health team, and his methods may solve problems where others failed. He pointed out that health education methods can, and should be used by all those whose work involve the improvement of peoples' health. These include teachers, agricultural and community development officers as well as members of the medical department who are not working primarily in the field of health.

Likewise, WHO (Ibid) noticed that people who are trained to do health education work are specialists in the field, but since all health workers are concerned with helping people to improve their health, knowledge and skills, they should practise health education in their jobs.

Also, Davis (ibid) sees the role of the health educator as that of convincing the community and individual of the importance of health. To him, one of the best ways of achieving this is to ensure that many different types of

individuals play a role. These include parents, teachers, employers, youth leaders, social workers, church leaders and politicians. By so doing, the "educating role becomes spread out and the end effects will be equally widespread".

In spite of the valuable role that health education plays in the society, Isely, in WHO (1985:214), complained about the lack of trained health educators in Africa. According to him, with only a few notable exceptions, African ministries of health are doing little for health education in the provision of sanitation. He noted that many sanitation services have too few employees who are poorly trained for work in rural areas and are supervised by medical officers "who are not familiar with the substance of their work".

Similarly, Doan, in WHO (1980:27), also estimated that there were only one or two sanitarians per 100,000 population in 30 countries surveyed in 1980. In addition, the training of sanitarians at all levels, like that of water supply engineers and technicians, tended to be urban-oriented and contained a great deal of medical material like anatomy, physiology and pathology. As a result, "it is no surprise that many sanitarians feel restless when obliged to work in a rural environment where latrine construction, improvement of wells and simple waste disposal methods are the day to day concerns" (Ibid).

2.3 Community Participation in Health Education Programmes

In their discussions on the importance of the role of the health educator (or sanitarian), Davis and others underplayed the importance of a very key element in the health delivery system, is community participation in planning health education programmes. Tenakoon, in WHO (1987:383), noted that "health work cannot be carried out in isolation or by efforts of paid officials but also, communities should organise themselves to devise self-help schemes and launch action to raise living conditions, using available resources to the maximum". According to him, the role of health professionals is to give guidance. They should go to the community and seek out its health problems. They should make frequent contacts with members of the community organisations and thus gain an insight into their characters and interests. Tenakoon concluded that the community has to be organised under its own leadership. One common way of doing this is for the local leaders to establish a community health committee which can identify health problems, inform the community about them and communicate with health professionals. "Health education should therefore not mean merely talking to people and sticking up posters but should also aim at community diagnosis and health development by improving people's knowledge, attitudes and practices and stimulating action" (Ibid).

Brieger and Remakrishna, in WHO (1987:384), expressed an almost identical view in their discussion of the limitations

of the use of social marketing in health education programmes. According to them, while the specific technique of social marketing may be new, the planning and management process in health education remain the same; that is, market segmentation is the identification of target groups of market research in educational diagnosis. This implies that the health worker should first identify or diagnose the health needs of the community through interaction. They backed their argument with the views of Green et al (1980), who also noted that the serious health worker should undertake pre-planning diagnosis, not to elucidate to the nature of a pre-determined health need, but to find out what the community sees as its priority requirements. This assertion is buttressed by Ryan (1978), who also contends that "marketing based on centrally determined needs and professionally selected products may defeat the aim of encouraging community involvement and adaptation of programmes to local cultural reality".

Brieger and Ramakrishna (Ibid), therefore concluded that a combination of social marketing, community organisation and social support would be valuable in developing a comprehensive health education promotion programme for community sanitation. Furthermore, the Institute of Development Studies (1978) in a study of health services in rural Ghana, noted that the community participation approach to rural health services supposedly overcomes the failure of the conventional health services to meet the real needs of the rural population,

because it is based on consultation with rural communities concerning their needs. It also noted that traditional health services do not have the resources to reach all the villages, so by harnessing the willingness of the villagers to do this, for themselves, new resources are being tapped.

Similarly, WHO (1988:21) advised that good health workers are those who visit people in their community and listen to their problems. They do not push people and not only merely give information. Rather, they help people think about their own problems and ask them to think about ways of solving the problems. In the end, they will all agree to take the actions that would improve their health.

Also, Kweka (1994) noted that people are not going to change their health practices just because someone has given them what he or she thinks is the right advice. To him, the village community represents a complex economic, social and political structure which needs to be studied carefully if one is to support or facilitate social change at the grassroots level. It is therefore necessary "to create a situation where the facilitator and the community will hold a dialogue, where they can assess and analyse their problems as they see them. This dialogue should be continued for sometime until the community or a large section of the community begins to internalize the problem" (Ibid).

Holmes (1964:6) also added his voice to the call for community participation by pointing out that well over 90% of diseases can be avoided, but they can only be avoided if the people themselves are prepared to learn and practise new ideas and skills so that the present low standard of hygiene and sanitation may be improved. He also concludes that most of the customs and habits of the community actually help the spread of diesease and this can only be corrected through community participation in planning health education programmes.

2.4 The Role of Women in Health Education

Emeldart and Isely, in WHO (1982:227), argue that the most significant reasons for the failure of the provision of clear water and sanitation facilities in rural sectors in developing countries is lack of adequate consideration for local conditions, practices, preference, and beliefs, which implies a need for community participation at all stages of improvement schemes; namely, planning, implementation, and evaluation. "Particularly crucial in this participation are recognition and utilization of the key role women play as acceptors, users, managers and educators in matters of water and sanitation" (Ibid). They further explained that as carriers of water and selectors of water sources and the quality of the water, health effects of water, like a decrease or increase in diarrhoea and other disorders such as skin

infections and trachoma are influenced by women. Also, as those who provide their infants and young children with fluids in both sickness and health, they determine the hygiene of the cup and spoon, and therefore are partly responsible for the cleanliness of the water and the recovery of the children from diarrhoea. It is also women who form a constant link in the chain of contamination from faeces to fingers to food, and who can break the chain by latrine use, hand washing, and protection of left over food. They further concluded that promoting positive attitudes towards proper and hygienic use of water supply, transport vessels, and storage receptacles and the use and care of latrines by women and their children must be encouraged.

On the management of water and sanitation facilities, Elmendorf and Isely (1982) noted that lack of community interest, management, and organisation, is the chief obstacle to proper use and maintenance of improved water and sanitation systems. In this direction, women can be trained to detect leaks and other defects in the system, do routine maintenance and minor repairs, and train other community and household members in maintenance and repair techniques. "The idea that technology is too complex for simple rural people in developing countries (especially women) is a myth",(Ibid).

In addition, women can also serve as collectors of essential data in the evaluation of the systems.

Marayan-Parker, in WHO (1988:356) also noted that communities are not smoothly functioning, homogeneous entities in which everybody is equally interested in water supply and sanitation. They are made up of people, some richer and more influential than others. Ethnic divisions may also be present. As a result, though it is important to work with community officials and leaders when devising low-cost programmes for water supply and sanitation, "it is equally necessary to mobilise the energies of ordinary people, including women". According to her, women's needs, interests, friendships and ways of networking tend to differ from those of men. Unless special attempts are made to understand the environment of women, they will continue to be by-passed. She is emphatic that women's involvement should not be limited to women's projects or components of projects alone, but rather they should take part in decision-making.

From the arguments advanced by the above authors and many others, it is the view of this writer that community participation in projects would be woefully ineffective without the active involvement of women in both decision making and implementation.

Relationship Between Water Supply, Sanitation and Health Education

Isely (Ibid) noted that there is a strongly felt need among rural people for safe and abundant water. Unfortunately however, this factor is often overlooked by health planners when estimating

cost-benefit ratios, but the truth is that the provision of domestic water supply attracts a high level of community participation and cost saving, as compared to other health education programmes which have less appeal. This is so because a certain quality of water is essential for improved personal and household hygiene. "It is generally recognised that the minimum quantity for health to be maintained is 20-30 litres per person per day" (Ibid).

> In a study conducted by the Department of Rural Water Supply in Chile, (WHO 1983), among ten localities, five which have water supply facilities and five which have not, the following findings were arrived at - The rate of consultations for acute diarrhoea in under-fives in the localities with water supply system was 55 per thousand - In localities without water supply system, the rate was 212.7 per thousand. The availability of drinking water thus cuts the incidence of acute diarrhoea by about 74%.

Watt and Wood (1979) also noted that many of the diseases that cause illness and death to mankind are "water related" in one way or another. They listed these diseases under four main headings, namely:

(a) Water-borne diseases - those that may be carried in water and infect consumers, e.g. cholera, dysentery, typhoid and hepatitis.

(b) Parasitic diseases - where the organism causing the sickness spends part of its life cycle in an aquatic host, for example guinea worm or bilharzia cercaria.

(c) Filth-borne diseases - those whose incidence could be reduced if ample water were available for washing and hygiene. For example, scabbies, tropical ulcers, trachoma and infertile diarrhoea.

(d) Water associated diseases - spread by insects that breed in water. For example, malaria, river blindness and sleeping sickness.

They therefore stressed the need for hygiene education. For "unless the local people understand the risks of contaminated water, the need for safe water disposal, and the importance of personal care, they will not appreciate the necessity for protecting the supply".

Similarly, in a research to find out when illness occurs most in rural areas, Amonoo-Lartson et al (1984) noticed that heavy rains that bring abundant water to rural communities are associated

with increases in diarrhoea and malaria as the drainage system cannot cope with the heavy downpour and mosquitoes breed in the puddles created.

In Ghana, statistical data at the Ministry of Health indicate that water-related diseases constitute the major causes of morbidity in our hospitals. An example is the case of the Volta Region in the table below:

Table 3

Major Causes of Morbidity: Volta Region, 1980 and 1990

DISEASES	NO. OF CASES		PERCENTAGE OF TOTAL	
	Y E A R		Y E A R	
	1989	1990	1989	1990
1. Malaria	134,208	129,520	39.3	37.6
2. Diarrhoea Diseases	19,574	23,125	5.7	6.9
3. Upper Resp. Diseases	25,240	23,324	7.4	6.8
4. Skin disease including ulcers)	17,851	16,805	5.2	4.9
5. Road Traffic Accidents (Trauma)	13,174	14,752	3.9	4.3
6. Intestical Worms	15,152	13,860	4.4	4.0
7. Pregnancy with complications	15,190	12,609	4.4	3.7
8. PUO (not malaria)	8,512	9,728	2.5	2.8
9. Anaemia	7,705	6,167	2.3	2.7
10. Rheumatism	10,826	8,292	3.2	2.4

Source: M.O.H. Annual Reports, 1991.

From the table, it can be noticed that four of the ten leading causes of hospitalisation and death in the region, namely; malaria, diarrhoea diseases, intestinal worms and skin diseases are related to water and sanitation.

From the foregoing literature review, it is evident that effective health education, with the active participation of women must be the pivot around which all rural water supply and sanitation programmes must revolve in order to achieve the desired objective of providing safe drinking water for good health to rural communities.

CHAPTER THREE

TRADITIONAL KNOWLEDGE, ATTITUDES, BELIEFS AND PRACTICES OF THE PEOPLE OF VOLTA REGION WHICH THE HEALTH EDUCATION PROGRAMME SEEKS TO INFLUENCE

In the review of related literature in chapter two, it came to light that in the first place, there is a very strong relationship between water, sanitation and health.

Secondly, it has been established that a successful health education programme is one that is geared towards improving the knowledge, attitudes and practices of the people by stimulating action or participation (Davis, 1983, Holmes, 1964), Ryan, 1978, WHO, 1988).

This chapter is devoted to the study of the efforts that the project implementors have made to understand the traditional knowledge, beliefs, attitudes and practices of the people of the Region in relation to health issues and how they (the implementors) hope to effect any meaningful behavioural changes in the people towards health issues.

Narayan-Parker, in (W.H.O., 1988) noted that baseline studies can be invaluable in discovering cultural, social, psychological, physical and organisational factors of relevance to water supply and sanitation.

In line with this notion, the VRWSS also undertook a baseline study in the form of a Focus Group Discussion in August, 1993, before the commencement of the project, on the knowledge, attitude, practices and beliefs (KAPB) of the people, in order to devise the appropriate strategies for the health education component of the project.

In all, 231 persons in 25 focus groups from the twelve districts in the region were involved. The target groups were farmers, fishermen, river bank dwellers, traditional healers, market women, adult males, Junior and Senior Secondary School students, the youth and school teachers.

Selection was done according to socio-cultural and ecological zones using a modified stratified random sampling technique to ensure that all districts in the region were covered, and that discussants came from areas where water and sanitation problems were known to exist. This is shown in Table 4 below.

Table 4

STUDY COMMUNITIES BY DISTRICT AND TARGET GROUPS

ZONE	DISTRICT	COMMUNITIES	TARGET GROUPS
1	KRACHI	Buafori Chinderi Kpetsu	River Bank Dwellers Traditional Healers Fishermen (Akan)
	NKWANTA	Bontibor Dawa Cottage Brewaniase	Youth (SS + COMM. STUDS.) Women (144 KSL Above) Farmers
2	KADJEBI	Kadjebi Poase Cement Asato	J.S.S. Students Farmers Women (14 yrs. above)
	JASIKAN	Kwamekrom Kobossreso Nsuta	Fishermen Traditional Healers Adult Males (25 yrs. +)
3	HOHOE	Nyangbo Odumase Fodome Tomegbe	Traditional Healers River Bank Dwellers
	KPANDO	Kpeve Gboxome Tsrukpe-Dukuma Agbenoxoe	Adult Males (25 yrs. +) J.S.S. students Market Women
	HO	Avenui Akoefe Tanyigbe Atidze	Teachers Food Vendors
4	AKATSI	Torve	Traditional Healers
	KETA	Hatorgodo Weme	Food Vendors Adult Male (25 yrs. +)
	SOGAKOPE	Agbakife	Teachers
	ADIDOME	Juapong	Youth (SS + COMM. STUDS.)
	KETU	Avlorto	Market Women

Source: VRWSS, Report of Focus Group study on knowledge, Attitudes, Beliefs and Practices related to Water, Health and Sanitation of the people of the Volta Region, August, 1993.

FINDINGS

After holding discussion sessions with all the 25 focus groups selected from the 12 districts of the region, the researcher came out with the following report:

3.1 Concept of Health

The World Health Organisation (WHO) defines good health as not merely the absence of disease or infirmity, but also a state of mental, physical, social and economic well being. In this context, apart from the concept of spiritual health, most of the participants' definition of health fall within the confines of the WHO definition above. This implies that the people are generally already aware of what constitutes good health. What they lack however, is how to promote and sustain good health.

The basic task of the project therefore is how to develop relevant programmes of activities and health messages that would ensure the attainment of good health. These would include the provision of good drinking water, provision of sanitation facilities like improved toilets, and initiating health education activities at the community level. It is envisaged that effective health education can lead to attitudinal changes like proper disposal of faeces, community participation in the construction of sanitation facilities, personal hygiene and the proper handling of water to avoid contamination and the maintenance of environmental cleanliness.

3.2 Awareness of Health Hazards:

According to the study, communities throughout the region are aware of most of the practices that constitute a health hazard. They mentioned instances like indiscriminate defecation, exposed latrines, bad water, unclean environment as things that constitute health hazards. Others are indiscriminate dumping of garbage, prevalence of mosquitoes and flies, defecating and bathing in streams and stagnant water, and availability of water born diseases. Once again it was found out that the peoples knowledge of health hazards can only be described as being at the `awareness' level, because they do not know why the practices constitute a health hazard. For example, they know that indiscriminate defecation at the banks of rivers constitutes a health hazard but they cannot explain the link between this practice and possibility of water pollution when it rains and the subsequent spread of water born diseases like cholera, dysentery and typhoid.

The project has therefore structured the health education programme to help the people internalise the causes of health hazards by demonstranting the right attitudinal changes and practices that would eliminate these hazards. It involves the peoples' participation in the planning, implementation and evaluation of an action plan on health hazards in the society.

3.3 Relationship Between Water and Health:

A greater part of the communities involved in the study were using unsafe water sources. Twenty of the groups said that they obtained their drinking water from the streams or river. Nine groups however had access to boreholes in addition to the river or stream. Ten groups had wells and the others used combinations of bore holes or dams or rain water and streams. Only four groups had access to pipe borne water.

When asked whether they boiled the water before drinking, the majority of the discussants answered in the negative. Ironically however, except in the area of bathing, the relationship between drinking water and health is generally understood, at the `awareness level' as usual. This stems from the fact that by their own admission, the majority of the groups stated that they feel too busy or lazy to boil or strain their drinking water, even though they know this can be a source of infection to themselves and their families. In places where bore holes are provided, some people continue to use the known contaminated source of supply because they claim they cannot afford the token fees being collected from those who fetch water from the boreholes. Others also claim that the water from the boreholes has a `funny' taste.

From the attitudes of the people as described above, it was recommended that health education in this direction should as much as possible go beyond simply giving information or

creating awareness, since this awareness seems to be already there. Emphasis must rather be put on participatory methods which would get the recepients personally involved in realising the possible consequences of their behaviour on their own health and income as well as that of their families, so as to bring about the required changes in values which are required as a basis for lasting behavioural change. Health education will therefore facilitate change of behaviours which will ensure that water does not become a source of ill health.

3.4 Sanitation and Health:

In each group, participants felt that there was a relationship between where one defecates and his or her health. The main reasons they gave were that:

- flies with some faeces settle on food and give diseases. Also when it rains faeces can get into sources of water and give them diseases;

- when someone steps on the faeces and brings it home, it brings diseases;

- stray animals walk on faeces and contaminate sources of drinking water.

The discussants suggested that the possible solution to the problem of disposal of faeces is the construction of a "Public Latrine" and the avoidance of indiscriminate defecation. The use of chamber pots by children and washing of hands after using the toilet were also suggested.

The issue of whether men and women should use the same toilet was rejected by all the groups because they think it is a taboo.

In view of the responses above, it is imperative that the health education programme of the project should involve the provision of sanitation facilities, especially public places of convenience.

In this direction, the project has designed about nine types of improved latrines for both individual and institutional ownership. Also both the community and school health components of the health education programmes are focussed on the proper disposal of faeces and the practice of personal and environmental hygiene.

3.5 Knowledge of Disease Prevention:

All the participants admitted that diseases can be prevented, but the majority indicated that they do not know how it can be done. They also show a reliance on someone to prevent diseases for them, and they mentioned hospitals and other agents of the Ministry of Health. The idea that they themselves can do much to prevent the disease did not come out

through the discussions even though they had earlier on mentioned some of the things they can do as a community to prevent diseases. The apparent reason for this might be the fact that either health workers have often given the impression that they alone have the answers to disease prevention or it might be due to the belief that dieseases come from God or juju.

Some of the groups also expressed the view that some diseases can simply not be prevented. They mentioned Malaria, Waist pains, diseases spread by women, hernia, rheumatism and AIDS. In the case of Malaria one group argued that even if you clean your surroundings and do away with stagnant water, the disease still prevails. This explains why although some of the participants seem to be able to state the causes of diseases and how they can be prevented, they still did not really believe that they can actually be prevented. This shows that they did not internalise facts on health education as values.

The solution to this problem as far as the project is concerned is that the people should be involved in the planning and implementation of the health education programmes. The Environmental Health Assistants in the communities would discuss and identify health and sanitation problems with members of the communities after which an action plan would be drawn with the people to solve these problems. In other words the health education programme of the project

is going to be internally driven. This would enable the people learn how to prevent diseases through practice.

3.6 Previous Knowledge of Health Education:

All the groups admitted that they had received some form of health education in the past. It was on topics such as Environmental Sanitation, personal hygiene, good nutrition and food safety, which were all recorded in nine out of the twenty-five groups. Information on safe drinking water, and safe toilets was given to seven of the twenty-five groups. The women also admitted receiving health education on the importance of immunisation, keeping toilets clean, child care, washing of clothes, safe disposal of children's faeces, and the mixing of O.R.S. and sugar salt solutions. The youth (SSS students) had the widest range of health education. These included education on AIDS, drug abuse, teenage pregnancy, immunisation, family planning, refuse disposal and safe drinking water. The J.S.S. students said they had education on personal hygiene.

The project would therefore have to direct its health education programme at making the people put the knowledge they have previously acquired, in addition to what is being taught now, into practice. Attention has to be focused on the illiterate segment of the society because they lacked an in depth previous knowledge of health education. Towards this end, the project has put in place the formation of water and sanitation (WATSAN) committees to see to the planning and

implementation of health education issues. There is also an Environmental Health Assistant who stays permanently among the people to help them to implement their Action Plans on health education.

3.7 Present Sources of Health Education:

Throughout the region the commonest source of health education was the Radio. It was mentioned by 70% of the groups. Some of them also indicated that it is the only source of health education available to them.

The second source of health education was given as the staff of the Ministry of Health in the hospitals, clinics and health posts during hospital attendance for treatment or immunisation of children. Some communities also mentioned community health nurses, Health Inspectors and School Inspectors in addition. Also four out of the thirteen target groups mentioned television and three mentioned newspapers. Other sources mentioned were visitors, elders, school children, drug peddlers, teachers, older siblings, churches, herbalists, parents and functional literacy classes. One group of J.S.S. students mentioned textbooks as their sources of information on health.

The researcher therefore noted that these sources of information should be reinforced and incorporated into the project during implementation, especially the relatively novel sources like herbalists and the churches.

3.8 The People's Preferences with Regards to Health Education Programmes:

(i) Preferred health educators: When asked to mention people that they prefer to give them health education, the majority of the groups mentioned Medical Assistant, Doctors, Sanitary Inspectors and Traditional healers. They all insisted that the people should come to them in their communities. Each community however seems to have its own additional preferences.

In Krachi, for instance, they would like the information to be passed through the Chief. Nkwanta preferred the project staff, while Jasikan would like it passed through the District Assembly. Teachers are preferred by Kpando and Ho groups. In Akatsi, Keta and Adidome, health committees were preferred while South Tongu (Sogakope) indicated that they would welcome "anyone who likes us".

These preferences were however not absolute, for some communities mentioned more than two preferences at a time.

(ii) Preferred places for health education: The study found out that people in the region prefer public places, community centres, the chiefs house or palace, Health centres, literacy classes, schools or any spacious place for health education. Some individuals also preferred their homes, that is, house to house visits.

(iii) Preferred Methods of Presentation of Messages: Generally all the participants preferred face to face or word of mouth presentations of health messages to them. They also suggested that the people should be assembled through the chief who would cause the gong gong to be beaten.

CONCLUSION

The report of the Focus Group study confirms the views of Marayan-Parker in (WHO. 1990) and other writers (see chapter two) that if health education is to seriously address the problems of rural communities, then it is necessary that cognisance is taken of the life style and needs of the communities, so that provision is made for the project staff to work with the communities in such a way as not to disrupt their economic and other social activities.

It was also noted that health education messages should be implanted through continuous practice and reinforced by follow up. Above all, as rightly pointed out by Tenakoon, (WHO 1987:383), the messages should meet the needs of the individual communities in the region, and deal with issues that concern them directly.

The study therefore serves as a yardstick by which this researcher, and for that matter any interested person can measure the impact of the project on the people with regards to their willingness to accept "measures which will improve their health and to reject those which will have an adverse effect", (Davis 1983).

CHAPTER FOUR

ACTIVITIES OF VRWSS PROJECT WITH SPECIAL REFERENCE TO HEALTH AND HYGIENE EDUCATION

PROJECT ORGANISATION

The VRWSS project has so far opened offices in eight of the twelve districts of the Volta Region as at June 1996, namely, Ho, Hohoe, Kpandu, Adidome, Sogakofe, Akatsi, Keta and Ketu (See Table 5 below).

Table 5

DISTRICT IMPLEMENTATION PLAN, VRWSS PROJECT

Project Phase	Phase I				Phase II			Phase III		
Year	1993	'94	'95	'96	1997	'98	'99	2000	2001	2002
Ho District	****	***								
Hohoe District	****	***								
Kpandu Dist.		***	***							
Adidome Dist.		***	***							
Sogakofe Dist.			***	***						
Akatsi Dist.			***	***						
Keta District				****	*****					
Ketu District				****	*****					
Jasikan Dist.					*****	****				
Kadjebi Dist.					*****	****				
Nkwanta Dist.						****	***			
Keta Krachi District						****	***			

SOURCE: VRWSS. (MIS) - YEAR 1996.

The district RWSS office is responsible for all the activities of the project in the districts under the supervision of the District Management Committee (DMC), which comprises representatives of the District Assembly, officials from the Ministry of Health in the district, Department of Community Development, Traditional Leaders, Queen mothers, representatives of women's groups, and other organisations involved in water supply and health in the district.

The District RWSS office is managed by a District Engineer (DE) who is responsible for all the project's activities in the district. He is assisted by a Technician Engieer and an Extension Supervisor (ES) for the health education and community mobilisation work.

The main tasks of the District RWSS office are to conduct feasibility studies in the communities applying for project assistance and, in cooperation with the communities, to plan and implement the facilities. The environmental Health Assistants, (EHAs) assisted by Extension Supervisors, undertake the community mobilisation, health education, and sanitation components of the project. Specialised hydrogeological investigations and test drillings are done by consultants.

The transport requirements of the district staff are three small four wheel drive Suzuki vehicles, supplemented by motorcycles for the office staff and Mopeds for the Field Assistants on co-ownership basis.

At the regional level, the project is managed by the Regional Office, under the supervision of the regional management committee, which is similar to the DMC at the district level. The office is manned by professionals in the fields of community mobilisation, health education, monitoring, training, engineering, sanitation, as well as project administration and management.

The duty of the regional officers is to ensure that the implementation at district level receives the necessary logistics and human resource support and performs satisfactorily, (See appendix 1 for the organisational structure of the project).

THE HEALTH AND HYGIENE EDUCATION COMPONENT OF THE PROJECT

Health and Hygiene education is an important component of the VRWSS project. Its main objective is to enhance the living conditions of the target population by reducing water and excreta related diseases.

To this end, hygiene education is integrated into the provision of improved water and sanitation facilities. It is envisaged that, by benefitting from the education programme, members of the communities will demonstrate new knowledge, beliefs and attitudes, with regards to the relationship between health, water, and sanitation by identifying health hazards associated with water and poor sanitation practices by taking measures to prevent these hazards both individually and collectively.

The target groups for the hygiene education programme are women and children, families or households, water and sanitation (WATSAN) committees, health education facilitators, school children, food vendors, literacy groups and youth groups.

The programme is divided into two main sections, namely: Community health education, and School health education.

Community Health Education

As soon as the project takes off in a community, the Environmental Health Assistant (EHA) identifies community based organisations and opinion leaders with whom he or she can discuss health and hygiene issues affecting the community in the form of a focus group discussion.

During this discussion, the groups identify common hygiene problems affecting the community. The problems are then arranged on a scale of preference by the group members, after which obejctives are set and an action plan is drawn with roles given out to the members. The Diagram below shows a specimen action plan.

Diagram

ACTION PLAN

What is the problem	Why does it happen	What can we do to improve	Who will be guiding/ responsible	Who will be remind- ing us	When to start and when to finish

In the diagram above, the action plan is divided into six columns as follows:

(1) What is the problem? The EHA holds a meeting with members of the community to brainstorm on some health and hygiene issues affecting the well being of the members. They may come out with problems such as lack of a rubbish dump, or improper disposal of rubbish, improper disposal or chidren's faeces or indiscriminate defecation.
These problems are then arranged on a scale of preference with the community deciding on which problem they deem as being of the utmost priority.

(2) Why does it happen? Here the group tries to find the cause of the problem. Each member gives his or her own reason and these are analysed and discussed until a concensus is reached. For example, the group that identifies indiscriminate defecation as its major problem may finally decide on the lack of a public toilet as the main cause of the problem.

(3) What can we do to improve? Once again the people are allowed to give their own solutions. The answer to this problem is to construct a toilet and this is where the project comes in. The EHA then gives the modalities for the acquisition of individual and institutional improved toilets and the advantages that could be derived from these toilets.

(4) Who will be reminding us? This column demands that the people choose a leader who will mobilise them into community action. The responsibility usually falls on the chairman of the water and sanitation (WATSAN) committee or anybody in the society with a specialist knowledge of the facility being constructed.

(5) Who would be guiding/responsible? The project usually engages the services of an expert to help the EHA in this stage of the activity. In the construction of a latrine,

for instance, a trained artisan and the district engineer are usually at hand to guide members of the communities.

(6) When to start and when to finish: Here members of the community set time limits for the project and work hard to beat the dead line they set for themselves. The project provides between 85-90% of the materials needed for the provision of facilities.

The EHA also assists community members to become aware of the four main risks associated with water and sanitation. These are:

(1) disposal of children's faeces;
(2) hand washing after handling faeces to avoid contamination;
(3) use of latrines; and the
(4) transport, storage and use of water at home to avoid pollution from germs.

Some of the methods and equipment used for this education are Participatory Tool Kits that are supplied to all EHAS on the project. These contain health messages, word games, puzzles and pictorial illustrations that show the faeco-oral transmission route of diseases from their sources, (faeces and water) to the host, (humans). There are also posters, video tapes, songs, role plays and drama to demonstrate the causes and prevention of common health hazards in the communities.

Apart from the Environmental Health Assistants, WATSAN committee members and members of other identifiable groups like the school health committee and the women's groups in the churches are also trained to use some of these methods for the education of the rest of the community

Monitoring: The programme is monitored from the regional right down to the community level. Monitoring instruments have been developed by the various levels of implementation. For example, a checklist has been devised to be used by the WATSAN committees and women's groups to monitor their own action plans.

The Environmental Health Assistants also assists the community to discuss the progress of their planned activities and the problems they encounter during the implementation, and how to overcome them.

Furthermore, the Environmental Health Assistants submit monthly reports that help programme managers at the district level to improve on strategies being applied.

School Health

With increasing numbers in school enrolment in pre-school, primary and Junior Secondary Schools, it has been realised that the school has an important role to play not only in imparting knowledge, but also in altering basic hygiene knowledge. The realization is based on the following assumptions:

(i) Schools offer controlled environment for introducing new forms of social behaviour and for establishing new social norms in matters such as the type of water we drink and

how to dispose of human waste, and standards of bodily hygiene (Personal Hygiene).

(ii) Schools can help to modity attitudes and habits that are established at home. They can also introduce pupils to new facilities such as protected water supplies, sanitation, latrines and also help to establish policies for the proper use and care of these facilties.

(iii) There is also a wider distribution of schools and teachers in proportion to population than most health services. Thus, schools provide the necessary infrastructure for hygiene education, which might be otherwise lacking.

(iv) Children attending school are often more vulnerable to disease. Inadequate school hygiene education, coupled with insanitary facilities, therefore, constitute a health hazard.

(v) Some of the causes of poor performance of pupils in schools are disease and malnutrition, resulting from inadequate diet, diarrhoea and worm infestation. School health co-ordinators who are the health education facilitators of schools in target communities, carry out the education programmes. They do this by using child to

child methodologies, role plays, drama, visual aids, projects, puppets and songs.

Envionmental Health Assistants serve as resource persons in schools by filling knowledge gaps and passing on skills. The school health co-ordinators work hand in hand with school health committees.

Composition of School Health Committees:

Members are:

Representatives of MOH;

Head of the School;

The Life skills teacher;

The school health co-ordinator;

PTA representative;

Physical education teacher;

Representative of food vendors;

Pupils:

School prefect (Boy);

School prefect (Girl);

School sanitary overseer.

Responsibilities

(a) Provision of health facilities in the school.

(b) Organisation of clean up campaigns in and around the school.

(c) Monitoring of activities of food vendors.

(d) Running workshops and clinics for teachers and communities.

(e) Provision of first aid box.

(f) Weekly/Daily inspection of school compound by school prefects and teachers on duty.

Action Plan for School Health

1st Cycle:

Step 1: Meeting with the Heads of the schools and discussion of school health criteria.

Step 2: Formation of School Health Committees (SHC) with the help of the Head of the school.

Step 3: Meeting with SHC, identifying problems in the following water and sanitation areas:

(a) Schools facilities and equipment in connection with water and sanitation.

(b) Food vendors.

(c) Personal Hygiene.

(d) Environmental sanitation.

Under each area, the following context is looked at:

(a) School facilities and equipment:

- Is there a latrine?
- Is there a urinal?
- Conditions of latrines (are they kept clean?)
- Conditions of urinals (are they kept clean?)
- Are drinking water facilities available?
- Is drinking water covered? Is it clean and handled hygienically?

- Drinking cups: Are they available for each pupil? Are they clean?
- Hand washing facilities: Are they available? Are they maintained well?

(b) Food Vendors

- What is the condition of the cooking area, is it hygienic?
- What is the condition of the selling area?
- How are the cooked foods presented, are the utensils kept clean?
- Is a common cup used for drinking water?
- Is the food vendor practising personal hygiene?

(c) Personal Hygiene:

- Are the school children washing hands
  - (i) After using the toilet?
  - (ii) Before eating?
  - (iii) After play?
- Are the school children bathing daily?
- Others

(d) Environmental Sanitation:

- Drainage in the school
- The school environment
- Conditions of classrooms
- Dumping of refuse

Step 4: EHA plans with SHC which areas to tackle, especially areas that are found to be of priority.

Step 5: For each area, a plan with the target group is evolved eg. for envornmental sanitation, plan with teachers and school children and food vendors.

Step 6: Organise health education sessions with each target group, using participatory methods. At the end of each session, let target group come up with simple attainable actions they want to take in order to promote behaviour change.

Step 7: Follow up and monitor actions.

1. What has been the initial problem or situation?
2. What activities were undertaken to tackle the problem?
3. What problems were encountered? How were they solved?

Step 8: New action plans to be developed by the group to tackle other problems.

CHAPTER FIVE

ANALYSIS AND DISCUSSION OF DATA

Achievements of the Health Education Programme so far

Within four years of its operation, the VRWSS has covered eight out of the twelve districts in the Volta Region.

The health and hygiene education component of the project has had an appreciable impact on the target communities as evidenced by the following:

Community Participation

The project staff, especially the EHAs, have been able to whip up the enthusiasm of the members of the local communities, especially women's groups, in the planning and implementation of the programme. As a result, as many as 363 WATSAN committees have been formed in the eight districts in the Region by June 1996, with 115 having already received training from the project, which will enable them become "Agents of Behaviourial Change" in the areas of knowledge, beliefs, attitudes and practices in relation to health and hygiene issues in their communities. The WATSAN committees also help the communities to implement their action plans.

Indicators of community participation and behaviourial change which this researcher noticed were at least 60% of the members of each community, (which was arrived at by randomly selecting ten households out of each community that the project covered for observation) demonstrate the following hygiene practices and knowledge:

(1) Hand washing at critical periods;

(2) Proper disposal of children's faeces;

(3) Proper and up-to-date recording of implemented actions and outcomes by the WATSAN committees;

(4) Evidence of awareness of health hazard associated with water and sanitation;

(5) Proper handling and storage of drinking water by women and children especially.

In addition to the above, the project has also provided as many as eleven types of improved household and institutional latrines that would help members of the communities to avoid contact with human excreta which causes diseases like hookworm infections, cholera, typhoid and others. The latrines also reduce fly and odour problems because they use vent pipes. They also have concrete squatting slabs which make cleaning very easy. As at June 1996, as many as 108 households, 75 communities and 39 institutions have acquired the new latrines, 419 other sanitation schemes were currently on-going in the target communities in the eight districts during the same period.

The researcher noted that achievements can only be appreciated when viewed against the limited number of KVIPs that the District Assemblies are able to provide for the communities over the years, if they ever did at all. The District Assemblies provided KVIPs to only the district capitals, leaving out the hinterlands. Also, all the Envrionmental Health Assistants on the project are on

secondment from the Ministry of Health, but until they joined the project, most of them were very dormant, since the people hardly noticed their presence in the communities. In the 1960's or immediately after independence they were known as `Town Council' people who always came to villages to conduct sanitary inspections.

Against the background of the above evidence it can be said that the VRWSS project is making steady progress in the area of health and hygiene education in the eight districts so far covered as the statistics in Table 6 below indicate.

TABLE 6

STATISTICS OF HEALTH EDUCATION PROGRAMME IMPLEMENTATION STATUS AT THE END OF JUNE 1996

		DISTRICTS AND NUMBER OF COMMUNITIES INVOLVED							
ACTIVITY	HO	HOHOE	ADIDOME	KPANDU	AKATSI	SOGAKOFE	KETA	KETU	TOTAL
Promoting Project Information	244	128	186	109	96	101	31	46	941
Application for Project Assistance	207	86	121	70	76	83	11	55	709
Completed Country Profiles	155	118	67	47	07	58	7	62	621
Commitment Deposit into WATSAN Accounts	–	–	54	21	37	34	10	5	307
Number of Sanitation Contracts Awarded	22	67	30	–	–	2	–	–	121
Completed Sanitation Schemes (1) Communal I.T.L	42	33	–	–	–	–		–	75
On-going Sanitation Schemes									
Communal I.T.L.	46	–	–	–	–	–	–	–	46
Household Latrines	30	23	21	59	20	10	–	–	363
WATSAN Committees Confirmed	61	39	75	24	54	35	–	35	323
WATSAN Committees Trained	44	24	13	18	9	7	–	–	115
Health Sanitation Plans Completed	79	75	49	90	29	8	1	–	331
School Health Counts Formed	103	79	42	61	50	63	–	–	398

From Table 6 above, out of a total number of 941 communities that received information about the project as at June 1996, 709 of them (75.3%) have applied for the project's assistance for the provision of sanitation facilities. This encouraging response can be attributed to the effectiveness of the health education programme that has enabled the people to realise the health benefits of these facilities to them as individuals and their communities. The Ho, Hohoe, Adidome and Kpandu districts take the greater share of all the activities because they were the first four districts to be covered by the project (See Table 5).

The facilities applied for included 363 individual household latrines. (51.2% of facilties applied for) as compared to 121 institutional or communal latrines. As noted earlier on in this chapter, the communities would have preferred more communal latrines, but the project policy discourages the construction of communal latrines. Emphasis is laid on household and institutional toilets, which are used by schools and offices.

The table also shows the significant number of WATSAN and School Health committees formed so far. As at June 1996, a total of 323 WATSAN committees have been formed in the 709 communities that applied for project assistance. Out of this number, 115 have already received training in the management of health and hygiene facilities provided by the project. The number of school health committees stand at 398 thus covering 55.4% of the total number of communities covered by the project.

It is envisaged that with the training of more Partner Organisations by the project to help in the WATSAN training, more communities would benefit from the health and hygiene education programmes.

From the table above, one can see evidence of health and hygiene activities taking place in the form of formation and training of WATSAN committees, acquisition of improved latrines, formation and training of school health committees and other sanitation schemes. All these involve the active participation of members of the target communities, as compared to the apathy and ignorance that existed among them with regards to health issues, at the time of the baseline study in 1993, (See chaper three).

In July 1994, the project, in collaboration with the Ghana Education Service (GES) and the Ministry of Health (MOH) in the Volta Region, came together at a workshop to develop a curriculum on water, health and sanitation for first and second cycle institutions.

This is in line with Government School Health Programme for the country in the 1990 convention on the Rights of the Child.

With financial and logistic support from the project, School Health co-ordinators were trained in selected pilot zones to acquire the necessary skills to enable them to:

(1) Effectively integrate health and hygiene topics into the normal school activities.

(2) Apply the right methodologies when handling health and hygiene topics.

(3) Sustain and evaluate desired behaviourial changes among the school children.

The programme was in two phases. Phase one covered the training of 92 schools, made up of 55 Primary Schools and 37 Junior Secondary Schools in four zones. Phase two was meant to test the tools that were developed during Phase one.

This researcher visited a number of schools whose health co-ordinators attended the above training workshop, to observe any behaviourial changes among the students. He also interacted with some of the students and food vendors at the schools to have an insight into conditions that were prevailing before the introduction of the health education programme and their present knowledge of health hazards. Some of the schools randomly visited in four districts were Matse `A' J.S.S. Anlo Afiadenyigba R.C. Primary and J.S.S., Anlo Afiadenyegba E.P. Primary School, Akatsi J.S.S.`A' and Segasco Primary, Segokofe.

It was established that before the introduction of the programme, health and sanitation facilities in the schools were very poor. Pupils had little or no idea of washing their hands with soap and water after visiting the toilet and even when they wash their hands at all, they all do so in the same basin. They also did not have individual drinking cups. Besides, there was no provision for the proper disposal of rubbish, there was lack of toilet facilities and food vendors in the school were not being monitored.

After the introduction of the programme and training of co-ordinators, there has been marked improvement in hygienic practices in the target schools. For example, pupils now wash their hands with soap and water provided by the school after visiting the toilet. They also have individual drinking cups. In addition, food vendors are being educated on good health and hygiene practices while shades are also provided for them to sell under.

Through the instrumentality of the members of school Health Committees, the larger communities as a whole are also involved in school health programmes, organising communal labour to assist the project in building latrines for the schools. All the schools visited also have adequate dustbins for the collection of rubbish. Most of these dustbins were woven from canes by the J.S.S. pupils themselves.

The schools have developed other hygiene education materials like cartoons, poems, role plays and songs which they teach their younger siblings at home. The school children also influence their parents especially their mothers in the proper disposal of waste.

In relative terms, the school hygiene component seems to be more successful than that of the community as a whole because of the element of illiteracy among members of the communities which prevents them from reading more on health education.

Other Activities of the Project in Building Capacity for Health Education

Apart from its stated objectives of providing water, sanitation and health education, the VRWSS project is also engaged in a few other activities that go a long way to benefit the Region in water, sanitation and health education.

One such activity is the training of local NGOs in community water and sanitation programmes by the project's "Small Business Development Unit". So far five local NGOs who are all community development oriented have benefitted from this programme. They are Sunrise Mobilisation Group, Ho, Tongu Youth and children's Evangel, (TOYACE) Sogakofe, Future Generation International, Ho, Municipal Action, Ho. After their training, these Non-Governmental Organisations became "Partner Organisations" in the training of WATSAN Committees on health education.

In addition, the project sponsors seminars and workshops to promote gender and other related issues of both national and international importance. Typical examples are recent gender workshops for Senior Staffs of the project at Tsito and the project guest house. Gender education would go a long way to enhance the participation of women in health education activities, since they are the pivot around which all community health issues revolve.

Problems and Weaknesses Identified

The first major problem that the researcher identified was the inability of the communities and individual households to pay for the sanitation facilities. Though the project has highly

subsidised the cost of the facilities (they are supposed to pay only 5% of the total cost), most people in the community are either unable to pay because of the abject poverty that is facing these rural areas. There is also the people's attitude of regarding anything coming from either the government or any NGO or a "Yevu" (white man) to be free of charge.

Also, since health education activities do not yield immediate and tangible results, some of the communities are not very keen on that aspect of the project, despite the huge resources that have been put into developing strategies and innovations to get the communities involved. Most of these communities are interested in getting only safe drinking water from the project, thus regarding the hygiene education component as being of secondary importance, just as Isely, in WHO (1982), predicted.

With regards to the problem of the people not taking hygiene education seriously, this researcher strongly feels that its origins are from the planners of the project. This is because all the reports on the project in the state owned media only talk about the number of communities that have been provided with safe drinking water and sanitation facilities without mentioning the health education component that has brought behavioural changes in the lives of the people.

CHAPTER SIX

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

S U M M A R Y

The study set out to find out the contributions (if any) of the V.R.W.S.S. Project in the promotion of health and hygiene education in the rural areas of the Volta Region. The Region is faced with numerous problems relating to the absence of safe drinking water and sanitation facilities.

The methodology used for the research was mainly participant observation. This methodology enabled the researcher to have easy access to relevant project documents as well as ensuring free and uninhibited interaction with both the project staff and members of the various communities covered by the project for information and data on the project while maintaining his aronymity.

Available literature indicates that for an effective health education programme to take off, it is necessary to have the full support and participation of members of the communities, who must be involved in the planning and implementation of all activities relating to the programme. It was also noted that due cognisance must be taken of the role of women and children as the main stakeholders in water and sanitation issues. The importance of baseline studies or needs assessment in the communities was also stressed in the literature.

In line with the last issue raised above, the results of a study conducted by the VRWSS project on the knowledge, beliefs, attitudes and practices of the people of the Volta Region with regards to the relationship between health, water, and sanitation, revealed that the majority of the rural people are aware of health hazards posed by water and poor sanitation practices.

Unfortunately, however, their life styles and beliefs prevented them from taking the necessary corrective measures to eradicate those hazards.

The project initiated an integrated public health programme, comprising the provision of safe drinking water, provision of sanitation facilities, and health education on water and sanitation issues. The above objective of this programme was to effect behavioural changes in the people towards health and hygiene issues through community participation.

Against the background of the above objectives of the project, this researcher came out with the following findings at the end of his study.

5.1 Logistic and Organisational Structures put in place to Promote Health Education

The project has a Regional Office (R.P.O.) under which there are District offices in all the eight districts so far covered. The districts are further divided into zones.

Each district office is equipped with a computer, electric type-writers and other modern office equipment and stationnery.

Personnel of the project are also provided with four-wheel drive cross country vehicles for the senior staff and motorbikes for the junior staff. In fact, each district office is provided with four Suzuki type vehicles while the Environmental Health Assistants (EHAs) are also provided with either motorbikes or morpeds. It is worthy of note that these vehicles are used only during working hours and are not taken home by the officers after close of work.

In terms of organisation, the project has set in place a District Management Committee to help in the planning and implementation of programmes at the District level.

In the communities, there are WATSAN Committees that work hand in hand with the Environmental Health Assistants (EHAs) in drawing up Action Plans for the health education programmes. Due to the availability of transport and frequent training programmes and monitoring, there is free flow of information from the Regional office through the District office to the EHAs in the communities and vice versa. The organisational structure of the project brings a lot of flexibility and innovation in the planning, implementation and evaluation of the health education programme as each community is given the chance to address its peculiar health and sanitation problems.

The Training Department, which seems to be the pivot around which all the activities of the project revolve, is

also adequately equipped with training materials and equipment like manuals, video equipment, large television screens, overhead projectors and slides, computers, and other necessary stationnery items. The section has also provided all the Environmental Health Assistants with participatory tool kits that contain visual aids for the dissemination of various health messages relating to health hazards and how to prevent them.

Funds are also made available by the project to pay almost 90% of the cost of water and sanitation facilities provided for the communities and schools.

5.2 Training Programmes for Project Staff and Volunteers for Capacity Building and Sustainability of the Programme

In a bid to transfer new knowledge, skills and attitudes especially at the community level, the project lays much emphasis on training and re-orientation. The Volta RWSS project offers training on health education to all categories of staff, consultants, government and private sector operators as well as the beneficiary communities.

In addition, training programmes are also organised for all extension staff, which includes environmental health officers and assistants, community development officers and extension supervisors. This is to enable them perform community based services like giving information and mobilisation for hygiene and sanitation education. At the district level, there are training programmes for district

management committees (DMC) and water and sanitation (WATSAN) committees at the zonal levels.

Furthermore, artisans in the community also undertake community based training for the construction of the different types of household latrines.

Also, some categories of staff of the project have undertaken computer training at the various levels like word perfect, Lotus 1,2,3 and D-Base. There are driving lessons for all whose work demands easy mobility, as well as tuition in Ewe language for staff who cannot speak the local dialect. All these training programmes are aimed at capacity building for effective documentation and communication of health messages at the lowest level of the society.

By December 1995, one hundred seconded staff have been trained on the project. Presently, some of them are sent for short durations for further training and exposure to other countries like Cameroun, Kenya, Uganda and Denmark. As at the end of June, 1996, 115 out of the 323 WATSAN committees formed in Ho, Hohoe, Adidome, Kpando, Akatsi and Sogakofe districts have been trained, in addition to all the engineers employed by the project so far. There is also a training programme that would cater for all the school health co-ordinators in all the project zones. School health constitutes a major component of the health education programme.

5.3 Health Messages Being Formulated

The Health messages formulated for the programme are in four main categories, namely:

(i) Hand washing

(ii) Disposal of children's faeces

(iii) Proper use of latrines

(iv) Water source, fetching, transport and usage in a hygienic manner.

These messages are carried through the use of posters, songs (traditional music) and video films. There are also participatory technique diagrams like "Picture with a gap" and "Earth diagram" all of which depict the transmission routes of diseases from their root (faeces and water) to the host (human beings).

It is evident that these messages are having the desired behavioural change in the communities as indicated by the number of improved water and sanitation facilities acquired by both individuals and communities and institutions so far.

5.4 The Role of the Project in Intensifying Health Education in the Region

Health and Hygiene education is not a new thing in the Volta Region. Formerly, this was carried out by the Environmental Health Division of the Ministry of Health and the Department of Community Development.

The problem, however, is that in recent times the activities of these health workers have been on a rather low

key and restricted to mostly district capitals where their presence is felt more in slaughter houses where they conduct meat inspection. There are also a few others at the country's entry points who inspect innoculation certificates of travellers (Port Health). With the inception of the VRWSS project however, there has been a revival of health education activities in remote corners of the eight districts of the Region that have been covered by the project. This success of the programme can be measured by the fact that out of 709 communities and individuals who applied for the project's assistance for sanitation facilities by June 1996, 222 have already been completed while 439 are on-going, making a total of 661 or 93.2% (See Table 8). This implies that the project is in the process of providing as many as 93.2% of the rural communities it has covered so far with sanitation facilities which were hither-to non-existent.

It is worthy of note that out of the above figure individual household latrines numbered 471 or 66.4% of the overall total. This is an indication of behavioural change in the sanitary practices of the individual rural dweller since in Ghana communal latrines are rather preferred in the rural areas.

With the provision of safe drinking water as at June 1996, 39 facilities have been installed whilst 97 are on-going making a total of 136 or 19.8% of the number of communities that applied for the project assistance. This low figure can

be attributed to the inability of the people to pay the 5% of the total cost of installations for water supply required of them. There are other factors discussed earlier on like the people's attitude of getting community facilities free of charge from Government and in some areas the taste of the water from the mechanised bore holes provided which the people do not like, especially in areas where they already have flowing rivers or springs as is the case of Logba where the cool spring water flows from the mountain and whose taste they prefer and are used to despite the talk of contamination and pollution of these sources of water. There is, therefore, the urgent need to direct the health education programme towards this hazard of drinking contaminated water. It must also be noted that the total cost of the water supply systems is higher than those of sanitation even though its subsidy is also higher, that is, 95% for water supply, 90% for communal latrines and 85% for household latrines.

Despite all these short comings, there is definitely an evident change in behaviour in the communities in health and hygiene practices as well as the handling of water as compared to the situation before the inception of the project in 1993.

In the area of school health, the washing of hands with soap and water by school children, during critical periods and the use of individual cups, as well as the hygienic handling of food by food vendors, are a clear indication of the impact of the programme on the pupils which was proviously non

existent. These attitudes and practices are also carried home to influence their other siblings and parents.

The most remarkable role that the project is playing in the intensification of health and hygiene education however, is in the area of mobilising community participation in health issues. With the assistance of the Environmental Health Assistants who live among the people in the communities, the people are mobilised to assess their health and hygiene needs, draw an action plan and implement them. The project, therefore, makes a clear departure from the situation where ministry of health personnel impose mass health education plans and their implementation on the people and thus fails to solicit their full participation in such programmes.

Another positive departure from the past is the project's ability to integrate the three components of community health, namely; safe drinking water, sanitation and health hygiene education into one whole. Formerly, these three components were handled seperately by different Government agencies like the Water and Sewerage Corporation and the Environmental Health Division and Community Health Division of the Ministry of Health. As a result, there was lack of Coordination, duplication and more significantly the relegation of health and sanitation issues to the background as attention is focussed on acquisition of water supply facilities only.

5.5 RECOMMENDATIONS

After a careful study and analysis of the activities of the project in the promotion of health and hygiene education in the Volta Region, this researcher would like to put forward the following recommendations which he feels can enhance the effectiveness of the project in achieving its set objectives.

(i) The project must provide enough Information Booklets for members of the communities covered. This would enable the people to appreciate how much the project is contributing in terms of human and materials resources towards the construction of a particular facility as compared to the 5-15% of the total cost of the same facility that the individual or community contributes.

The absence of these booklets also affects the work of the DMCs and WATSAN Committees which are supposed to know much about the project and educate the people on the need to do away with the notion that utility services must be free of charge because they are coming from the "white man" or government.

Unfortunately, some members of even the DMCs have never set eyes on the Project Information Booklet, let alone the Project Document, so as to know the aims and objectives of the project which they are supposed to manage. A good example is the Sogakofe District DMC.

The information booklets should also be translated into the local languages for easy reading.

(ii) There must be more public education in areas where the people are refusing to use the bore holes because they do not like the taste of the water from them. They should be made aware that despite its hard taste, the bore hole water is safer to drink in terms of disease prevention. The Information Booklets should also be translated into the local languages for easy reading.

(iii) The directive from the CWSD of the GWSC to the project to shift attention from communal latrines should be seriously reviewed. This review is necessary because of the following observations:

(a) It is not every household in a rural community that can afford a communal latrine since they will be handicapped in terms of either finance or availability of land or both. With regards to the availability of land, one must take into consideration the fact that the type of toilets being constructed by the project would involve movement from one site to another when the first toilet is full, and if the project's target population is between 150-5,000 then one can imagine the amount of land needed for toilets

alone. Furthermore, the situation would be worse when one considers the case of communities that are along streams and low lands like Keta district. There is the possibility of contaminating the source of drinking water for the people.

(b) Communal latrines have been with the rural people for ages, though most of them were not constructed and kept hygienically. It would, therefore, be more convenient and cheaper to provide the communities with the project's improved type of communal latrines. The argument that these latrines would not be properly kept is defeatist, because that is the very basis of integrating health and hygiene education with the provision of these facilities. The argument, therefore, defeats and undermines the health and hygiene education programme. Furthermore, there is a water and sanitation (WATSAN) committee and EHA in every community to suppervise the maintenance of these toilets.

(c) Also, in the 1960s communal latrines in the region were kept very clean with the supervision of village development committees (see Dorvlo 1962). As a result of the lack of communal latrines, some

of the Institutional ones are now being used by the general public out of necessity.

(iv) The health messages displayed on posters are woefully inadequate. In most of the communities one cannot see a single poster on health education. These posters are only displayed in some of the district offices and during workshops and seminars organised by the project. Furthermore, most of the health messages which are probably translated from English into the Ewe language sound quite ambiguous. For example, there is a message in Ewe that says "Wash your hands after visiting the toilet, it gives good health". Obviously it is not the washing of hands that gives good health, but rather, by washing of hands after visiting the toilet one prevents contracting a disease and hence the good health. This researcher would therefore like that message to read "Wash your hands after visiting the toilet, it prevents illness". Another one also says, "Put everything you used in cleaning yourself after visiting the toilet into the pit please don't use stones". This message is also not clear because it simply does not tell us why we should put everything into the pit and why we shouldn't use stones. An alternative message should have been "To prevent contact with flies, put everything you used to clean yourself after toilet into the pit, please stones don't decompose, so don't use them".

Also, since these posters are meant to sensitise the people into taking actions to improve their health and hygiene practices, the messages on them should be in the form of problems to be solved instead of mere messages. For example, instead of sending across a message like "Clean drinking water Promotes Good Health", the wording and illustration could be transformed into a problem like "How Can We Ensure Clean Drinking Water To Get Good Health?"

CONCLUSION

The aim of this study was to assess the role of the VRWSS Project in the promotion of health and hygiene education in the rural areas of the Volta Region. After a critical study of the activities of the project in the field of health and hygiene education in terms of imparting new knowledge and effecting behavioural changes on health and hygiene issues, this researcher would like to state that within the period of the research, the project is playing a positive and significant role in promoting health and hygiene education in the eight districts it has covered so far. This is evident by the physical and organisational structures put in place as well as facilities and programmes for capacity building for health education. Above all, the success of the programme is clearly evident from the level of community participation in the health and hygiene education programme and the change in the attitude and practices of the people towards health and hygiene issues.

In its attempt to achieve its stated objectives, the activities of the project, therefore, seem to be following the approach of Tenakoon (ibid) that "health education should therefore not mean merely talking to people and sticking up posters, but should aim at community diagnosis and health development by improving people's knowledge, attitudes and practices and stimulating action".

The big question however, is, "can the communities manage at the present level when the donor support is no more there?", or "Would the project suffer the fate of other externally Funded Projects in the country by folding up after being taken over by the government? These are all questions that can best be answered through a follow up evaluation that would constitute another study of the project, because the essence of the capacity building mechanism that has been incorporated into the VRWSS project is for the purpose of sustainability of the project after the withdrawal of the donors.

BIBLIOGRAPHY

1. Amonoo, Lartson, et al 1984: District Health Care, Challenges for Planning, Organisation and Evaluation in Developing Countries, London, MacMillan Education Ltd.

2. Brieger, W.R. and Ramakrishna, J. 1987: "Health Education: Social Marketing does not have all the answers". In World Health Forum Vol.18, No.3, Geneva; World Health Organisation.

3. Davis, J.B.M. 1983: Community Health, Preventive Medicine and Social Services, London: Alden Press.

4. Doan, B.D.H., 1980: "Sanitation and Health Education". In World Health Statistics Quarterly Vol.33 Geneva: World Health Organisation.

5. Dorvlo, L.K.T., 1962: " Peki Dzake Wing The Chapman Trophy". In ADVANCE No.3 Accra: Department of Community Development.

6. Elmendorf, M.L. and Isely, R.B., 1982: "Role of Women in Water Supply and Sanitation; tasks for all the people". In World Health Forum Vol.13, No.2, Geneva: World Health Organisation.

7. Feachem, R.G. et al, 1980: Appropriate Technology for Water Supply and Sanitation, World Bank.

8. Finau, S. and Finau, S., 1983: "Better Accounting Improves Water Supply". In World Health Forum Vol.4, No.2, Geneva: World Health Organisation.

9. Green, L.W. et al. 1980: Health Education Planning , A Diagnostic Approach. May Field: Palo Alto.

10. Holmes, A.C., 1964: Health Education In Developing Countries, London: Thomas Nelson and Sons Ltd.

11. titute of Development Studies, 1978; Health Services in Rural Ghana. U.K.: University of Sussex.

12. Isely, R.B., 1985: "Water Supply and Sanitation in Africa", In World Health Forum Vol.16, No.3, Geneva: World Health Organisation.

13. Jordan, T.D., 1984: Handbook of Gravity Flow Water Systems. London: Intermediate Technology Publications.

14. Knowles, M.S., 1980: The Modern Practice of Adult Education, from Pedagogy to Andragogy. New York: Cambridge.

15. Kweka, A.N., 1994: "Adult Education for Self Reliance in Community Health Education Programmes - A Case Study from Tanzania". In Adult Education and Development, No.42, Bonn: 11Z/DVV.

16. Ministry of Health, 1994: Annual Report, Accra.

17. Naraya-Parker, D., 1988: "Low Cost Water and Sanitation: Tasks for all the people". In World Health Forum Vol.9, No.3, Geneva: World Health Organisation.

18. Marayan-Parker, D., 1990: "Self-Help in a Rural Water Project". In World Health Forum Vol.2, No.3, Geneva: World Health Organisation.

19. Ryan, W. 1978. Blaming The Victim, New York, Vintage.

20. Tennakoon, S., 1987: Community Participation In Health Activities". In World Health Forum Vol.8, No.3, Geneva: World Health Organisation.

21. Twumasi, P.A., 1986: Social Research in Rural Communities, Accra; Ghana, Universities Press.

22. Volta Rural Water Supply and Sanitation Project, 1993: Project Description, Ho; Regional Project Office.

23. Volta Rural Water Supply and Sanitation Project, 1994: Report of Focus Group Study, Ho: Regional Project Office.

24. Volta Rural Water Supply and Sanitation Project, 1995: Hygiene Education Component, Ho; Regional Project Office.

25. Watt, S.B. and Wood, W.E. 1979: Hand Dug wells and their construction, London: Intermediate Technology Publications.

26. Whittington, et al 1992: Household Demand for Improved Sanitation Services: A Case study of Kumasi, Ghana. UNDP Water and Sanitation Programme.

27. W.H.O., 1988, Education for Health, Manual on Health Education in Primary Health Care, Geneva.

APPENDIX 1

Volta Region Rural Water Supply and Sanitation Project

Project Organisation