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COLLEGE OF HEALTH SCIENCES

SCHOOL OF MEDICAL SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

EVALUATION OF THE SCHOOL HEALTH EDUCATION PROGRAMME FOR THE
PERIOD 2001 – 2006 IN THE BOSOMTWE-ATWIMA KWANWOMA DISTRICT

BY

CHRSITIANA ABRAFI AMPEH

FEBRUARY

2008

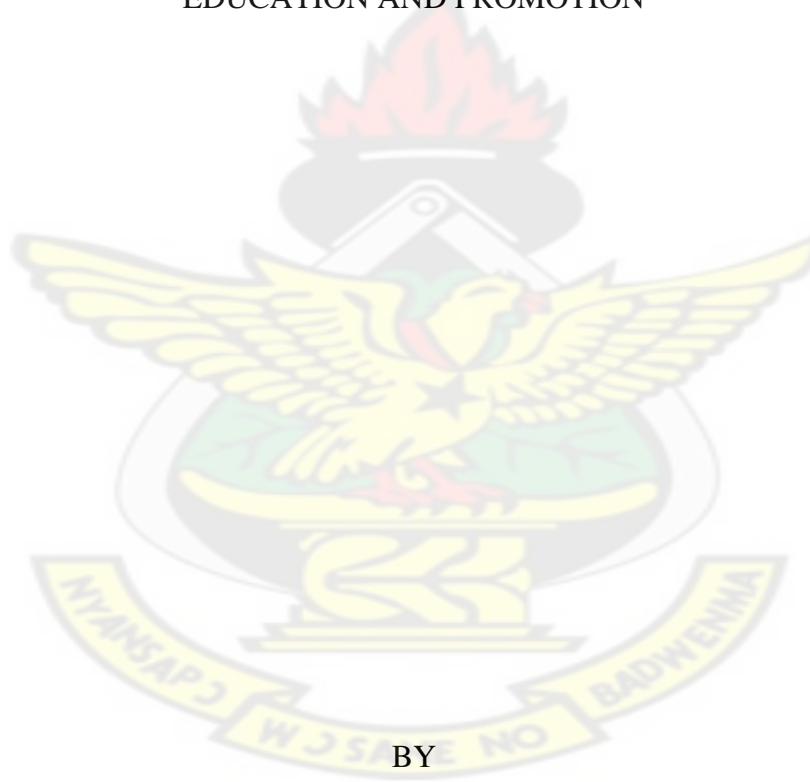
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A THESIS SUBMITTED TO THE DEPARTMENT OF COMMUNITY HEALTH, KNUST IN
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MSC. HEALTH
EDUCATION AND PROMOTION



CHRSITIANA ABRAFI AMPEH

FEBRUARY

2008

DECLARATION

I declare that this research is the result of my own efforts except where otherwise specified in the text and it has not been partially submitted previously to this or any other university for the award of the degree. I however claim the sole responsibility of any errors and inaccuracies in the work.

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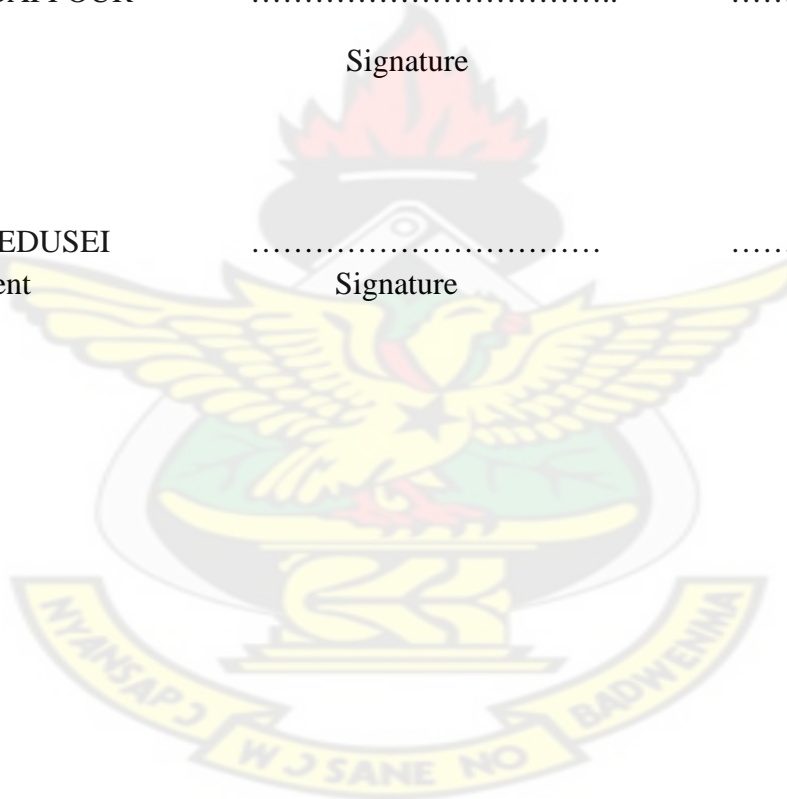
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DEDICATION

DEDICATED TO PASTOR KWABENA ANNOR BOAFO

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To God be the glory for the great things He has done in my life. Through thick and thin the Lord has seen me through and brought me this far and I am thankful to Him.

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God bless you!!

ABBREVIATIONS / ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BAK	Bosomtwe - Atwima - Kwanwoma
CHPS	Community-Based Health Planning Services
CSH	Comprehensive School Health
DCE	District Chief Executive
DHMT	District Health Management Team
ECOWAS	Economic Community of West African States
GES	Ghana Education Service
GHS	Ghana Health Service
GPSHS	Guidelines for Provision of School Health Services
HIV	Human Immunodeficiency Virus
MLGRD	Ministry of Local Government And Rural Development
MOE	Ministry of Education
MOH	Ministry of Health
OPD	Out Patients Department
RDA	Recommended Daily Allowance
SHEP	School Health Education Programme
UNAIDS	Joint United Nations Programme on HIV / AIDS
UNESCO	United Nations Education Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
USDA	United States Dietary Allowance
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Background Information

Health is an essential requirement for human and material development. It is therefore necessary for health authorities of various countries to develop policies that aim at improving the health status of their people as part of the World Health Organization's objectives enshrined in the "Health for all by the year 2000" policy. This is irrespective of colour, race, and language or government policy.

By definition, health is strongly affirmed to be a state of complete physical, mental, social, psychological and intellectual wellbeing, and not merely the absence of disease or infirmity, (WHO, 1992). Indeed it is said to be a fundamental human right. It is therefore significant to attempt the attainment of the highest possible level of health as a most important worldwide social goal whose realization requires the action of many other social and economic sectors.

One of the vulnerable groups in the society is children whose health status becomes a severe constraint on the economic growth and development of every nation's future. There were 42 million people said to be living with HIV/AIDS worldwide as at 2002, of which 3.2 million were children under 15 years. 10,000 of the 500,000 new cases reported apparently died during the period. The figures for Africa alone constituted 70% of adults while children recorded 80% of the deaths involved, (UNAIDS and WHO, 2002). The pandemic has therefore swallowed over 20 million Africans in the decade.

In sub-Saharan Africa the victims of the disease face many challenges including hunger and deprivation. The world therefore has both legal and moral responsibility to recommit itself in bringing relief to the affected. There are millions of children affected by communicable diseases, malnutrition, and poor sanitation. There is also the issue of inadequate access to potable water. Worse still, drug and substance

abuse and indiscriminate sexual relationships persist aside home, motor traffic accidents, violence and high school drop-out rates (Lansdowne, 2001).

In Ghana alone, malaria is classified as the number one killer of children under 5 years, (UNICEF Calendar Booklet, 2007). The figures show that 20,000 children die from the disease while 3.5 million become ill. Poverty thus becomes endemic among adults since they cannot go to work, while their children are also forced out of school by the situation. The resultant effects are the crises situations which Africa faces in the continent today.

In the world today and possibly in the future, many of the leading causes of death, disease and disability are identified as chronic lung cancer, cardio vascular disease, nutritional deficiencies, and substance abuse among others. These can be significantly reduced by preventing six interrelated categories of behaviour that are initiated during youth. These situations are fostered by social and political policies and conditions including tobacco use, behaviours that result in injury and violence as well as alcohol and substance use. Others are dietary and hygienic practices that cause disease; sedentary lifestyle and sexual behaviour that cause unintended pregnancy and disease (WHO, 2007).

These harmful habits are often well established by the age of 13 years. Almost two-thirds of cancers could be prevented if these behaviours were not started. The earlier children learnt to prevent illnesses, the healthier they would be in their future life. Prevention, they say is better than cure. It is thus far easier to establish and maintain healthy habits learnt early in life than to change unhealthy habits during adulthood. The information and skills needed to make healthy decisions are therefore learnt during childhood and adolescence.

In the face of these challenges, the health of the child cannot be compromised in any way. The youth as the backbone or the future of every society are plagued with threats that set the whole world at war. It becomes relatively difficult therefore, for any country to head towards realizing its goals without turning to address the needs of children. This obviously, is a task that cannot be left in the hands of one sector alone. Hence, the need for the contributions of all stakeholders becomes imperative.

As one of the agents of change, the school has become the main focus, and has a critical role to play in educating and developing the child. One of the channels identified as available for the school to use as multifaceted means of shaping the child is through health education, which reinforces learning. The school system which aims at enriching the lives of children makes it a natural avenue for giving young people the knowledge, skills, and attitudes they need to either start or stop and change behaviours.

For these reasons, and for Ghana to the UN Convention on 'the Rights of the Child', the government enjoined the Ministries of Education and Health in 1992, to introduce a comprehensive programme which would integrate health education across the curriculum and incorporate health delivery services that would improve the health of and academic status of school children as stated in a document "Guidelines for Provision of School Health Services in Ghana (GPSHS), 2005". This programme called the School Health Education Programme (SHEP) is one of the most promising means of ensuring healthy children today and decreasing illness and death in the future.

SHEP is described as, 'the effective and efficient provision of health services to pupils and students through schools, in order to prevent, reduce, treat and monitor their health and well – being', (GPSHS, 2005). It provides opportunities to give message about health and prevention of diseases to children that can be spread to their homes and communities. In effect, it represents the totality of all health services that improve the physical, social, intellectual, emotional and mental health and development of pupils / students in the school's environment.

The two agencies, Ministry of Health (MOH) and Ministry of Education (MOE) in conjunction with the Ministry of Local Government and Rural Development (MLGRD) are the major collaborators that play key roles in providing health. Teachers are required to do specified type of examination and then refer children with special problems to health personnel for further management. Under the initiative Ghana Health Service (GHS) staff pays scheduled visits to schools for specific activities such as general physical examination, vision and hearing tests among others. The environmental health personnel also ensure healthy environments in schools.

The School Health Services activities in the schools are primarily based on the prevention of ill-health at three levels: -

- 1 .Health promotion and prevention of diseases, including environment, nutrition, and immunization;
2. Identification of problems and early intervention such as health checks and appropriate action, helping children with mental and emotional problems, providing first aid treatment and referrals where necessary, and
3. Management of long- term problems.

If pupils and students are to be targeted, then the health of teachers, food vendors and others who come into close contact with them (the pupils and students) cannot be overruled, hence their consideration under the SHEP.

1.2 Problem statement

Education for health is a fundamental human right, which is also the right of every child. Health is inextricably linked to educational achievement, quality of life, and economic productivity. By acquiring health-related knowledge, values, skills, and practices, children can be empowered to pursue a healthy life and to work as agents of change for the health of their communities (WHO, 1993).

The health and well-being of children and youth must be of fundamental value for all countries, especially in Africa. In recent times, other issues of concern are indeed, also becoming quite prominent. Added to longstanding health and nutritional issues, HIV/AIDS, and increasing alcohol and substance abuse, have underscored the need for collaboration among young people, families, schools, Non-Governmental Organizations, communities and governments in taking a comprehensive approach to school-based health education.

The SHEP curriculum has gone on for years, but the pertinent and inevitable issue at stake is whether the efforts of the programme, in its design and implementation have been assessed to determine the extent to which the objectives have been achieved. If there are any bottlenecks, the study seeks to identify these and suggest corrective measures to stakeholders.

1.3 Rational of the study

In Ghana, as in the rest of Africa, the population of school-going children has grown steadily in recent times. Because children are more receptive to learning, and since many attend school, they may be reached readily in a very cost-effective manner. When children are thus reached with the message on health education, the benefits are felt at all levels of society – individual, family, school, community and the general society. The effects of these benefits are evident in all the identified sectors because:

- Of the documented linkages between the health status of children and their educational achievement; and as the nutrition and health status of children improve so too does their ability to attend school appreciate. Therefore, any efforts to improve school performance that ignore the significance of health will be ill-conceived, so also are health improvement efforts that ignore education.
- Schools are important channel of communication for health education messages and so are health services to students, the family and community as a whole.
- The relationship needs to be strengthened between in-school learning and out-of school health behaviours.
- Education for skills guides people to think critically about health and social issues, encourages them to work collaboratively on solving problems, and provide them with the confidence and expertise required to participate fully in community activities.
- One of the most important determinants of a child's health is usually the educational status of the mother. Therefore, efforts to increase the school attendance and improve the health education of girls can have profound benefits.

Ghana, in collaboration with the WHO and other international organizations, has carried out this programme to promote effective school health education (SHE). As such, efforts must be made to evaluate the concept to see how far it is meeting its objectives and the way forward. The rationale of this study therefore is to assess the programme at the Bosomtwe-Atwima-Kwanwoma District to help provide insight into the various factors that are likely to hinder its progress. It is also to identify specific areas that require much attention and identify practical interventional measures to improve the programme.

1.4 Research Questions

From what has been stated, the following questions governed the study:

1. How long has the teacher been trained in health and management?
2. What screening programmes are organized for children?
3. How often do children eat in school and what type of food do they normally eat?
4. How often are SHEP activities supervised?

1.5 Objectives

1.5.1 General Objective

The study sought to evaluate the school health education programme from 2001-2006 and how it has improved the health of children.

1.5.2 Specific Objectives

1. To assess stakeholders' level of knowledge of the school health programme.
2. To assess the involvement of health personnel and PTA in SHEP activities.
3. To identify the effectiveness of referral system existing for pupils who face health problems.
4. To assess the eating patterns of pupils in and out of school.

5. To verify whether pupils have regular physical education.

6. To assess the sanitary conditions in the schools.

1.6 Conceptual Framework

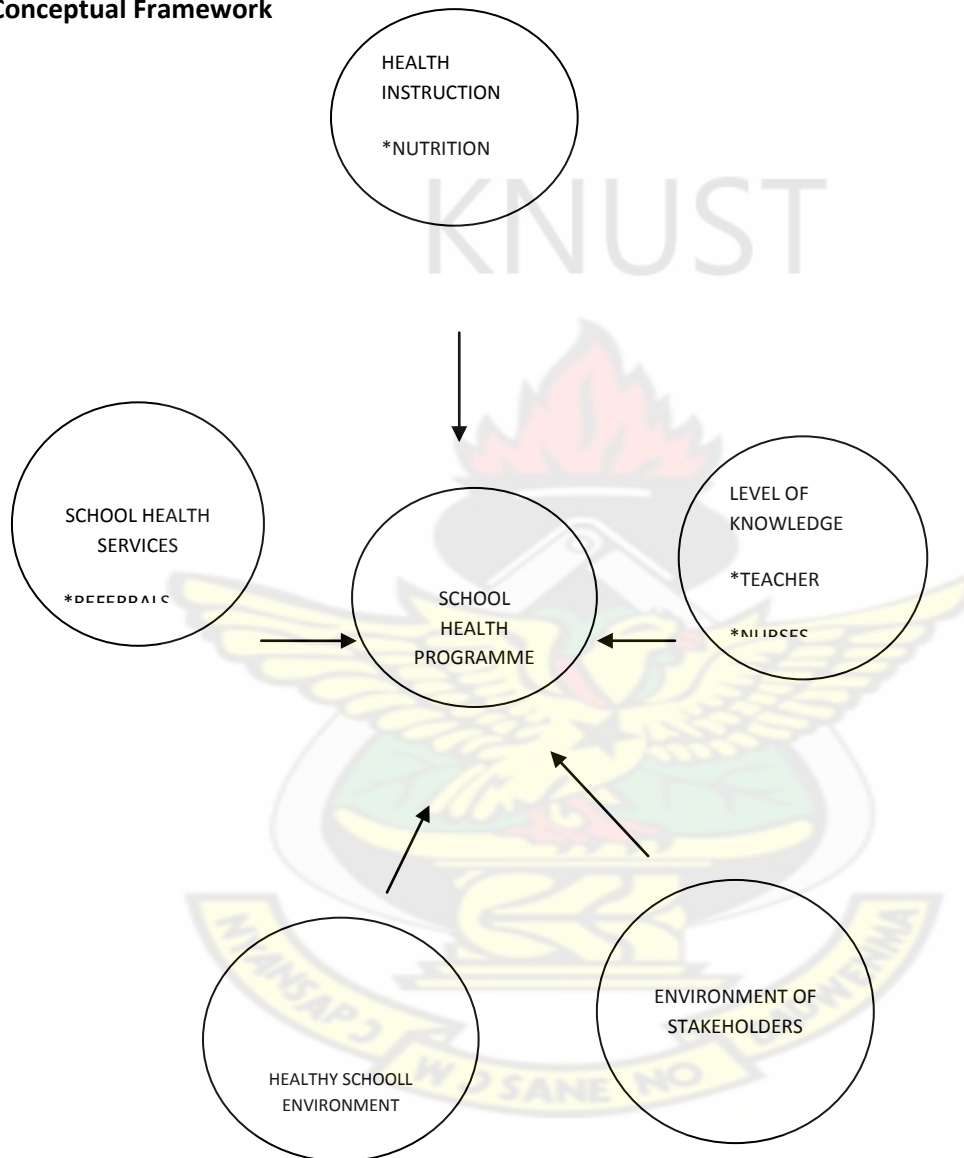
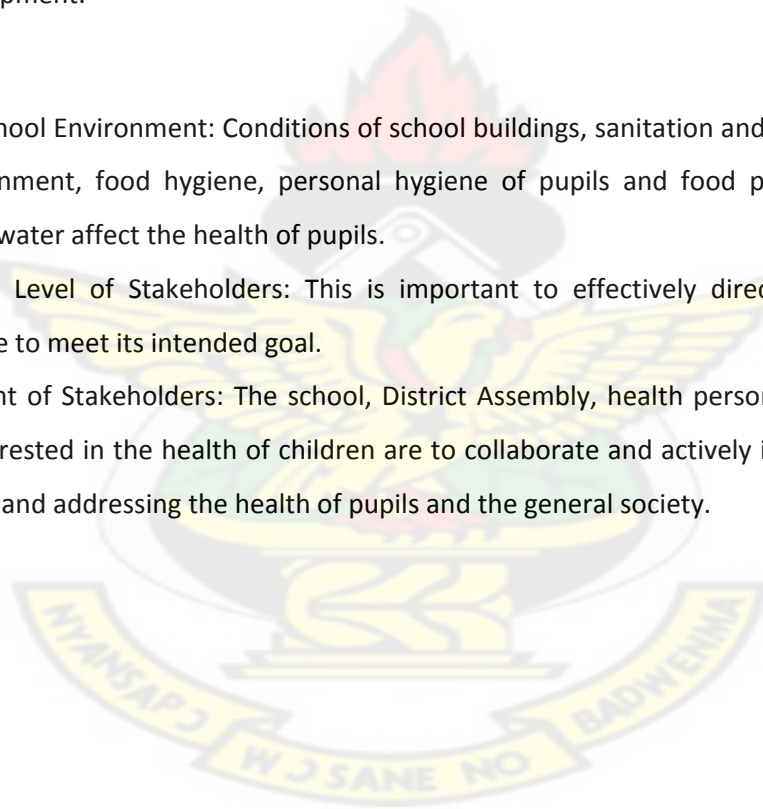


Figure 1.1 Conceptual Framework

The conceptual framework has the following:

1. School Health Services: Effective and efficient services provided in the area of disease prevention, identification of problems and early intervention and management of long term problems is important in the promotion of children's health. Children found to be having health problems are referred to appropriate health facilities for redress.
2. School Health Instructions: Messages about health and disease prevention including nutrition, physical education and sports, and social matters that foster healthy relationships among people are imparted to children to improve their physical, emotional, social and mental health and development.
3. Healthy School Environment: Conditions of school buildings, sanitation and safety in and around the environment, food hygiene, personal hygiene of pupils and food providers, source and storage of water affect the health of pupils.
4. Knowledge Level of Stakeholders: This is important to effectively direct the course of the programme to meet its intended goal.
5. Involvement of Stakeholders: The school, District Assembly, health personnel, community and NGO's interested in the health of children are to collaborate and actively involve themselves in identifying and addressing the health of pupils and the general society.



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CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews literatures that are relevant to the study objectives of the topic. A wide range of books, journals, papers and the internet were consulted for the appropriate information. It is understood that, anything learnt at all from the past to the present generation did not appear in a vacuum.

The problems of today emerged gradually, and have their roots established from childhood days. Thus, the ulcers, hypertension, obesity, neurotic and psychotic behaviours related to anxiety, worry and fear among others are all tied directly to a *pattern of living* and a level of understanding obtained during the formative years. The desire to live a fruitful and happier life depends on the decisions and choices to be made. One must therefore have a sense of value early in life coupled with the proper skills and knowledge necessary for a better future. The part played by health education in this period can therefore be most productive, and it must be learnt in school and carried out through life.

2.1 Overview

2.1.1 History of School Health

The school health programme started in North America in 1850 when a school teacher serving on a Shattuck committee suggested that the school system could be best used as a vehicle to promote public health and prevent disease. According to Means (1975), the Shattuck report confirmed that health determines man's wealth, happiness and long-life. Other states adopted the report and when the influx of immigrants caused an outbreak of smallpox in New York, education officials opened the schools to health professionals to administer the vaccine. Since school children were in clusters there was the possibility that in case of any epidemic, many children could be affected. Duffy (1974), held the view that vaccination became a prerequisite to school attendance.

The beginning of school health in Ghana was not documented and according to the Ashanti Regional directorate of the programme, it might have started with the introduction of formal education by the missionaries in Ghana. This was because they followed the educational system in their respective countries. Schools are in the same way opened to the general public as far as health, social, educational, and even spiritual activities are concerned.

History has it that in the 19th century, school health was concerned about strategies for the prevention of diseases which involved routine medical inspections to identify students with contagious diseases of the eyes, skin and serious infections such as tuberculosis. The programme was expanded in the 20th century to include information on the effects of drugs on humans, dentistry and minor surgeries. Later, Physical Education (PE) was also found to be vital to the health of individuals and the community and was thus included. These and other healthful activities done in schools were seen by Tyack (1992), as very helpful in the reduction of school failure and child delinquency.

Physical Education imparts a healthy and positive attitude of mind that helps to promote academic work. According to a document by GES, this is one of the reasons why the concept of physical training is enshrined as a fundamental human right in the UNESCO Charter on PE and sports, which states inter alia, that, "Every human being has a fundamental human right of access to PE and sports which are

essential for the full development of one's personality. The freedom to develop the physical, intellectual and moral powers through PE and sports must therefore be guaranteed both within the educational system and in other aspects of social life", (Ministry of Education, 2001)

In the aftermath of First World War, poverty and malnutrition disrupted the school health programme. Means (1975), reiterated that new philosophies and methods of health promotion were thus developed which focused on psychological and behavioral aspects of school-age children. The adoption of the concept thus helped the providers in streamlining school health services.

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2.1.2 Evolution of Comprehensive School Health

Initially, school health consisted of teachers providing information packages of health-risk behaviours to students. As nature is dynamic, concerns about physical fitness of the youth caused the school health programme to evolve, as a guarantee for the improvement of health. At the start, it was felt that the method did not bring about much change in behaviour, as asserted by Goodstadt (1978), Thompson (1978) and Green and Lewis (1986). Consequently, the necessity to evolve new and pragmatic strategies was considered.

2.1.3 Rationale for Health Promoting Schools

Over the years, the school health programme has been developing in scope and complexity and is regularly updating itself to meet the needs of the times. In the past, permanent solutions were found for health problems, which included the eradication of smallpox through vaccination. These days, people's health-risk behaviours have brought about a lot of chronic diseases like cancer, diabetes, and heart diseases, which takes more lives. Allensworth and others (1997) were of the view that these *new social morbidities* have necessitated the need to improve methods and programmes for the prevention, as well as to address the issues of violence, substance abuse, teen pregnancy, HIV/AIDS, sedentary lifestyle and poor nutrition among others.

The rationale for choosing schools as a more attractive arena for addressing health issues stems from the fact that schools already have structures and systems, so incorporating new knowledge and skills in the curricula is cost effective, (Kolbe, 1985; Wiley et al. 1991). The WHO in (1991) and Nutbeam and others (1997), hold the view that school-age students are in the formative years where they often adopt health-risk behaviours which become lifetime habits if appropriate interventions are not sought. Nutbeam and others (1993) again claim that teachers are very reliable in responding to interventions targeted at schools. These class instructions can therefore significantly influence students' attitude and behaviour. Moreover, as teachers do so, they can change their own health-risk behaviour and serve as role models for students to emulate. Since the school serves as a valuable link to the home, the tendency is that the health of the community would improve. Thus, St. Leger (2001), saw the comprehensive school health programme as empowering children to be responsible for their own health condition.

2.1.4 Policy Making and Programmes Development

It has been observed that for some reasons the current educational system in Ghana faces a lot of problems since decisions are made at the national level and passed down to the schools. The curricula are crowded to the extent that a lot of areas are vying for status and time on the school time table. These and other co-curricula activities are making it difficult for schools to adopt comprehensive health promoting programmes.

Commenting on the situation, Seffrin (1992) says the gap between common practice and "what ought to be" in the area of health education in schools, make it difficult to achieve their set target. Each district and school for that matter has its own peculiar problems, therefore, aside the national policies, there should be district and school-level policies which permit the implementation of the programme to take place. Unless this is done, Rorbach et al. (1993) believe that, long term maintenance will only be a mirage.

The District Assemblies, Directorates of Education, Health Providers, School Authorities and the community should collaborate to plan healthful programmes which affect their health (Reid et al, 1995 and Gilles 1998).

Students have a role in the decision-making procedures in all matters relating to their health and must therefore be made part of it (WHO, 1993; Miller, 1993, 1997). Smith et al., (1992), Tones and Tilford (1994) conclude that schools should have policies which aim at students, teachers and support staff that enhance community links, in-service training, with the involvement of non-teaching staff, parents and other adults (National Foundation For Educational Research, 1993).

2.2 Level of Knowledge on School Health

Stakeholders must considerably be acquainted with the subject to be able to direct its course.

2.2.1 Teachers Level of Knowledge

There is no person in the school system better fitted to make a significant contribution to the health of children than the classroom teacher. According to Grebow et al. (2000), teachers basically provide the keystone efforts to strengthen students' achievement. With their interest, enthusiasm and understanding, the school programme moves ahead. Teacher training therefore both pre-service and in-service, is one of the major factors in a successful SHEP. Education and training of teachers therefore that aim at inspiring and equipping teachers with knowledge and skills that make a curriculum exciting are essential. Such training should also include activities to promote the teacher's own positive health behaviours to enhance their role as models.

According to Willgoose, 1974, the health personnel would be indeed handicapped without the help of the teacher. Included in the duties of the teacher are detection of abnormalities in children and making referrals to appropriate health facilities; making follow-ups on students who deviate from normal health, and then assisting health personnel in screening exercises. Again, teachers do daily inspection on students and health counseling for those who might have had problems. In this direction, a fully trained teacher is able to observe many significant signs and symptoms of poor health. Although a teacher may

sometimes not be in a position to diagnose certain types of illness, he/she can detect changes in the behaviour of children and refer those to health facilities.

Due to poverty, ignorance and parental indifference a great number of children in school in Ghana may come from homes where they lack adequate resources for school. In some of the communities children may lack sufficient sleep, adequate food, or even the emotional climate that makes for satisfactory schoolwork. The children therefore appear listless, lazy, gloomy, or easily discouraged, and show poor scholarship. In such situations, the child may fall short of expectation in output of work. An alert teacher may be able to notice the sallow skin, poor posture, restlessness and lack of energy in physical activities, among others. Those with vision and hearing impairment can also be identified. Here, the teacher needs to co-operate with the parents to save the child's situation.

According to a document from the Ghana Health Service, teachers and public health nurses are to collaborate and organize various tests including vision testing, hearing, speech and language screening, psychiatry and behavioural screening to combat items of maladjustment. Most of these tests are targeted at pupils upon entry into preschool, Basic Levels 1 and 3, Junior High School 1, and Senior High School 1, once a year. On the other hand, other classes could be included whenever the need arises, after which they do appraisal. These tests are not intended to diagnose but only to refer pupils in need to physicians. (Guidelines for School Health, 2005)

Teachers occasionally conduct inspection of hands, fingernails, faces, and the skin. The eyes, hair, teeth, and other parts are also taken care of. In addition, they inspect the food market/canteen and the general school compound assigned to children to work. These are all intended to help children practice good health habits. Whenever the teacher discovers a problem he/she follows up to discuss it with pupils, school administrators, parents and all stakeholders.

2.2.2 Level of knowledge of The School Nurse:

A large number of children fail to utilize health facilities. They simply do not get comprehensive care; as a result, numerous conditions affecting their ability to learn go undetected for long period of time. To

solve this problem the school nurse practitioner programme in pediatric health was started in Colorado with Denver Public Schools personnel, (Willgoose, 1974). Under this programme nurses receive extra training in order to be able to assess the factors that may operate to produce learning disorders, psycho educational problems, behaviour problems as well as those causing physical disease. Cases beyond their scope are referred to appropriate physicians. Unfortunately in Ghana, there is no such programme as school nursing. Public Health Nurses visit schools periodically to screen children for eye, ear and dental defects, measure and weigh pre-school children and give health talks.

2.2.3 Level of knowledge of School Pupils

Since the school health programme focuses mainly on school-age children, the intention is to help them make healthy lifestyle choices that promote good health. Thus, children are to be made responsible for their health. The WHO (1993) and Miller (1993, 1997) recommended that young people should have a role to play in the decision-making procedures in all matters relating to their health. By so doing they feel valued and responsible for their lifestyle choices. Though children are not included in decision-making in Ghana, they are expected to use the knowledge gained in health education to keep their environment clean, make healthy food choices and practice good eating habits. They also practice personal hygiene and cleanliness depending on their ages. Interestingly, some of the students are given responsibilities as 'school nurses' to give first aid to those in need.

2.3 Involvement of various Agencies in SHEP

Since SHEP is not a one man business, all stakeholders are to be concerned in its implementation.

2.3.1 Involvement of the District Assembly

The Ministry of Local Government and Rural Development is one of the major collaborators in the school health education programme. Its key role is the provision and maintenance of infrastructure (school buildings, furniture, etc.), potable water, sanitary facilities and recreational grounds among others. It collaborates with GES and GHS to make health policies and programmes for the district. Again, the Environmental Health Officers from the District Assemblies have the duty to certify food vendors annually as healthy and conduct periodic inspection of schools to check the condition of buildings (doors

and windows, walls, floors, roofing, tables and chairs); source and storage of water, condition of rubbish dumping sites; the type and distribution of toilets and urinals. No matter the type a good toilet and urinals must not show faeces and give offensive odour. The urinal should drain into a soak away or sewerage system.

Periodic inspections are carried out in the food market/canteen for good sanitary conditions, while the preparation and serving of dishes and the food must be protected from flies and dust. Vendors are educated to practice good personal hygiene to make sure the food is safe for children to eat. In addition, sanitary health officers check the green of the compound to ensure there are tall and shady trees grown beautifully, green grass and flowers on expected places on the compound. These enhance the beauty of the compound and contribute to a healthful environment. After the inspection they discuss identified problems with the school authorities and award them a certificate. (Checklist for School Inspection-BAK)

2.3.2 Involvement of the Community

The school is part of the community; as such any health education children acquire is spread to the home and community. The community also influences the school greatly by providing a cultural setting in which the school works, for example, language, art and craft among others. When the community feels part of the school it can lend support in all areas like provision of infrastructure, library books and accessories, resource persons and reinforce what has been taught in school. They could again assist in staff accommodation and others. Also when the school is organizing activities like sports, cultural, speech and prize giving day and health programmes, the community could participate.

It is in the light of this that the WHO in the Alma Ata Declaration (1978) and the Ottawa Charter (1986), sought a holistic view of health behaviour which takes into account the involvement of the community in the school health programme. Lynagh and others (1997); Kolbe and Allensworth (1987) also supported the idea of including community involvement as one of the components of the Comprehensive School Health programme.

In Ghana, the community in collaboration with GES, GHS and District Assembly is expected to make health policies and plan health programmes considering their social needs. Unless the community is

involved in the school health programme implementing and maintaining the programme would be difficult. Rorbach et al. (1993), ascertain that long-term maintenance of SHEP is unlikely. Grebow et al. (2000), suggest that the policies should ensure the protection and support for staff and make the school a safe haven.

2.3.3 Involvement of Health Personnel

School health is part of public health and as such it calls for such workers as Medical Assistants, Public Health Nurses, Community Health Nurses, Nutrition Officers, Social Workers, Community Psychiatric Nurses, and Community Oral Health Officers to collaborate with GES and the District Assembly to plan and supervise health activities in the school. They are to organize health inspections, screening and growth promotion activities and consultations for staff and students. They do referral of children with abnormalities to appropriate health facilities. They also organize orientation and training for teachers and food providers, then, once in a year they certify the food vendors as healthy to provide food services to children. Counseling becomes inevitable when dealing with human beings so the health personnel also do counseling for those who might be in need. (Guidelines for School Health, 2005)

2.3.4 Involvement of Teachers

Teachers are inevitable in every school programme, therefore Grebow and others (2000) describe teachers as keystone of efforts to strengthen students' achievement. In school health teachers are invariably expected to work hand in hand with health officers to organize programmes aimed at promoting the health of pupils and themselves. One example of such programmes was organized in Uganda when they discovered a high prevalence of HIV/AIDS. The school health programme was geared towards sexuality education intended to change basic attitudes about sexual intercourse and encourage safer sexual behaviours, delays in the initiation of sex and among experienced youth, reduction in the number of sex partners (Sue Alford et al., 2005). The deworming exercise organized in Ghana in 2006 for pupils was one other example. Teachers also organize general hygiene inspection of pupils to check their hair, nails, teeth and other parts of the body for good personal hygiene. Cleaning of the compound is supervised by teachers to ensure proper sanitation. In lieu with GHS they organize screening exercises for vision impairment, hearing, speech, language, mental and behavioural abnormalities for referral and

management. Again teachers monitor activities of food vendors and ensure their certification declaring them fit to offer food services to children.

The health record cards of pupils are filled and updated regularly by teachers as part of their responsibilities. In addition to these, they counsel parents and pupils with health problems.

(Guidelines for School Health, 2005).

2.3.5 Involvement of Pupils

The primary aim of instituting the school health programme was to help children adopt and maintain good health habits and be responsible for their choices of lifestyle. As such, the WHO in 1993, advocated that children be involved in decision-making processes affecting their health and welfare. Once they adopt and maintain good health habits and good lifestyle choices, the society is sure to change. For example, in the United States, when teachers observed that vendors were selling junk food to students, the school took over the canteen services. Students prepared and sold nutritious breakfast and lunches to themselves and used the profit to beautify their school.

On the contrary, Ghanaian culture does not involve children in decision-making, but rather make them recipients of adult decisions. Therefore, though school health is basically about the health of school children their duties were not included in the Guidelines for School Health. For example, the only time pupils are made to cook for themselves would be when they are camped somewhere for sporting activities. What children are usually involved in is the cleaning of their school and any activities assigned them by teachers. In schools where first aid is provided, one student is put in charge with the help of the school health teacher.

2.3.6 Involvement of SHEP Coordinators

The District coordinators from GES, GHS and District Assembly are the principal planners, organizers and supervisors of the school health programme for the district as part of their public health activities. The GHS is represented by the Public Health Nurse, the GES by a teacher representative and the District Assembly by the Principal Health Inspector. They are involved in sourcing for funds and other inputs for school health activities, organizing various screening tests, immunization, deworming and other physical examinations for those pupils at the entry points. Again, they organize general consultations and do referrals. Every school is also supposed to have three health talks per year which is organized by health coordinators and school authorities. Most importantly, they organize workshops for school health teachers and food vendors.

(Source: Guidelines for School Health, 2005).

2.4 Referral System

As already said, teachers are not supposed to diagnose diseases when they are doing physical examination of children. They are to identify those with symptoms of health problems and thereafter refer them to health facilities for treatment. This begins with the nearest facility which is the Community-based Health Post usually referred to as CHPS compound. The next point of call is the clinic, health centre, district hospital before it finally goes to a teaching hospital. Where one is referred to depends on the nature of the case. When one is referred to a bigger health facility the cost is higher. Thus, a case treated at Okomfo Anokye Teaching Hospital may cost more than the same case treated at a health centre.

2.4.1 Referral Points

The Bosomtwe-Atwima-Kwanwoma District (BAK), shares boundaries with five other districts, namely, Ejisu-Juaben, Asante-Akim North, Kumasi Metropolis, Amansie East and Amansie West. Serious cases of ill-health are therefore referred to the nearest hospital which may not necessarily be within the BAK District Hospital – Kuntunase, St. Michael's Hospital – Pramso, Konongo District Hospital, Kumasi South Hospital and Komfo Anokye Teaching Hospital. As part of efforts to increase access, specialist outreach services are sometimes carried out in some of the health facilities. Such services include eye care and paediatric surgery. (BAK Annual Report, 2006)

2.5 Nutrition of Pupils

For the past 20 years West Africa has experienced very little in reducing food insecurity and child malnutrition. The population of people who are malnourished is not known. The WHO estimates that about 100 million children under five in developing countries are moderately or severely malnourished or have complicated diseases which often lead to premature deaths. Malnutrition has long been recognized to have a significant and long lasting effect on intellectual development and social behaviour. Approximately, one-third of children below five years are stunted in growth. Prevalence levels exceed the WHO cut-off point for high public health significance. Stunting or low height-for-age is considered a proxy for chronic poverty. Prevalence levels in the rural areas are twice that of urban areas.

De Onis (2000) contended that half of Niger is undernourished and estimated a 1.3 million increase by year 2005. Micronutrients, particularly lack of vitamin A, iron and iodine affect mainly women and children and contribute to some of the highest rates of maternal and child mortality in the world, birth defects, impaired physical and mental growth, anaemia and increased susceptibility to infections. They limit individuals' potential and pose a major impediment to productivity and national development (ACC/SCN, 2002). Traore et al. (1998) estimated the number of children suffering from xerophthalmia (vitamin A deficiency) in the Ecowas region to be 30%.

It is worth noting that even moderate under-nutrition can have lasting effects on children's cognitive development and school performance (Medford, 1995). Chronically, undernourished children attain lower scores on standardized achievement tests, especially of language ability (Hinton et al. 1990). For instance, according to a UNESCO report, studies in Honduras, Kenya and the Philippines show that the academic performance and mental ability of pupils with good nutritional status are significantly higher than those with poor nutritional status.

Hinton and others, (1990) and Medford, (1995) observed that when children are hungry and undernourished, they have difficulty resisting infection and therefore are more likely than other children to become sick, thereby missing school, and falling behind in class. Such children are often irritable and have low energy, which can limit their physical activity. Good nutrition on the other hand fosters mental,

social and physical well-being throughout life by strengthening a positive body image and increasing their sense of personal worth.

On the other hand, rising incomes of parents and a change in lifestyle, especially in urban settings, and a shift from staple to imported foods, have brought about emerging problems of overweight and obesity with negative implications for chronic non-communicable diseases. Delisle (1990) and Bendeck et al. (1997) are of the view that urban diet is based on processed to pre-prepared foods, availability and price of foods like bread and rice. Almost all individuals use outside home plus home prepared meals.

In spite of improved availability of food, the dietary energy and protein supplies are still unstable and below requirements. The nutritional quality of most local diets remains low for most people while access to adequate food is not always secure for the poor. Aside these, lack of good water and good sanitation practice by vendors contribute to poor and unhygienic conditions under which foods are often prepared and sold, which often results in serious food contamination and food-borne diseases. It is against this backlog that the government is intervening with the school feeding programme to improve the nutritional status of school-age children.

2.5.1 Types of food eaten

It is clear that there is high variety of ways to obtain a nutritious diet. A diet of fruits and vegetables, whole grain cereals, nuts, legumes and seeds can be adequate but it takes thoughtful efforts to obtain that adequacy and it is difficult for most people to sort through all the how-to guides to find thoughtfulness. Most Ghanaians are now forgetting their typical traditional nutritious foods. The change in lifestyle including drinking and eating unhealthy food with little or no fibre containing much additives as is in industrial countries, is having untold harmful effects on the health of people. In the light of this the GES included various topics about food in the Life Skills and now Catering syllabus to educate pupils on healthy eating habits (Ministry of Education, 2001).

Some schools are privileged to be captured in the school feeding programme so the quality of food for pupils is assured. All kindergarten pupils are also catered for. But other children buy from vendors and as usual rice dishes of different types top all since rice is a delicacy for children. Other dishes include banku, kenkey, and fried foods among others. Other opportunistic vendors knowing children like sweets sell junk foods like toffees, chewing gum, 'abele walls' and some drinks like ginger drink to these feeble children. Fruits such as banana, watermelon, oranges and mangoes are seen when they are in season.

2.5.2 Eating Pattern

It seems likely that most people trying to attain a healthier diet lack the basic education necessary to design one since many people have little knowledge about good nutrition. Eating habits are influenced by many forces in the society, for example, food production and processing, marketing, consuming pressure and tradition. The fresh Tools for Effective School Health (2004) stated that it is efficacious to teach persons healthy eating patterns when young so that they acquire the knowledge, skills and attitudes that will enable them to maintain their own health and that of those they care for. High-risk eating behaviours like skipping breakfast, under eating and overeating are difficult to change once they are established when young. Apart from preventing some of the leading causes of illness and death, nutrition interventions decrease direct healthcare costs and improve the quality of life. Writing on quality of food taken, Edusei, (2007) advised on balanced diet as the right quality, the right quantity, and the right mix given at the right time. That is, food selected from all the food groups, and given at the right time is necessary to ensure the balance.

Agreeably, the usual pattern of meals is breakfast, lunch and supper; however, snacks could be taken in-between these. This pattern has also been enshrined in all Food and Nutrition or Catering books so that children learn to eat correctly. A balanced meal should consist of a main dish (protein part), an accompaniment (carbohydrate part) and a dessert (fruit or others for minerals and vitamins) example, groundnut soup with banku and cut pawpaw. The right mix can be ensured if the diet follows a definite pattern.

Unfortunately, most Ghanaian diets do not follow any definite pattern. The principle is: anything to satisfy hunger which the pocket can afford is enough. Fruits for example, are not taken as part of a meal

by most people. They are eaten only when available, and in any quantity ranging from under-nutrition to over-nutrition. The time in-between meals are not checked. Therefore, most of the dishes taken cannot be said to be balanced. Diets may range between under and over consumption of some nutrients to the detriment of others, and in developing countries it is always body building foods and micronutrients that are lacking (De Onis, 2000).

Healthy eating patterns in childhood and adolescence promote optimal childhood health growth and intellectual development; prevent immediate health problems such as iron deficiency anaemia, obesity, eating disorders, and dental caries, and may prevent long-term health problems, such as coronary heart disease, cancer and stroke. School health programme can help children attain full educational potential and good health by providing long-term healthy eating behaviours.

2.6 Physical Fitness

Practicing good nutrition without regular physical exercise is like a car without an engine. Today, there is a growing emphasis on looking good, feeling good and living longer. Increasingly, science evidence tells us that one of the keys to achieving these ideals is fitness and exercise. Exercise is not just for Olympic hopefuls or supermodels. No one is too unfit, too young or too old to exercise. Regardless of age, sex, role in life, you can benefit from regular physical activities. Exercise must become one of those things that are done without question, like bathing and brushing of teeth. The prize is worth the price. This realization was seen as a fundamental human right by UNESCO and caused schools to include *PE* in the school curriculum (Ministry of Education, 2001). Today, more than ever in the past, considerable attention must be given by the classroom teacher to the role of physical exercise in the maintenance of organic health.

Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness is described as a condition that helps us look good, feel good and do our best. More specifically, O'Connor (2006) states that it is

“The ability to perform daily tasks vigorously, with energy left over for

enjoying leisure-time activities and meeting emergency demands. It is the ability

to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and well-being.”

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. Since what we do with our bodies affect our minds, fitness influences to some degree qualities such as mental alertness and emotional stability. As learning is stressful *PE* is important to keep children refreshed and alert at all times.

Fitness is influenced by age, sex, heredity, personal habits, exercise and eating. Getting moving is a challenge because today physical activity is less a part of our daily lives. Only fewer jobs require physical exertion. People rely on machines rather than muscles to get around, so obesity and problems that come with it are on the increase. Exercise in combination with a sensible diet can help provide an overall sense of well-being and can even help prevent chronic illness, disability and premature death. Young children should not be inactive for more than two hours (United States Dietary Allowance guidelines, 2005). It is against this back drop that much attention has been given to *PE* and sports in Ghana and is given two periods on the school time table.

Wilmore (2003), and O'Connor (2006), outline four components of fitness, which are cardio respiratory endurance, muscular endurance, muscle strength and flexibility. Cardio respiratory endurance is the ability to deliver oxygen and nutrients to tissues and to remove wastes, over sustained periods of time. Long runs, jogging, cycling, rope-jumping, swims, and games like handball are among methods employed in measuring this component. Muscular endurance is the ability of the muscles to sustain repeated contractions or to continue applying force against a fixed object e.g. push-ups, sit-ups, pull-ups, weigh training. Muscular strength is the ability of the muscles to exert force for a brief period of time, for example, weight lifting.

Flexibility, on the other hand, is the movement of joints and muscles through their full range of motion, for example, in a full sit-and-reach position. In addition, how often, how long, and how hard one

exercises, and what kinds of exercise are done should be determined by what one is trying to accomplish at a time. One's goals, present fitness level, age, health status, skills, interest and convenience are among factors to consider.

Kimberly (2003) suggests that exercise should be done early in the morning before work begins to keep children alert and energetic to start the day's activities. Strenuous exercise should therefore not be done during extremely hot, humid weather, or within two hours after eating. Heat and, or digestion both make heavy demands on the circulatory system, and in combination with exercise can an overtaxing double load. There should be regularity in exercise. At least three balanced workouts a week are necessary to maintain a desirable level of fitness. Therefore, the two periods plus the Friday games on the time table is in the right direction. All exercise clothing should be loose-fitting to permit freedom of movement, and make the wearer feel comfortable and self-assured. Exercise generates great amount of body heat. Light-coloured clothing that reflects the sun's rays is cooler than dark clothes that absorb heat.

The benefits of exercise are numerous as outlined by Parker Pope (2001). It improves health by increasing muscle strength, building and maintaining healthy bones and reduces illnesses like heart diseases among others. It improves our sense of well-being by reducing stress and increasing mental acuity. Fitness improves the sense of appearance by maintaining a healthy weight and improves posture. Stamina is increased to improve immunity to minor illnesses.

Again fitness enhances one's social life by improving self-image, make new friends and better able to handle physical and emotional challenges a typical day presents. More importantly, exercise is beneficial to the body as it increases the flow of oxygen to the brain and increase chemicals in the brain that help cognition improving mood, that is, endorphins-a chemical that gives a happy mood. For these and other reasons *PE* must be seen as a very important subject. The classroom teacher is to demonstrate clearly to his/her particular class that exercise, nutrition, and rest build a quality of physical fitness that is a forerunner for all other activities. This means the classroom teacher is a physical education teacher and as such is a teacher of health. For fitness in later life is related to skills acquired during the early years.

2.7 Healthful School environment

The school should be a safe and appealing place to children to make them want to be there.

2.7.1 School Buildings

School-going age children spend a significant portion of their days in school buildings. Many of these buildings are old and in poor conditions and may contain environmental conditions that inhibit learning and pose increased risks to the health of teachers and pupils. A good school block should have good doors and windows firmly fixed good and safe roof, smooth walls and floors with no cracks. The block should be painted in colours that would enhance its beauty. In the case of furniture, they should be well-arranged with considerable intervals for free movement and proper ventilation. They should also be environmentally friendly and suitable for people who are physically challenged. Unfortunately, many schools are devoid of these descriptions. Cracks in walls and leaking roofs often cause wetness in buildings.

Usually, wetness in buildings can result from several factors including penetration of rain water through the walls of the roof and window cracks; condensation on internal surfaces of water vapour generated in the building, and migration of water at ground level through the floor and up the walls. According to Givoni (1981), wetness in buildings constitutes a potential hazard to health and comfort and a source of aesthetic and material damage. Damp walls may increase the frequency and severity of various ailments, such as chills and rheumatism.

The aesthetic damages include efflorescence of soluble salts on the surfaces of porous walls, changes of colour and paint staining and peeling. Wet walls may also provide ground for, and fungus attack and unpleasant odours. Damages to materials involve dimensional changes (warping) and rotting of wood, metal corrosion, disintegration of the bonding in laminated panels and others. The cracks on floors emit a lot of dust when children are sweeping and this may have a toll on asthmatic patients.

Good ventilation in a room helps to improve health. It was generally believed that to give optimum ventilation conditions the inlet windows should directly face the wind; any deviation from this direction tends to reduce the indoor air speed. However, a study, according to Givoni, (1981) has shown that this is not always so and that in some cases better conditions can be achieved when the wind is oblique to the inlet windows, particularly when good ventilation conditions are required in the whole area of a room. The study demonstrated that in a room with two windows in opposite walls, where the inlet directly faces the external wind, the main air stream flows straight from the inlet to outlet walls, the rest of the room is only slightly affected. Air flow is slight along the side walls, particularly so at the corners of the inlet window wall. When the wind is oblique (45°) to the inlet opening of the same room, most of the air volume takes up a turbulent, circling motion around the room, increasing the air flow along the side in the corners. On the other hand, if the two windows are located in adjacent walls, better ventilation is obtained with the wind perpendicular to the inlet window than it is oblique, following the inlet-outlet direction. Almost all the old schools follow the first order and with the increasing number of pupils in schools may be poor. This is because some of the classrooms are overcrowded. Fortunately, the new architectural design for schools has the oblique wind direction.

To enhance the beauty of the classroom, good lighting is necessary. Poor lighting greatly affects pupils' vision. In some schools especially some of the newly built ones moulded blocks were used instead of windows. Though this seems cost effective as pupils easily destroy windows especially louvers, it may have long-term effect on the children's sight.

2.7.2 Sanitation and Personal Hygiene

Sanitation concerns the compound, toilets, urinals, classrooms and food market or canteen. A lot of government effort is currently being focused on waste reduction, reuse, and recycling. The environmental health unit of the District Assembly is in charge of the sanitary conditions in schools and has a designed checklist for inspection of schools. It serves as a guide upon which they can provide the necessary advice or help. The areas of concentration are the compound, classrooms, urinal and toilet, rubbish dump and food market among others.

To ensure serene atmosphere, every school compound should be green, where greening means growing shady trees, grass and flowers at various areas for beautification. Classrooms and compound must also be kept clean at all times. To maintain the cleanliness enough dustbins with well-fitting lids must be placed at vantage points with binnets in the classrooms in which rubbish would be kept. These must be emptied and cleaned regularly. The rubbish dump must be sited not too close to the classroom. This must also be kept clean. Solid waste when not properly disposed constitute a major environmental hazard as they pollute the air giving off offensive air, promote fly breeding, pollute surface and underground waters through their leachates. They attract animals which may cause zoonotic infections (Awoyemi, 2007).

The types of toilets that are usually seen in schools are the pit latrine, trench, aqua-privy, and Kumasi Ventilated Improved Pit (KVIP). These provide sanitary faecal disposal. Awoyemi (2007) outlines some characteristics of an ideal latrine and advocates that it must not allow handling of faeces, faeces to be seen, odour of faeces, pollution of water or surrounding grounds, and the breeding of flies. It must allow for privacy while being used and the faeces to be conveyed away immediately it is discharged.

In the absence of sewerage system, excreta may be unhygienically disposed in the bush. This practice promotes fly breeding and increases helminthic and other parasitic infections in the communities. In China and many South-Asian countries, night soil is digested, used to produce biogas, fed to hogs, or fertilize farms and fish ponds. Unfortunately, not much has been done in Ghana in this sense, some people defaecate indiscriminately, even in and around schools. With regard to urinals, they must be ideally built in cement blocks, internally and externally tiled, and properly roofed. The urine must drain into a soak away pit or into a sewage system.

On the absence of food vendors, they should be periodically screened and well-educated to observe good food and personal hygiene because foods are prone to become unsafe during the stages of procuring, processing, storing and consumption. They become unsafe either due to chemicals or microbial growth. Toxins produced by microorganisms such as *clostridium botulinum* may remain in food even after the death of the parent organisms. Chemicals are added to food either illegally or ignorantly as sweeteners, flavours, preservatives, or as adulterations. Natural toxins which may occur in foods like

aflatoxin in groundnuts, alkaloids in mushrooms, heavy metals in fish and aquatic foods are to be considered carefully. While some are destroyed during the cooking process, some remain unaffected, thus, food providers must be well educated on food hygiene (Awoyemi, 2007).

To enhance personal hygiene, the concept of hand washing must be imbibed in children. It is the most significant step for preventing the spread of germs and illness. Washing of hands should be done with preferably warm water and soap as often as possible (even when hands look clean). It must be done before preparing food, before and after eating. It must be done after using the toilet or urinal, coughing or sneezing, touching books or money, petting an animal, cleaning a child who has gone to toilet, playing, and shaking hands with other people.

The traditional practice of washing of hands with soap and water is very effective because the soap suspends the dirt and skin that trap bacteria. Warm running water especially, washes away suspended dirt and oils free from the skin and additional friction from wiping of hand removes more germs. In case water and soap are not available, alcohol-based hand sanitizer wipes or a gel could be used (<http://www.doh.fl.us/Family/school/health/influenza.html>). Also, wood ash could be used in place of soap

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methods employed in the study. It covers the study design, a brief description of the study district, data collection technique and tools, sampling technique, data handling, ethical consideration, limitations of the study and assumptions.

3.1 Profile of the Study Area

The Ashanti Region has 21 districts, one of which is the Bosomtwe-Atwima-Kwanwoma District. Its capital is Kuntunase, about 28 km from Kumasi. It shares boundaries with Atwima, Ejisu-Juaben and Kumasi Metropolis to the north, Asante-Akim North on the east, and Amansie-East and West on the south. The district is about 2.8% of the total area of Ashanti Region and covers approximately 681.7995 square kilometers. The road network from Kumasi to Kuntunase and Abono at the Lake area is a second class road. Unfortunately, roads to most other parts are quite not motorable. The district, which is divided into five sub-districts and 120 communities, is mostly inhabited by Akans. The population as estimated in the year 2006 was 178,468. The main economic activities are crop farming, fishing (around the Lake Bosomtwe), and craft-making (wood carving). A lot of office workers are also available.

The BAK district is endowed with 407 educational institutions comprising five secondary schools, seven vocational and technical schools, and 146 pre-schools, 151 primary and 98 Junior Secondary schools (GES 2006). In addition, it has 20 private and public health institutions with a human resource of 210, most of whom are concentrated at St. Michael's Hospital, Pramso. There are 21 CHPS zones, 64 outreach clinic points and 53 trained Traditional Birth Attendants in the district. 130 functional and active Community Based Surveillance Volunteers (CBSVs) are engaged in the district. The ten top causes of OPD attendance are malaria, acute eye infection, cough/cold, diarrhoea, rheumatism, skin disease, lower abdominal pain, home/occupational accident, and pneumonia.

The major causes of admission include malaria, hernia, enteric fever, anaemia, diarrhoea and malnutrition. Causes of mortality rates are septicaemia, HIV/Aids, sepsis, malaria, CVA, severe anaemia, pneumonia, hepatic failure, liver cirrhosis and hypertension. Source: (Ghana Health Service, BAK, 2006)

Effectiveness of the Referral System

The BAK District where the project was undertaken faces some difficulties in terms of the road network. Some of the roads are in deplorable states such that transportation flow is difficult. As such, when someone is referred on emergency to a health facility farther away, they fall on chartered public transport which charge exorbitant prices. Therefore, those who cannot afford may not go at all. There is a launch on the Lake Bosomtwe which helps those people living beyond to cross over. Amakom Methodist Church also has one launch which ferry patient's free-of-charge to Abono, from where the sick may continue with a vehicle to the referred hospital. The St. Michael's Hospital also has an ambulance to transfer emergency cases to Komfo Anokye Teaching Hospital in Kumasi. At the referral points cases are treated with promptness depending on their nature.

3.2 Research method and design

A descriptive cross sectional survey was used for the study. Both qualitative and quantitative methods were employed to collect data from 203 respondents on the implementation of the school health education programme. This was designed to describe the existing distribution of variables which included knowledge level of people in SHEP, involvement of people in SHEP activities, referral rate of pupils with health problems. The survey was carried out in the Bosomtwe - Atwima - Kwanwoma District. The respondents were SHEP coordinators in the district, teachers and school pupils. Both probability and non-probability methods were employed. Purposive and simple random sampling methods were used for the coordinators, nurses and pupils respectively.

3.3 Study Population

The study population was drawn from the three District SHEP Coordinators of GES, GHS and District Assembly of the BAK District, 150 teachers of different ranks and qualifications, and 50 school pupils from kindergarten 1& 2, Basic Level 1& 3, and Junior High School 1.

3.4 Sampling Size and Technique

3.4.1 Sampling Technique

Probability and non-probability sampling techniques were employed in selecting the 120 teachers and 33 key informants for the study. In the non-probability method, purposive sampling was employed to

select the key informants who were the three District SHEP Coordinators, school heads, and school health representatives. These were involved in the planning, implementation and supervision of all school activities. The rest of the teachers were selected by simple random sampling. Eight teachers were selected at random to add to the two key informants who were the head and school health representative to make up ten. Numbers were assigned to each of the teachers in the fifteen schools, and each of the two key informants was made to select four teachers at random to make up ten.

The probability method was again used to select 50 pupils. Only one pupil was selected from each of the selected classes. Kindergarten 1 & 2, Basic Levels 1 & 3, Junior High School 1 were chosen because they were the entry points where pupils were targeted for screening every year. The names of the ten circuits were written and the simple 'lottery' method was used to select seven. Names of towns where transportation was easy and roads were accessible were numbered and 15 towns were picked due to proximity. The towns were purposively picked according to availability of health facilities so as to ascertain whether referral of pupils was actually done.

3.4.2 Sample Size

The sample size was 203 comprising of 3 SHEP Coordinators, 150 teachers and 50 pupils. The sample size estimation was based on the sample size expression;

$n = Z^2 (pq)/d^2$ used to determine the minimum number of subjects to be included in the study; where

n = sample size

Z = statistical certainty chosen

P = estimated proportion of the schools undertaking SHEP in the BAK District

q = 1- p (Estimated proportion of the schools not undertaking SHEP)

d = precision desired (tolerated margin of error)

If the value of p is 0.1 (which gives large sample size) and the desired precision is chosen to be 0.05 with statistical certainty of 95% (Z = 1.96), then

$$n = (1.96)^2 * (0.1*0.95) / (0.05)^2$$

$$n = 138.2976$$

$$n = 138$$

The minimum sample size to be chosen for this study is 138. But because data would be disaggregated by community, year of entry into the programme, and also to make it more representative a total of 203 were selected from the district (Snedecor and Cochran 1989).

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3.5. Data Collection Technique and Tools

The data collection techniques were interview, review of secondary data, administration of written questionnaire, observation and food frequency. All existing relevant data on the area of study were collected from the District Education Office, District Assembly and the schools. An interviewer guide as well as self-administrated questionnaire was used to collect data for the study. Some of the questions were open-ended so as to allow respondents to provide further details on some of the issues while others were close-ended to give specific answers. Informants were duly informed about the purpose of the study and their consent was sought before the interview.

Two interviewers were trained on the content of the questionnaire and interviewing techniques to help the principal investigator. The interviewer guide was used to collect data from the SHEP Coordinators. Two sets of questionnaire were designed, one for the teachers and the other for the pupils. The teachers filled their questionnaire while the investigator and interviewers filled for the pupils. The SHEP coordinators were held on a one-on-one basis with the principal investigator using the interview guide to establish their views on the programme.

Where necessary the local language was used for clarity. All completed questionnaires were checked for accuracy before computing. Stata software version 9.1 was used for the data analysis.

3.5.1 Data Collection.

Using secondary data from annual reports facilitated the study. Information was also collected from the Health Inspectorate Division of the District Administration, the Public Health Nurse Officer and the District Coordinator of SHEP (GES). Interviews were conducted with interview guide. Respondents were contacted in their schools and work places. Both open-ended and close-ended questions were used to collect the data. The open-ended questions were used to allow informants to freely express their views or additional information. The close-ended questions were used to provide specific answers. In determining the knowledge level of the teachers with regards to SHEP various questions were asked ranging from their training in school health to whether they could detect ill-health in the pupils they handled and refer them to appropriate health facilities. Further more, their contribution or involvement towards SHEP was also assessed by questions like, “Do you have a SHEP committee?” and, “What do the SHEP committee members do in the programme?” The data was collected within a period of three weeks in the month of September, 2007.

3.6 Pre-Testing

The data collection tools were pre-tested at Barekese which has similar socio-economic and socio-cultural settings with BAK. This was done to determine the appropriateness of the tools. Appropriate adjustments were made.

3.7 Study Variables

Variables for the study are categorized into dependent and independent variables.

Dependent variable: Effectiveness of the school health programme. It is effective when it is able to meet its set objectives and change is evident in the recipients, for example, school dropout and absenteeism reduced.

Independent variables:

Level of knowledge: Having enough understanding or information about SHEP. It is ranked high if the person knows exactly what is to be done and could do it, and low if he has little or no understanding of the subject and does it his own way.

Involvement: The extent of participation in school health activities in both the planning and implementation.

Effectiveness of referral system: Ability of teachers to detect ill-health and referring pupils to appropriate health facilities. It is effective if pupils bring feedback for teachers to be assured that the problem had been addressed, or teachers follow up to see the outcome and offer counseling when necessary. It is ineffective if pupils are just asked to go home and teachers do not know the outcome.

Eating Pattern: Having the nutritional knowledge to be able to select the right food to eat and eating consistently at the right time, the normal breakfast, lunch and supper without skipping any.

Physical fitness of pupils: Provision of good physical education improves the health of children and enables them to perform up to their potential in and after school.

Sanitation: A clean and safe environment, free from cracks, corroded roofs, dust, dirt, bad odour and flies breeding in the school to improve the health of children.

3.8 Data Handling and processing

The questionnaires were stored in files in the sequence collected and kept in drawer for safekeeping. The information from the questionnaire was properly organized through data coding, editing, cleaning, and re-entry. All these were quality control measures meant to provide valid and reliable information in the study.

3.8.1 Data Analysis

The principal investigator and supervisors sort out the questionnaires collated and recorded responses. Cross validation and consistency checks were done. Stata software version 9.1 of data analysis was used for data entry, cleaning, processing and analysis according to the order of questions. The relevant information was retrieved in a standard form and the results were presented in frequencies, tables, and percentages. P-value was used to test for association. It was analyzed and interpreted.

3.9 Ethical Considerations

The researcher sought a letter of introduction from the university to introduce herself to the authorities concerned in the district. Informed consent was sought from the DDHMT, GES – BAK District, School Authorities and the pupils with the assurance that the identity of respondents would not be exposed. The objective of the study was explained to participants. All the information collected for the study would remain confidential. The result of the project would be disseminated to the appropriate quarters to help in policy making which would be beneficial to the subjects. Appointments were made with the district coordinators in advance. Enough time was given to them to prepare for the interview. Responses were recorded verbatim without changing the meaning as expressed by the respondents. Information obtained from respondents was treated with the highest level of confidentiality deserved.

3.9 Assumptions

1. It was assumed that the views expressed by the respondents were a true reflection of the situation on the ground. Opinions were therefore accurate assessment of the variable under the study.
2. Children, pupils and students were used interchangeably.

3.10 Limitations of the Study

The school health programme started years back. However, in this study evaluation was done from 2001 to 2006. The low recurrence recorded in the study may not be a true reflection of the actual outcome as reported by respondents.

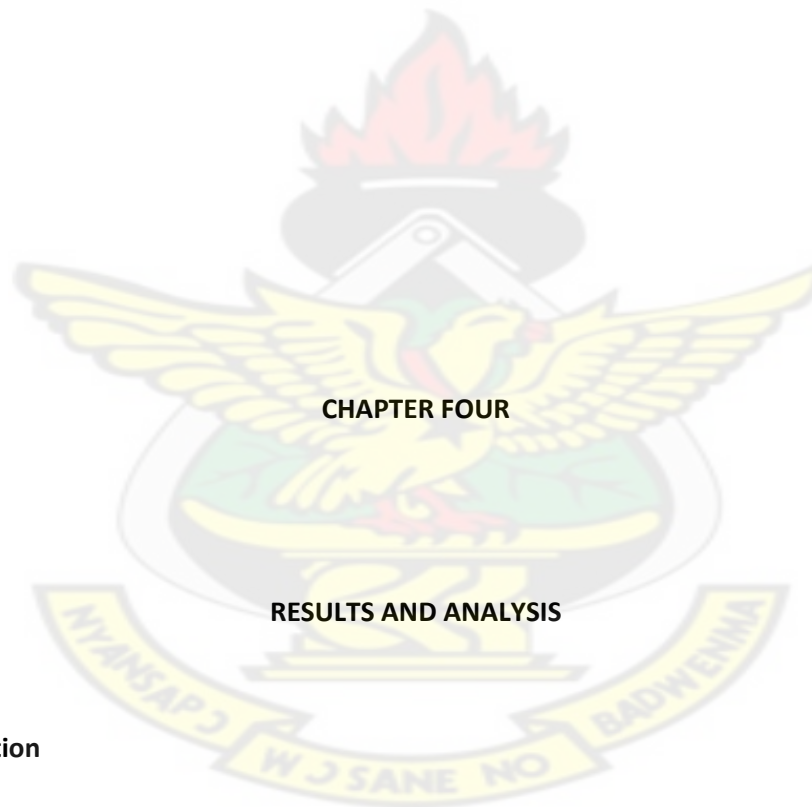
3.11 Delimitations of the study

1. Due to time and financial constraints and the inaccessible nature of the road network in some portions of the district, seven out of the ten circuits were selected for the study.
- ii. The nutritional status of the pupils was not delved into. Anthropometric measurement was not taken. The check was only done through observation and food frequency of some dishes provided in the schools.

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CHAPTER FOUR

RESULTS AND ANALYSIS

4.0 Introduction

This chapter presents the results of the data collected from the respondents made up of the teachers, pupils and the SHEP coordinators.

Table 1: Sex – gender distribution of teachers, pupils and SHEP coordinators

VARIABLES	TEACHERS n =150		PUPILS n = 50		SHEP CO -ORDINATOR n = 3	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Sex:						
Male	74	49.3	27	54.0	1	3.3
Female	76	50.7	23	46.0	2	66.7
Age:						
4 – 9			31	62.0		
10 – 19			19	38.0		
20 – 29	25	23.3				
30 – 39	45	30.1				
40 – 49	35	23.3			3	
50 +	35	2.3				

(Source: Author, 2008)

A total of 203 respondents were interviewed. Out of these 102 were males representing 50.2% and 101 representing 49.8% were females. The ages of the pupils ranged from 4-18 years while that of the adults ranged from 20-64 years. However, their ages were grouped for easy analysis and interpretation. Most of the teachers were in the age group 30 – 39 years, representing 33.3% (50) of their population, while the pupils were within 4 and 9 representing 62% (31) of theirs. Also, age group 50 and above represented 27.3% (41) and age group 20 – 29 represented 16% (24).

Table 2: Educational Characteristics of Teachers

Educational characteristics	Frequency n = 150	Percentage (%)
Educational level:		
Certificate A	110	73.4
Diploma	18	12.0
Degree	16	10.7
MSLC	6	4.0
Years in school:		
1 - 3	72	48.0
4 – 6	54	36.0
7 – 9	17	11.3
10 +	7	4.7
Roles in SHEP:		
None	104	69.3
Administrator	21	14.0
School Health Representative	16	10.7

Committee Member	9	4.7
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(Source: Author, 2008)

Almost all the teachers were professionals. Those with basic teachers' certificate were 110 representing 73.4%. Diploma holders were 12% (18) while 10% (16) had degree certificate in various fields. Only 6 representing 4% were not professionals but had middle school leaving certificates and were mainly kindergarten attendants.

Respondents who had been teaching in the various schools up to 3 years and above were 72 (48.0%), 4 to 6 years were 54 (36.0%) and those who has stayed 10 years and above were 7 (4.7%). This was very important to ascertain their level in experience in detecting ill-health in children immediately their conditions looked unusual.

The role of teachers in the SHEP also showed that 21 (14%) were administrators (school heads), 16 (10.7%) were school health representatives, while 9 (6%) were health committee members.

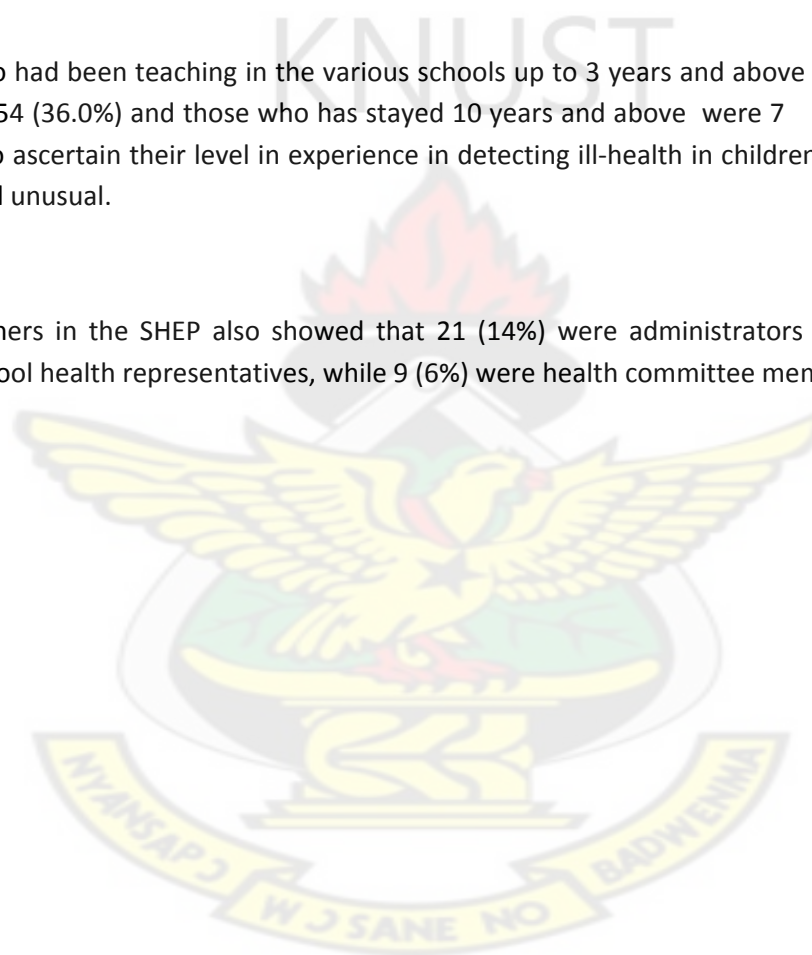


Table 3: Characteristics of Pupils

Characteristics of Pupils	Frequency n = 50	Percentage (%)
<i>Whom pupils stay with:</i>		
Mother	21	42.0

Both parents	24	48.0
Guardian or father	5	10.0
Parents occupation:		
Father		
Trading	4	8
Skilled work	20	40
Salaried work	16	32
Unemployed	10	20
Mother		
Trading	8	16.0
Skilled work	16	32
Salaried work	8	16.0
Unemployed	18	36.0
Pupils' means of transport:		
Bus	6	12.0
foot	44	88.0

(Source: Author, 2008)

Of the 50 pupils sampled 21 (42%) stayed with their mothers while 24 (48.0%) stayed with both parents. With parents' occupation, 24% (12) were traders. 72% (36) skilled workers, 48% (24) were salaried workers; while as many as 56% (28) had no employment. The most frequently used means of transport to school was by foot as most of the pupils (88%) resided in the towns and therefore walked to school. Only few (12%) went by bus.

Table 4: Health Education in Schools

Variables	Frequency	Percentage (%)
<i>Health education as a subject:</i>		
Yes	95	63.3
No	55	36.7
Total	150	100
<i>Teaching SHEP:</i>		
As a separate subject	8	8.5
Integrated into other subjects	87	91.5
Total	95	100

(Source: Author, 2008)

When asked whether health education is been taught as a subject in the school, 95 (63.3%) had it taught in their school whilst 87 (58%) had it integrated into other subjects. Unfortunately, 55 (36%) did not know whether health education was taught or not

Table 5: level of knowledge on school health

variables	Teachers	
	Frequency	Percentage (%)
<i>Trained in Health Educ:</i>		
Yes	37	24.7
No	113	75.3
Total	150	100

<i>Where trained</i>		
GES workshop	27	72.9
GHS workshop	10	27.1
Total	37	100
<i>Able to detect ill-health in pupils</i>		
Able to detect	139	92.7
Unable to detect	11	7.3
Total	150	100
<i>Reaction to detecting ill conditions:</i>		
Refer child to dispensary	44	31.7
Send home	53	38.1
Refer to health facility	42	30.2
Total	139	100
<i>Follow up to see condition of disabled children:</i>		
Yes	107	77.0
No	32	23.0
Total	139	100
<i>Counseling parents and students with health problems:</i>		

Yes		
No	133	88.7
Total	17	11.3
	150	100

(Source: Author, 2008)

Of all the 150 teacher respondents, only 37, (24.7%) had had some form of training by the GES and GHS, but with their knowledge in child psychology and personal experience most of them, 139, (92.7%) could detect unusual health conditions in pupils. Out of these 44 (31.7%) referred them to the schools' dispensary, 42 (30.2%), to health facilities and 53 (38.1%) sent them home to parents. Teachers who showed concern and followed up to see the children's condition in their homes or wherever were 107 (77%). If a case was detected 133, (88.7%) called children and their parents and counseled them.

Table 6: Involvement of SHEP activities

Variables	Teachers	
	Frequency n = 150	Percentage (%)
<i>Schools with SHEP committee:</i>		
Have	43	28.7
Do not have	107	71.3
<i>GHS:</i>		
Have	2	1.3
Do not have	148	98.7
<i>GES:</i>		
Have	4	2.7
Do not have	146	97.3
<i>School administrator:</i>		

Have	25	16.7
Do not have	125	83.3
<i>School health teacher:</i>		
Have	20	13.3
Do not have	130	86.7
<i>Health inspector:</i>		
Do not have	150	100

(Source: Author, 2008)

From the table above, very few schools had SHEP committees. Teachers who had committees in their schools were 43, representing 28.7%. GHS membership constituted 2 (1.3%), GES 4 (2.7%), District Assembly 4 (2.7%), school heads 25 (16.7%) and school health teachers 20 (13.3%). Ironically, the district administration was not represented.

Inputs like equipment and materials for SHEP activities as presented in table 7 below mostly came from the schools capitation grant 122 (82.0%) while 26 (17.3%) used internally generated funds from the daily tolls they collected from food vendors and occasional donations from those who used the schools premises for various activities. The same source was used to stock the first aid box.

Table 7: SHEP Input

variables	Teacher	
	Frequency n = 150	Percentage (%)
<i>Inputs for SHEP activities :</i>		
School capitation grant	86	57.3
Community assistance	26	17.3
No assistance	36	25.3

<i>First aid in school:</i>		
Have	123	82.0
Do not have	27	18.0
<i>Stocking first aid box:</i>		
Capitation grant	122	82.0
Benevolent organization	2	0.7
Not stocked	27	18.0

(Source: Author, 2008)

Table 8: Referral of sick children

Variable	Frequency	Percentage (%)
<i>Pupils sick in school before:</i>		
Yes	39	78.0
No	11	22.0
Total	50	100
<i>Type of sickness:</i>		
Malaria	6	15.3
Headache	16	41.0
Abdominal pain	15	38.5
Vomiting	1	2.6
Diarrhoea	1	2.6
Total	39	100
<i>Where child was treated:</i>		
Health facility	10	25.6

Home	21	53.8
School	8	20.5
Total	39	100
<i>Children permitted to bring drug to school:</i>		
Will permit	31	20.7
Will not permit	119	79.3
Total	150	100
<i>Teachers assisting children to take drug:</i>		
Will assist	91	60.7
Will not assist	59	39.3
Total	150	100

(Source: Author, 2008)

Table 8 indicates that 39 (78%) of the pupil had been sick in school before with various illnesses among which are malaria 6 (15.4%), headache 16 (41%), and abdominal pains 15 (38.5%). Of these, 10 (25.6%) were referred to health facilities, 8 (20.5%) received first aid at school while majority 21 (53.8%) were sent home. As to whether teachers would allow pupils who did not complete their medication before reporting to school to bring the drugs to school, 69 (46.0%) said yes, while 81 (54%) answered no. Ironically, 91 (60.7%) were ready to assist pupils to take drugs if parents ask them to.

Table 9: Schools with SHEP facilities

Variables	Frequency	Percentage (%)
Schools with health records:		
Have	31	20.7

Don't have	119	79.3
Schools with referral forms:		
Have	7	4.7
Don't have	143	95.3
Prompt treatment at health facilities:		
Treated quickly	37	24.7
Not treated quickly	113	75.3

(Source: Author, 2008)

Of the 150 teachers 119 (79.3%) had no health records of their pupils, and 143 (95.3%) also had no referral forms for pupils who might fall sick in school. Some of the teachers, 37, (24.7%) who personally took sick children to health facilities on emergency reported having prompt treatment.

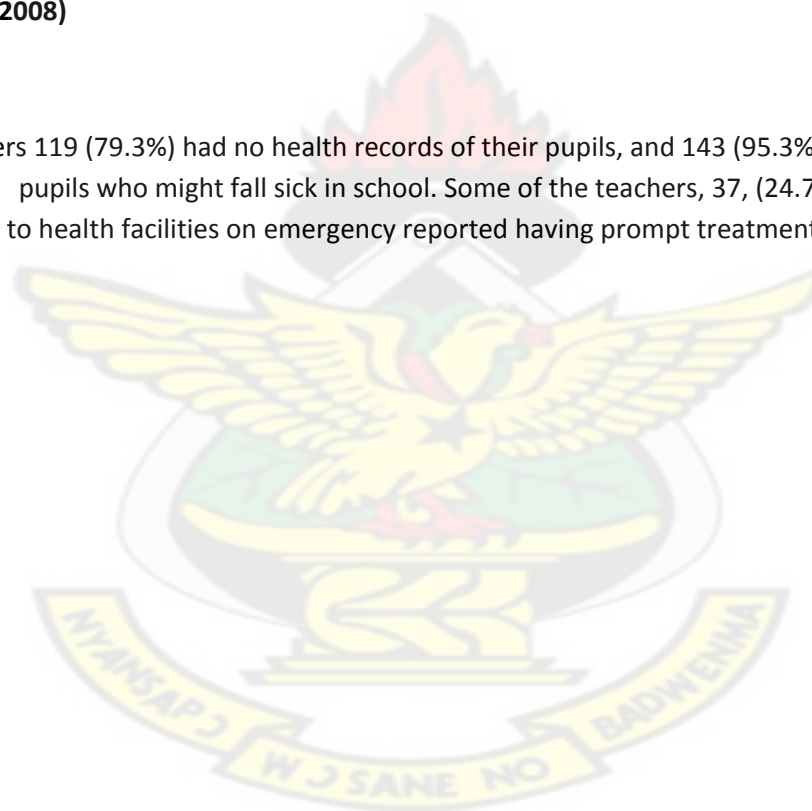


Table 10: Eating patterns of children

Variables	Frequency n = 50	Percentage (%)
<i>Eating before school:</i>		
Yes	25	50.0
No	25	50.0
<i>Number of times eaten:</i>		
Once	18	36.0
Twice	30	60.0
None	2	4.0
<i>Type of food bought:</i>		
Rice dishes	35	70.0
Corn and yam dished	10	20.0
others	5	10.0
<i>Eating of fruits:</i>		
Yes	33	66.0
No	17	34.0
<i>Eating in between meals:</i>		
Yes	19	38.0
No	31	62.0
<i>When snack is taken:</i>		
Break	16	84.2
After school	3	15.8
Total	19*	

***Based on the total number of students who took snack (Source: Author, 2008)**

From table 10 above, half of the pupil ate before going to school. The other half started eating from school. At school, most of them 30 (60%) ate twice, 18 (36%) ate once.

Unfortunately, one of the pupils staying with the father alone and the other staying with a guardian did not eat at all while in school. The most patronized food was rice dishes enjoyed by 70% (35).

This was followed by kenkey, some root vegetables and fried plantain (20%). Some stubborn vendors sold drinks and sweets which 10% (5) patronized. Some of them, 33 (66%) spent part of their meagre money on fruits which was a good thing to do, though inconsistent. Young as they were most of them 31 (62%) did not take snacks in-between meals.

Table 11: major foods patronized by pupils

Kenkey (250g)	Kcal	Protein (g)	Iron (mg)	Vit.A (RE)	Vit.C(mg)
	325	10.7	20.7	0	0
Okro (7g)	2.1	0.1	0.1	2.2	3.3
Palm oil (5g)	44.2	0	0	250	0
Total nutrients	371.3	10.8	20.8	252.2	3.3
RDA (WHO)	1800	19.7	11.5	400	20

Total	1428.7	8.9		147.8	16.7
Deficit					
% deficit	79.3	45.2		36.9	83.5
% excess			80.8		
Braised rice					
Rice (200g)	232	2.2	1.0	0	0
Vegetable oil (5g)	44.2	0	0	0	0
Total nutrients	276.2	2.2	1.0	0	0
RDA	1800	19.7	11.5	1400	200
Total deficit	1528.3		10.5	400	200
% deficit	84.6	88.817.5	91.3	100	100

Source: King and Burgess (2000)

Assessment of the two most patronized foods, stew okro stew and kenkey; then braised rice, showed that 250 grams of kenkey sold for fifteen Ghana pesewas contained 325 kilo calories (kcal) of energy, 10.7 grams (g) of protein, and 20.7 micro grams (mg) of iron. The okro stew 7 g sold for five pesewas provided 46.3kcal energy, 20.8mg of iron and 252.2 mg, vitamin A- retinol.

This meal has a total nutrient deficit of 79.3% (1428.7) kcal, 45.2% (8.9g) of protein, 36.9% (147.8) of retinol (vitamin A), 83.5% (16.7mg) of vitamin C. It was only iron which had an excess of 80.8% (9.3mg). Braised rice also contained 276.2 kcal of energy, and 2.2g protein. There was no vitamins A and C. This meal too had a nutrient deficit o 84.6% (1528.3) kcal, 88.8% (17.5g) of protein, 91.3% (10.5mg) of iron, 100% (400) of retinol Vitamin A, and 100% (200mg) of vitamin C. for a child who eats once a day at school, the deficit nutrients have to be provided at home.

Table 12: Physical Fitness of Pupil

Variables	Frequency n = 50	Percentage (%)
<i>No. of times of PE:</i>		
Once	22	44.0
None	28	56.0

(Source: Author, 2008)

For such an important subject as PE, table 7 shows that less than half of the pupils, 22 (44%) had it done once in a week as against the two times on the time table.

Table 13: Observation of personal hygiene and sanitation.

Variables	Frequency n = 50	Percentage (%)
<i>Having own cup:</i>		
Have	19	38.0
Do not have	31	62.0
<i>Washing of hands before eating:</i>		
Yes	44	88.0
No	6	12.0
<i>Washing of hands after eating:</i>		
Yes	44	88.0
No	6	12.0
<i>Washing of hands after visiting the toilet:</i>		

Yes	33	66.0
No	17	34.0
<i>Washing of hands after play:</i>		
Yes		
No	5	10
	45	90
<i>Washing of hands using soap:</i>		
Yes		
No	39	78.0
	11	22.0
<i>Where hands were washed:</i>		
In communal bowls	39	78.0
Under running water	11	22.0
<i>Work done in school:</i>		
Sweeping compound	30	60.0
Cleaning urinal	1	2.0
Picking rubbish	19	38.0

(Source: Author, 2008)

On personal hygiene, 19 (38%) of the pupils had their own cups as indicated in table 12, but they lent them others while 31 (62%) had no cups until the Ghana at 50 cups were given to them. Interestingly, they kept them at home and used as souvenirs. Children who remembered to wash their hands before eating were 46 (92%), after eating 44 (88%), after toilet 33 (66%), and after play 5 (10%). Those who used soap were 39 (78%). Again, 39 (78%) used communal bowls in washing their hands while only 11 (22%) correctly washed under running water.

All the children did some work in school to keep the environment clean. 30 (60%) swept the compound and 19 (38%) picked rubbish.

Figure 1: Health activities pupil remembered done in school.



Health areas pupils remembered done within the past two weeks were nutrition 10.0% (5), personal hygiene 32% (16), while 52% (26) had not done anything as shown in figure 1 above.

Table 14: Test for associations of some background characteristics of teachers and their ability to detect ill-health.

Variables	Able to detect disabilities (teachers)		p-value
	Yes	No	
Age group			
≤ 30	33	2	0.93
31 – 40	41	4	
41 – 50	33	2	
51 +	32	3	
Gender:			0.32
Female	72	4	
Male	67	7	
Years in school:			0.15
1 – 3	66	6	
4 – 6	51	3	
7 – 9	17	0	
10 +	5	2	

(Source: Author, 2008)

In assessing for relationship between some of the variables and teachers ability to detect abnormalities in the pupils, there was no statistical significance in difference between the ages of the teachers and

their being able to detect change in the condition of the pupils (p -value = 0.93). This was suggesting that the ages of the teachers did not enhance detecting unusual condition in the pupils. Also the sex of the teachers did not determine their ability to detect health problems; neither does the length of stay in a particular school.

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CHAPTER FIVE

DISCUSSION

5.0 Introduction

In this chapter the researcher discusses the results of the data gathered from the field of study as per the study objectives. These objectives were to assess the knowledge level of the study respondents and the level of involvement of stakeholders in the SHEP activities. It also looked at the referral system of pupils with ill-health, the eating pattern of pupils, activities for their physical fitness and the sanitary conditions in the school including pupils' observance of personal hygiene. The SHEP has been implemented through out Ghana. However, little has been done to evaluate its implementation to unravel the critical implementation issues to inform policy makers in the BAK District. As a contribution to this all important but seemingly neglected task, the study sought to evaluate the SHEP not only to feed policy makers but also to fill the knowledge gaps in the programme.

The data was obtained through two main approaches: observation and structured interview questionnaires. For the purpose of the analysis, the data was divided into three main sections. The first section captured the main social background of the respondents, while the second covered the knowledge level, involvement of stakeholders and activities done in school health. In the third section the researcher attempted to solicit opinions on the school health programme. In analyzing the data, the views of the respondent to the questionnaires were considered first, followed by the opinion of the key informants which forms the basis of the discussions of the data.

5.1 Background Characteristics Of Study Participants

It was important to know the social background of the interviewees so as to give a fair idea of the type of respondents whose views are presented in the study. All the characteristics of the respondents were included in the analysis and discussions of the data. The adults who were mostly professionals were old enough and by the nature of their training they would be able to plan, organize and supervise any health programme designed for the children in their care. They would be able to help the children to identify healthful habits to adopt and harmful habits and actions to reject. They would

also be in the best position to detect unusual changes in the pupils and refer those with health problems to appropriate health facilities to avoid complications.

2.2.0 Level of Knowledge on School Health

The ability of one to detect disabilities or behaviours which deviates from normal could help manage a lot of health problems before they get out of hands. It is in this direction that adequate information on health status of school pupils' appears vital for stakeholders.

5.2.1 Teachers Level of Knowledge on School Health

During the study, teachers apparently exhibited low level of knowledge on school health. The study revealed that, only 24.7% of the teachers sampled for the study had had some form of training through GES/GHS workshops for once or twice between the years 2001 and 2006. Teachers under SHEP were required to conduct general hygiene inspection, observe and monitor mental, speech, visual and hearing impairment and other unusual behaviours and problems affecting the health of pupils. They therefore needed the requisite medical judgment to detect these abnormalities and refer those in critical need immediately to appropriate facilities for redress.

Grebow and others (2000) advocated that pre-service and in-service training of teachers is one of the major factors in the success of the school health programme. Strangely enough, the subject is not included in the curriculum of teacher training colleges. There is therefore the need for frequent workshops to enlighten teachers on the subject matter, to give them adequate knowledge and skills to be able to deal with their own health problems and that of the children they are handling. Because there is no consistent training most of the teachers (92.7%) used personal experience as adults and the little knowledge they have in child psychology as a subject in the training college to detect certain signs of poor health. This is in agreement with Willgoose (1974) that a fully trained teacher is able to observe many significant signs and symptoms of poor health. Of the teachers, 31.7% referred children to the schools' dispensary if it was a minor case; 30.2% referred them to health facilities, and 38.1% of them home to parents. The latter's inability to refer children to medical facilities stemmed from the fact that the school did not have referral forms to be given to the children. Secondly, the schools did not have funds to foot the cost of the treatment, if the affected children did not have health insurance policy. The 24.7% who confirmed that student were treated promptly at health facilities took the children there themselves. This appears a laudable idea as they acted as a co-parent which Willgoose (1974) advocated, but it meant leaving the rest of the class to their fate. If it is the lower primary school then children cannot control themselves and anything at all could happen in the absence of the class teacher.

5.2.2 Level of Knowledge of Nurses

It is a recognized fact that nurses on their part have high level of knowledge on school health. Presumably, the school nurse practitioner programme has not been formally introduced in Ghana but in the course of training nurses learn pediatrics. They are

therefore able to detect the signs and symptoms of many diseases or disabilities in children. School health forms part of community health programme so public health nurses receive enough knowledge of school children in the area of health. The Expanded Programme of Immunization (EPI) continues until about five years by which time most children would have started pre-school, so it is evident that nurses have good knowledge in school health. They worked with specialist doctors to organize screening exercises in the schools. They visited schools to give health talks on personal hygiene, disease control and disease prevention.

5.2.3 Level of Knowledge of School Pupils

The study revealed that all the pupils had little knowledge on certain health issues that affected them. In particular, children knew about sanitation, eating good food, washing of hands, and personal hygiene among other things. Ironically, their understanding of “good food” is heavy food and not balanced diet. The constitution of balanced diet as described by Edusei (2007), being the right quality of food (that is, food containing all the necessary food nutrients in their right proportions), the right quantity, the right mix and given at the right time, is not known to some of the teachers, let alone the kids. Children only, bought what their meagre money could afford, which could not be described as a balanced diet as observed. This agrees with the contention of Delisle (1990) and Bendeck et al. (1997) that the nutritional quality of diets for most people is low. In spite of their being asked to buy ‘good food’ ten percent of the pupils bought toffees and others sweets which did not satisfy them and could cause dental caries. Unhealthy eating has a toll on children’s health, growth and intelligence as discovered by Medford (1975). This might have contributed to the low academic performance of some children in school, though the study did not go into that. The appearance of the ‘junk’ food in

school canteens or compounds indicated that some of the school authorities had not been hard on these vendors to provide the best of foods to sell to the children.

In many of the schools visited, the pupils had been taught the importance of washing their hands with soap as indicated in the data. This was backed by the provision of basins of water in front of the classrooms. The study showed that not all the pupils remembered to wash their hands all the time. 22% did not wash with soap, while all of them washed in communal bowls as well as use communal cups both in and outside the classroom especially at the food market.

A closer observation of their behaviour at the canteen revealed that most of them washed their hands in the dirty water vendors used in washing the serving dishes. It was a matter of just dipping their hands in the water. Once all manner of children: those from the toilet, those who had eaten and those who had played in the sand were all using the same washing bowl, it must be understood that the practice is against the instructions as outlined in the monthly calendar of UNICEF for year 2007, since the practice could spread communicable diseases.

The study again showed that all the children had some work to do in school to improve sanitation and beautify the place. In spite of this, they began to litter the places they painfully cleaned even before the break time. After break the classrooms and the compound became an eye saw. They messed the toilets with urine and faeces and sometimes when one leaves the place it takes some time before the person is relieved of the stench that followed him/her. Some of the children even remove their dressed before going to the toilet. This opposes the quality of a good toilet proposed by

Awoyemi, (2007). The impact of what children had learnt was not greatly felt. They must therefore relive the knowledge gained.

5.3.0 Involvement of Stakeholders in SHEP

School health is a collaboration of many stakeholders aside GES. These include the District Assembly, health personnel, teachers, health coordinators and pupils. The level of participation of each group has great influence on the general school health activities.

5.3.1 Involvement of District Assembly

The study revealed that after putting up structures the District Assembly did very little in the area of school health. Only 2.7% of the respondents claimed health inspectors from the District Assembly sometimes visited their school for health inspection. This was confirmed by the Senior Health Inspector who woefully attributed this to lack of resources in the form of vehicles, fund and inadequate personnel to go round the whole district and the numerous schools. Observation of the situation underground also attested to this, for example, some of the vendors did not have health certificates, others had not renewed theirs, and some operated under unhygienic conditions. Some urinals drained into the streets or other areas with serious pungent smell among others. These constituted serious health hazards. Worse of all, no one represented the Assembly as a SHEP committee member though they responded readily whenever there was a delicate issue to discuss.

5.3.2 Involvement of the Community

The school is part of the community and the two should have to collaborate to draw programmes which addressed their needs. According to the data collected 13.3% of the respondents were fortunate to have had the community sometimes involving itself in school health activities through social activities like cultural display, sports and others. Those who used the schools premises for church activities sometimes fixed broken chairs, doors and windows, painted and supplied light to the rooms they used. These beautified the place and improved visibility as they mostly used yellow or cream paints. One school (Odumase R/C) could boast of the Town Development Committee (TDC) build a canteen for them. At Konkori Primary School, the field was always weeded by the community members since they used it for their football games and other gatherings.

Interestingly, a philanthropist at Foase had put up a block for the school in his home town, yet in spite of these praiseworthy acts, some notorious persons in the community engaged in acts which endangered the health of the pupils and staff. They sometimes broke into locked toilets and urinals and messed the places with faeces. Some even went to the extent of defaecating and urinating in the bushes around, behind and some times in the classrooms. They used the school compound as thoroughfare and littered every where as they passed. Unfortunately, school authorities helplessly looked on since the schools were mostly not fenced. Schools built by the road sides were not spared of noise and air pollution from passing vehicles which are detrimental to the health of children.

5.3.3 Involvement of Health Personnel

The involvement of health personnel according to the study was relatively low (1.3%) even though school health is part of community health services. The programme had a target of organizing screening exercises for children at the entry point once a year, three health talks per school, and workshops for teachers among other things. It was unfortunate to observe that some schools did not have a taste or enough of these interventions. The Public Health Nursing Officer-in-charge attributed this to inadequate funds, personnel and lack of transport to go round the numerous schools, as the district could only boast of one motorable vehicle. Moreover, the heavy administrative duty did not give them chance to actively participate in school health programmes, unless there was a problem which needed attention, for example, the nationwide deworming exercise organized for school pupils in 2006. Occasionally, however, health teams from other places like Komfo Anokye Teaching Hospital, KNUST Medical School and other organizations organized screening exercises in some of the schools as part of their outreach programmes.

5.3.4 Involvement of Teachers

In all the schools visited, teachers exhibited high level of participation in the SHEP. The data revealed that in the area of study 37.3% of the teachers were school health committee members, 16.7% were administrators, while 2.7% came from GES District Office, all being representatives of GES. This clearly indicates that GES is the major implementer of the school health programme. This underscores the need to equip them with the prerequisite knowledge and skills to impart to the children and also identify children with ill-health and refer them to appropriate health facilities. It is quite encouraging to note that 77% of the respondents who usually referred children followed up to see what was happening to them. This agrees with Willgoose, (1974) that, the teacher should cooperate with parents to save the child.

The study also showed that 82.61% of teachers supported the idea of their children sending their prescribed drugs to school to continue their treatment. These were prepared to supervise their taking of the said drugs. Interestingly, 58.2% of those who did not even support the idea of children taking drugs to school were prepared to assist them to take the medicines if only their parents permitted them. This clearly shows that teachers as co-parents are interested in the welfare of their children. When quizzed on the issue of drugs, those who were against pupils bringing drugs to school gave reasons as their being forgetful, the drugs might not have been prescribed by physicians and so constitute drug abuse, they did not want to encounter problems with parents among others. Some parents' negative attitude toward teachers is hampering their cooperation towards the care of children who are the backbone of the nation.

5.3.5 Involvement of Pupils

In the schools where the study was undertaken, it was discovered that all pupils were involved in SHEP activities. Each one was assigned a duty in the cleanliness of the school. 62% swept classrooms, sanitary areas and offices. 38% wedged or picked rubbish on the compound. Some had been selected as into "school nurses", while others were in charge of the water for washing hands. They only did not take part in decision-making processes against the advocate of WHO (1993) that children are to be part of decisions which affect their health and be responsible for their choice.

5.3.6 Involvement of SHEP Coordinators

The study revealed that only the GES Coordinator was actively involved in SHEP activities in several ways. She was able to visit about 25 to 30 schools per term though

without any funds, transport or any incentives. Her only motivation was her being the coordinator. The two others from the GHS and District Assembly did not participate too much and attributed their inability to do so to lack of funds, motivation and transport among others. Most importantly, other heavy administrative duties also took most of their time. But where and when necessary, they collaborated to organize screening programmes for schools and food vendors and certify the vendors as fit to provide food to pupils. They undertook health inspection, planned health talks and health week celebration activities. In addition, they organized workshops for teachers and food vendors on health and sanitation.

5.3.7 Referral System

Teachers who identified any abnormalities in children were expected to issue them with referral forms to be taken to the appropriate health facilities. Incidentally, only visiting screening specialists provided referral forms to affected pupils. This might account for the reason why some teachers sent sick children home. It is of no wonder that 75.3% of respondents did not know whether referred cases were treated with promptness or not. They did not get reports about their pupils' condition to be able to participate fully in their care as expressed by Willgoose, 1974. Generally, the economic activity of the populace was reported to be farming and a lot of parents were also unemployed so poverty was prevalent. As such, when a child was referred to a hospital and there was no money, parents took him or her to a herbalist or spiritualist. This sometimes worsens the case before it finally went to the hospital. Such pupils might also not be covered with National Health Insurance as a source indicated that, the number of insurance card holders for the fourth quarter of 2006 was 31% of the total O.P.D attendance in all the health facilities.

5.4.1 Referral Point

Referral point for the school children in the study area began from the various CHPS compounds to Health Centers before it got to the District Hospital at Kuntunase or to St. Michael's Hospital at Pramso. Others were referred to Konongo, Kumasi South, and Komfo Anokye Teaching Hospital.

5.4.2 The Effectiveness of the Referral System

This refers to the agency with which detected health problems are referred and handled in health facilities. This could be said to be ineffective because most teachers (79.3%) did not have health records of pupils to study and refer needy ones to appropriate facilities, and 95.3% did not have referral forms. Thus, they only ask pupils to go to hospital or home. They could therefore not trace the health status of the children. Health officials said cases brought to them were treated promptly depending on their nature, and no preferential treatment was given to pupils whatsoever.

5.5 Nutrition of Pupils

Providers of food were found to have little knowledge in nutrition such that they could not provide the right balance of food. With good knowledge, one does not need much money to produce a good meal. Although 66% of the pupils claimed they bought fruits it was only when the fruits were in season and thereby sold cheaply. While the study did

not delve into the nutritional status of children, observation of the type of meals provided was enough to suspect malnutrition. According to Medford (1995), undernourished children perform poorly in standardized tests especially of language ability. Hinton and others (1990) are of the view that children who are hungry and undernourished are unable to resist infections and are likely to be sick thereby absenting themselves from school, and hence fall behind in class work.

5.5.1 Types of Foods Eaten

Most of the dishes provided in schools visited boarded around rice which 70% of the pupils patronized. Most of them were polished, reducing the nutritional value. It goes to prove Bendeck's (2000), assertion that people have now develop a taste for processed foods with all their nutritional inadequacies. Others included kenkey, fried plantain, yam and cocoyam among others. These mostly went with hot pepper sauce, though beans and okro stew were sold. Reading through the lines, the food constituted over ninety percent carbohydrate and fat providing energy. Protein of high biological value and protective foods suffered considerably especially those of vitamins A and C. A dietary analysis of two of the major foods mostly patronized showed this result. For example, in the okro stew and kenkey, the iron content was found to be high, even having an excess of 80.8% over the WHO recommended daily allowance (RDA), the bioavailability of iron from plant source is very low. To increase the bioavailability therefore, it is important that fruits such as pawpaw, mangoes, oranges and green leafy vegetables which provide Ascorbic Acid (Vitamin C) be included in the diet. This vitamin is vital to increase the bioavailability of iron from plant sources.

Protein was also found in kenkey (54.8%) of the 19.7 RDA, but as a plant source the protein lacks some essential Amino Acids. It is therefore essential to serve with legume stews and soups to complement for the amino acids deficient in cereals since pupils could not buy enough meat, fish or eggs, that is, if even they were able to buy some. Though the dish had a high amount of protein, because it is lacking about 79.3% kcal, the body will deaminate the protein to release energy for its daily activities thereby making it unavailable to perform its primary function of growth. If the home is unable to make up for the nutritional deficits and they are accrued, malnutrition sets in and children's physical and mental growth are hampered. Medford (1995), asserted that this undernutrition affects cognitive development and school performance.

The high unemployment rate in the community adversely affects pupils. Unemployed parents constituted 28% and some were petty traders (12%) which made it difficult for them to make ends meet. The amount of money children took to school therefore was usually between 10 and 30 Ghana pesewas which could not offer them any meaningful balanced meal. Strangely enough, some of the children used part of this meagre pocket money to buy sweets and other "junk" foods instead, and they often went hungry. These contribute to nutritional deficiencies which would affect children's health if not checked.

5.5.2 Eating Pattern

About 50% of pupils in the study area took breakfast at home before going to school which meant the rest of them skipped breakfast. The practice skipping meals, especially breakfast, according to De Onis (2000) is not healthful as the practice undernourished children and lead to acute malnutritional diseases. Lunch was however taken at school to agree with Delisle (1990) and Bendeck et al. (1997), who assert that most people use

outside home meals for convenience. The school time table had two break times at 30 and 20 minutes respectively. At both times, some children took various kinds of snacks or meals. From the study 66.67% of those who ate twice were staying with their mothers while 58.33% were with both parents. The 10% who did not eat at all stayed with father or guardian. This is a clear proof that it is a privilege to be raised by parents, and mothers cared better.

5.6 Physical Fitness

In spite of all the benefits of exercise the subject seemed to be outliving its importance on the school time table. The study revealed that only 44% of the pupils benefitted from physical exercises (PE) once a week as against the recommended two times on the time table; however, all admitted having games on Fridays. This normally took place in the afternoon after the lunch break. Kimberly (2003), asserted that it is not good to do strenuous exercise within two hours after eating and in hot weather. This is because both heat and digestion make heavy demands on the circulatory system.

The syllabus also suggested certain skills to be taught for better performance of certain parts of the body e.g. the brain, muscles and proper blood circulation as outlined by O'Connor, (2006). Though children naturally love play, skills development cannot be realized if teachers do not provide opportunity for children to develop interest in sports and exercise and this love could die after school as it would not be part of them. Asked how they selected pupils for inter-schools competitions, teachers said they organized inter-classes competitions for their selection. These few chosen ones were later trained

properly for the sport or game. This is against the UNESCO charter on PE and Sports as a fundamental human right for improving health.

5.7 Physical School Environment

The condition of buildings and general appearance of school compound contributes greatly to the health of pupils and school staff. The surroundings, when well-kept, provide a serene atmosphere that promotes good learning and opportunity for exercising the body and for relaxation.

5.7.1 School Buildings

The district assembly is duty bound to provide infrastructure for schools. When classrooms, toilets and urinals are built, authorities scarcely find the need for any maintenance again, not even when the government's capitation grant and school feeding programme have increased the school population. With the exception of some newly built schools almost all the schools were rocked with varying problems ranging from dilapidated roofs to cracked walls and floors, as well as broken doors and windows. Some of the buildings had not been painted for years and in addition none of the classrooms had been ceiled, let alone been provided with mosquito netting. There were also several corroded roofs that might cause wetness in the buildings, which according to Givoni (1981), constitute a potential health hazard, especially to asthmatic and rheumatic people, discomfort and a source of aesthetic damage like peeling of walls and fungal growth.

5.7.2 Sanitation and personal hygiene

The study showed that all the pupils partook of the cleaning of the school compound everyday. Ironically, immediately the pupils entered the classroom they began littering again so that by the close of the day there will be a mess all over the compound again. Part of the problem could be attributed to the absence of, or inadequate dustbins in the rooms and at vantage points on the compound as expected.

With regards to canteen services, only kindergarten schools had kitchens and eating places. The rest operated in the open spaces often plagued by dust. The district assembly had advised that vendors provide show cases which will protect food from flies and dust. Some of them had not adhered to this and sold in the open, exposing food to flies which bring about diseases. In addition, some surroundings were quite dirty; especially those who used leaves left them on the ground and only cleaned after their businesses were over.

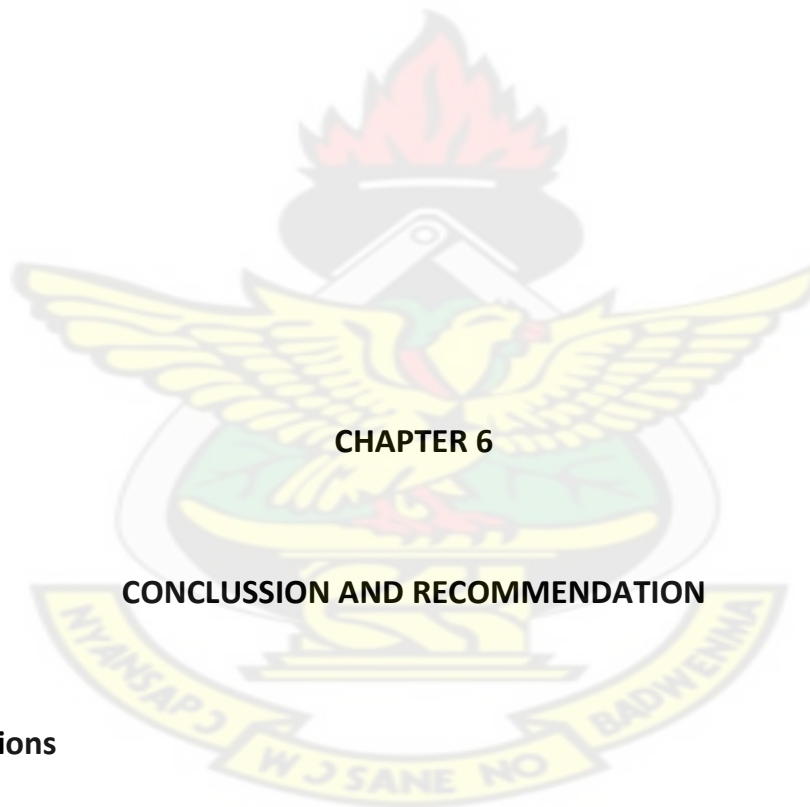
Only few vendors had provided tables and benches for buyers to sit on and eat comfortably. Those without certificates even saw it as a bother to obtain one though they had been educated on its importance. Vendors had not provided water for washing of hands. Pupils therefore used the same dirty water for washing used serving dishes to wash their hands. Some of the vendors used the same bowls and plates for serving dishes without washing them; they just dip them in water especially when they were in a hurry. A quiz into the educational background of some of the food vendors revealed they were mostly illiterates, with the highest being junior secondary school graduates. Their low level of education proved that the National Commission on the Role of the School and Community for Improving Adolescent Health (1990)'s assertion that 'an important determinant of a child's health is usually the educational status of the mothers' is true. Only a few vendors need commendation.

At the places of convenience many of the toilets were mainly the Ventilated Improved Pit (VIP) types, while others were trenches. Unfortunately, there were two schools that did not have these facilities. The number of drop holes ranges 2-10 shared between the sexes and staff depending on the number. All kindergartens had toilets and where the sizes are unsuitable for the kids bed pans had been provided for convenience. Only these kids had been provided with toilet rolls so some walls have not been spared of “faecal paintings”. Though they were cleaned everyday the stench from some of them leaves much to be desired.

Urine from some urinal drained into the streets and other places though some had soak away. It was sad to note that instead of community members helping to maintain sanity in schools, some notorious ones broke into locked toilets and urinal and defaecated around. This constitutes a serious health hazard and underscored the reason why Lynagh et al. (1997) reiterated that the community be involved with community health programme. At least, they would know their responsibilities and cut of points.



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CHAPTER 6

CONCLUSSION AND RECOMMENDATION

6.1 Conclusions

This chapter wraps up the study undertaken at BAK District and makes appropriate recommendations that could be adopted to restructure the SHEP for the benefit of school- age children and all the general citizenry. The study was undertaken with a view to evaluating the school health programme in the Bosomtwe - Atwima - Kwanwoma District. It explored the knowledge level of the respondent in the pogramme and the level of participation of stakeholders. It also considered the referral system of pupils in

the school, the eating pattern of these pupils, their physical fitness activities, and the practicing of healthy habits including the sanitary conditions in the school. It is hoped that the findings of this study would assist in the recognition of the programme, give it a place on the school time table, and including it in the national budget.

6.1.1 Level of knowledge

Low level of knowledge in health issues was detected among teachers in the Bosomtwe-Atwima- Kwanwoma District. Only 24.7% had attended some workshop organized by GHS and GES. As an integrated subject, there was neither syllabus nor any structured guide for teachers to follow. This accounted for the laxity with which the subject was being handled.

6.1.2 Involvement of pupil in SHEP

The study also revealed low involvement of people other than GES coordinator and teachers. The District Assembly contributed 2.7%, GHS 1.3% and PTA 13.3%, thus; collaboration was seen to be poor. This was explained to be due to inadequate funding, personnel, transport and even motivation to do the work. Moreover, GHS and District Assembly personnel had other tight administrative duties which took most of their time and efforts. It is highly commendable that the GES coordinator used her own resources to visit between 25 – 30 schools per term. External support comes from DFID and UNICEF once in three years for workshops so the year under review had therefore seen only two workshops. This showed that upon the transfer of the school health teacher any newly appointed one may not have had any knowledge in the programme to be able discharge his or her duties effectively. Apathy therefore sets in the work.

6.1.3 Referral system

In spite of the fact that the teachers had no training 92.7% were able to detect some degree of abnormalities in pupils after physical inspection and referred them to health facilities (61.9%). These were followed up by 77% of teachers. Thus, lack of training was not a barrier to teachers relinquishing their duties as co-parents in the welfare of pupils. Personal hygiene and nutrition (especially school feeding) among others were conceded to have improved the health status of pupils. The unfortunate thing is that teachers did not have health records of pupils so that even in the absence of the class teacher others may know those with various problems like asthmatic and rheumatic pupils and help them to avoid crisis. For example, an asthmatic child may not be asked to work at a dusty place, and those who needed periodic check ups could be reminded or assisted to do so.

6.1.4 Nutrition of Pupils

Responses indicated that pupils ate irregularly. Half of them did not eat before going to school, 36% ate once, 56% ate twice and 10% nothing while in school. From observation and assessment some of the most patronized foods none of the dishes provided were nutritionally balanced. The average of 20 Ghana pesewas given to them was not sufficient for any “good” meal. The excess nutritional deficit could cause undernourishment which could affect their academic output and economic productivity in later years. At eating places, serving tables and chairs had not been provided and children squat or stood to eat. Vendors had not complied with the provision of these as directed by the sanitary inspectors.

6.1.5 Physical Fitness

P. E, a potential health subject, was found to be gradually losing its place as no class had it twice as was on the time table. Most of the pupils, 56%, did not have morning P.E. It had been construed for their Friday games which no teacher officially supervised to teach any skill.

6.1.6 Physical School Environment

Observation and responses showed that sanitation in and around some schools was not very satisfactory. Cobwebs hanged in the classrooms, walls cried for renovation and painting, the cracks in floor emitted a lot of dust which could be detrimental to health. Inadequate dustbins contributed to littering of the compound. The condition of toilets and urinals in most schools is not worth mentioning. They caused flies breeding which cause diseases. Outsiders using toilet indicated that some communities lacked basic amenities like toilets. Pupils seem to have gulped down the clean hands concept but all schools used communal washing bowls and drinking cups both in class and food market. Water was fetched directly from reservoirs instead of providing them with veronica buckets. These could contaminate water and spread diseases.

For a school programme which is not seen as a pivot for academic work even at the national level, and so had no place on the time table, no specific guide (syllabus) and other logistics, transport, poor funding and low motivation; a programme which relies on benevolent people and organizations for sustenance, then its implementation cannot be well done and urgent interventions are needed to redirect it to achieve its original aims.

6.2 Recommendation

To improve the School Health Programme in the BAK District, the study wishes to recommend the following for future attention:

Ghana government

1. The road network, especially to remote areas should be improved for easy accessibility.
2. The school feeding programme should be extended to all schools so that the pupils could at least enjoy one good meal at school. This would improve their health and curb absenteeism.
3. The increase in enrolment due to the capitation grant (free education) should go with the expansion of school facilities to curb over crowding in the classrooms.
4. Funds, transport and other necessary logistics together with enough motivation must be provided for personnel to undertake the work. The source for funding must be clearly defined since three main ministries are collaborating to implement the programme. If all the three are to contribute, it must be clear because as at now no department is willing to resource the programme as they claim it is not their responsibility.

6.2.2 Ghana Education Service

1. Health is a pivot for academic achievement. It must therefore be given prominence on the curriculum at all levels. Teachers should have the basic knowledge (pre-service) in training college before coming out to teach and update themselves (in-service) since new health problems erupt everyday.
2. Schools must be allowed to internally generate funds to improve conditions like minor repairs, painting and greening of the compound.
3. Health screening must be a prerequisite for entry into schools and records kept in the school.

4. Subject teaching must be introduced for teachers to teach their subjects of interest so that no subject like P. E would be disregarded.
5. Health record and referral forms must be included in the logistics provided to schools.
6. Pupils should be encouraged to eat more fruits and vegetables and schools with lands should plant fruits and supply to pupils to supplement their meals.
7. Schools must be allowed to contract vendors and that contract not in compliance with food policies should be terminated immediately.
8. As part of national educational scheme, food and health committees or task forces should be established at all levels of the school system to disseminate information about health and other relevant issues. They would also ensure that the right thing is done.
9. Pupils must be encouraged to plan, find out and report on health issues, make laws, draw collect pictures, discuss, write essays and poems, sing and act plays, organize quiz competitions about healthy habits to adopt and unhealthy habits to reject. For example, all class members should be appointed as “health detectives”. Ask them to note what they can see involving the cleanliness and appearance of people, animals, buildings, roads, walks lawns and gardens. Permit everyone to tell what he/she saw. Let them discuss their findings.
10. Some award system should be put in place to motivate schools that excel in food, health and environmental promotion activities.

6.2.3 Ghana Health Service

1. The school nurse practitioner programme in pediatric health should be introduced in Ghana and products posted to schools to handle pupils’ health problems.

2. Frequent workshops must be organized for teachers to upgrade their knowledge and skills in pediatric health.
3. School pupils should be given immediate attention at health facilities so that they could return to the classroom in due time.
4. Schools must be provided with First Aid boxes with the requisite package so that every school pupil would benefit from it. This is because some of the schools had 'empty' boxes.

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6.2.4 The MLGRD (District Assembly)

1. All communities must be provided with enough basic amenities like toilets so that community members would not compete with the pupils over school property.
2. Public education must be intensified for food providers to understand the need for providing healthy foods for children and observe good personal and environmental hygiene. Also, they must understand the need to undergo examination to be declared fit before providing food to the people. This would curb the practice of uncertified relatives or friends replacing vendors in their absence.
3. Vendors who can not provide dinning tables and chairs for pupils must be allowed to sell in schools.

6.2.5 Parents

1. Parents should be involved in health and Family Life Education programmes targeted at children in order to understand the changes in the children and also reinforce what is taught in the class.

6.2.3 Community

1. Community members should be involved in programme planning and implementation so that their health needs in relation to their cultural values, beliefs and lifestyles would be addressed directly. If they collaborate with school to enforce health policies and the society will change easily for the better. This is because the child will be checked and helped both at school and at home to stop, start or change behaviour.
2. Though the school is part of the community, school assets do not belong to the community, therefore permission must be sought from the school authorities before using any school property. Those who forcibly break into school buildings must be brought to book.

6.2.7 Donor Agencies (UNICEF / USAID / DFID)

1. Donor agencies should make the workshops at least annual instead of once in every three years so that new teachers could benefit especially when the school health teacher leaves.
2. The District Coordinators should be motivated to generate enough interest in the programme.

6.3 Concluding Remarks

Implementation of the SHEP mostly rest on teachers, therefore they should be given the proper training to accomplish the task to improve the health status of the pupils put under their care. Health is wealth and happiness. All stakeholders should therefore see children as the future of the nation and contribute effectively to their health needs to improve the economy of the nation. As the capitation grant has risen the enrolment in schools, infrastructure should be improved to commensurate the increase so that overcrowded classes such as at Ahenema Kokoben could be divided for better ventilation and convenience of teachers. The main coordinators should be given the necessary motivation to go round schools as expected to provide the necessary support base for the programme. If children develop healthy habits in life, they will grow up to be healthy adults who can contribute positively to national development. The School Health Programme therefore needs to redirect its cause to realize its goals.



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on can stop answering any question you consider embarrassing. Thank you
access to education in Ghana and even beyond, so feel at ease to express your
is valuable. Whatever you say will be confidential and will not in any way
answers and you do not have to agree with what we will say. Everybody's
for improved educational standard. We wish to stress that there are no rights
to improve the efficiency in the implementation of the school health
we-Akwima-Kwanwoma District. Your opinions are very important and they
press and failures of the school health programme in Ghana, particularly in
) We are conducting interviews with people like you to ascertain your views
your name is and these are my colleagues. (Let them introduce
University of Science and Technology (KNUST), School of Medical Sciences,
ing/afternoon and thank you for your permission. We are with the Kwame
on

QUESTIONNAIRE FOR TEACHERS

Kwanwoma District, Ghana

of School Health Programme in the period 2001-2006 in the Bogomwe-

Background characteristics

1. Sex: male ☐ female ☐

2. Age: ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50 and above

3. Highest educational level: ☐ Degree ☐ Diploma ☐ CERT A ☐ MSLC

4. Name of present school

.....

5. Length of stay in the school (years) ☐ -3 ☐ 4-6 ☐ 7-9 ☐ 10 and above

6. Teaching subject(s)

.....

7. Role and SHEP ☐ Administrator ☐ School health representative

☐ Committee member ☐ none

Health Education taught in school

8. Is Health Education taught as a subject in the school? ☐ Yes ☐ No

9. How is it taught in your classroom? ☐ As a separate subject ☐ Integrated into other subjects

Level of knowledge in school health

10. Have you been specially trained in health education? ☐ Yes ☐ No

a. How did you get your training? Through workshop by ☐ GES ☐ GHS
☐ others (please specify)

11. What activities do you do under school health?

.....

13. Are you able to detect disabilities in your children? (E.g. hearing, sight, writing etc).
Yes ☐ No ☐

(b) If yes, what do you do after detecting a problem? ☐ Refer to school dispensary.
Send child ☐ me. ☐ Refer to health facility.

14. Do you follow up after this? ☐ Yes ☐ No

15. Do you normally counsel students and parents with health problems? ☐ Yes
☐ No

Involvement in SHEP

16. Do you give first aid in the school? ☐ Yes ☐ No

17. How do you stock the first aid box? School ☐ NGO ☐
Philanthropist ☐

18. Does the school have a SHEP committee? Yes ☐ No ☐

(b) In case of any committee, who constitute the membership? Please tick members.

☐ GHS representative ☐ GES representative

☐ School Administrator ☐ School representative (teacher)

☐ PTA representative ☐ Health Inspector

☐ School pupils

19. Who does the supervision and monitoring of the programme?

☐ District SHEP Coordinator ☐ Head teacher

☐ Assistant Head teacher ☐ Nobody

20. How do you get inputs for SHEP activities e.g. money, equipment and materials, resource persons, etc?

.....
.....

Referrals

21. Do you have health records in the school? Yes ☐ No ☐

22. Do you have referral forms? Yes ☐ No ☐

23. Do you permit children to bring their prescribed drugs to school?
Yes ☐ No ☐

24. Do you supervise or assist children to take their drugs? Yes ☐ No ☐

Personal hygiene and sanitation

25. How do children get drinking water in the school? Reservoir ☐
Buy from outside ☐

(b) In case of reservoir, do they use individual cups? ☐ Yes ☐ No

26. How do pupils wash their hands? ☐ With water alone ☐ with water and soap

27. In what do pupils wash their hands? ☐ In a communal bowl ☐ Under running water.

(For group discussion)

28. In your own estimation would you say the SHEP has been a success? Yes ☐

No ☐

b. If yes, how?

.....
.....

c. If no, why?

.....
.....

29. What are some of the challenges in the implementation of the SHEP?

.....
.....

30. How have you been coping with these challenges?

.....
.....
.....
.....

31. Suggest how best the SHEP could be improved?

.....
.....

.....

.....

KNUST



FACULTY OF MEDICAL SCIENCES \ DEPARTMENT OF COMMUNITY HEALTH

What do you do to improve cleanliness in your school? ☐ Sweep compound

after.

Do you wash your hands? ☐ Communal washing bowl ☐ Under

Do you use soap to wash your hands? ☐ Yes ☐ No

Do you use a toilet? ☐ After play

Do you normally wash your hands? ☐ Before eating ☐ After eating

Do you normally wash your hands? ☐ Yes ☐ No

Do you share it with others? ☐ Yes ☐ No

Do you have your own drinking cup? ☐ Yes ☐ No

What is your source of drinking water? ☐ Pipe-borne water ☐ Well ☐ Stream ☐ Borehole

What is your source of drinking water? ☐ Pipe-borne water ☐ Well ☐ Stream ☐ Borehole

What is your source of drinking water?

What is your source of drinking water?

6

How many times do you go for P.E in a week? ☐ None ☐ Once

KNUST



work

☐ Others

highest educational level: ☐ Degree ☐ Diploma ☐ Cert A

age ☐ 20-29 ☐ 30-39 ☐ 40-49 ☒ 50 and above

sex: ☐ Male ☐ Female

and characteristics

You can stop answering any question you consider embarrassing. Thank you for access to education in Ghana and even beyond, so feel at ease to express your opinion is valuable. Whatever you say will be confidential and will not in any way affect answers and you do not have to agree with what we will say. Everybody is for improved educational standard. We wish to stress that there are no rights to improve the efficiency in the implementation of the school health programme-Akwima-Kwanwoma District. Your opinions are very important and they address and failures of the school health programme in Ghana, particularly, in (2). We are conducting interviews with people like you to ascertain your views. Your name is and these are my colleagues. (Let them introduce

How have you been coping with them?

What are the challenges in the implementation of ZHEP?

What is your source of funding?

How do you organize workshops for teachers in the district?

How do you solve them?

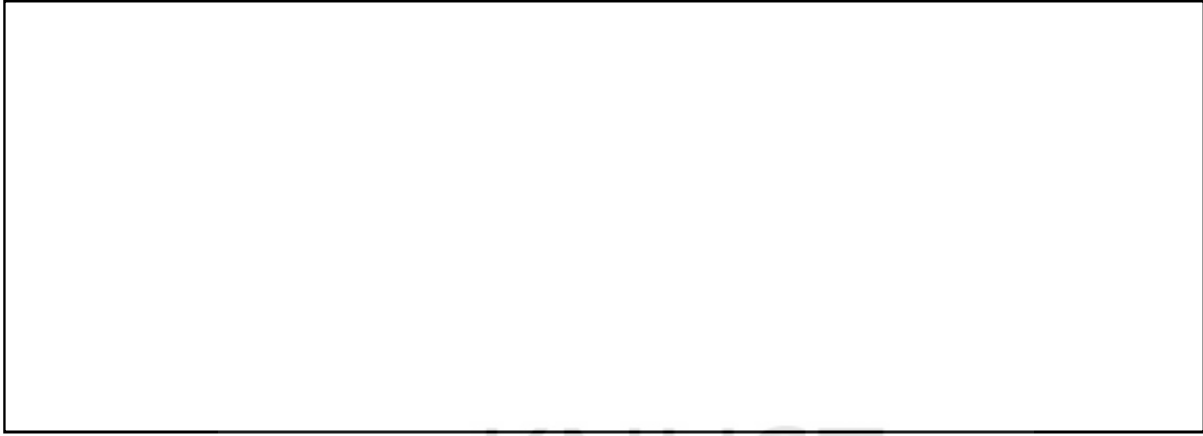
What are some of the major health problems of pupils in your area?

How many schools are you able to visit in a term?

How do you get resources for ZHEP activities?

What ZHEP activities are you engaged in?

Who are your ZHEP collaborators?



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se toilet for staff: Yes \ No

toilet for girls.....

toilet for boys

se toilet for pupils: Yes \ No

toilet in use: WC \ Pit Latrine \ KALB \ ALB \ Others

ing site: Clean \ Dirty

minate dumping: Yes \ No

storage facility: Dustbin \ No dustbin

WATER

inking cups: Yes \ No

on of food from dust: Yes \ No

.....

ood vendors.....

facility: Pot \ Drum \ Others

g water: Yes \ No

FOOD HYGIENE

.....

se chairs (adequate) Yes \ No

cracks) Yes \ No

lean) Yes \ No

3 (condition) Good \ Bad

THE SCHOOL BUILDING AND ENVIRONMENT

10. Personal cleanliness of vendors:

8. Clean plates, bowls and dishes: Yes \ No

9. No. with medical

4. Drinking cups (adequate) Yes \ No

5. Source of water: Safe \ Unsafe

remarks

8. Tables & chairs (condition) Good \ Bad

9. Doors and windows: Good \ Bad

4. Floors (smooth surface) Yes \ No

5. Walls (cracks) Yes \ No

KNUST

.....

.....

OFFICER

.....

MASTER

HEAD TEACHER \

.....

.....

.....

.....

environmental condition of the school.....

sanitation at the school? Yes \ No

is grown on the compound? Yes \ No

is grown around the building? Yes \ No

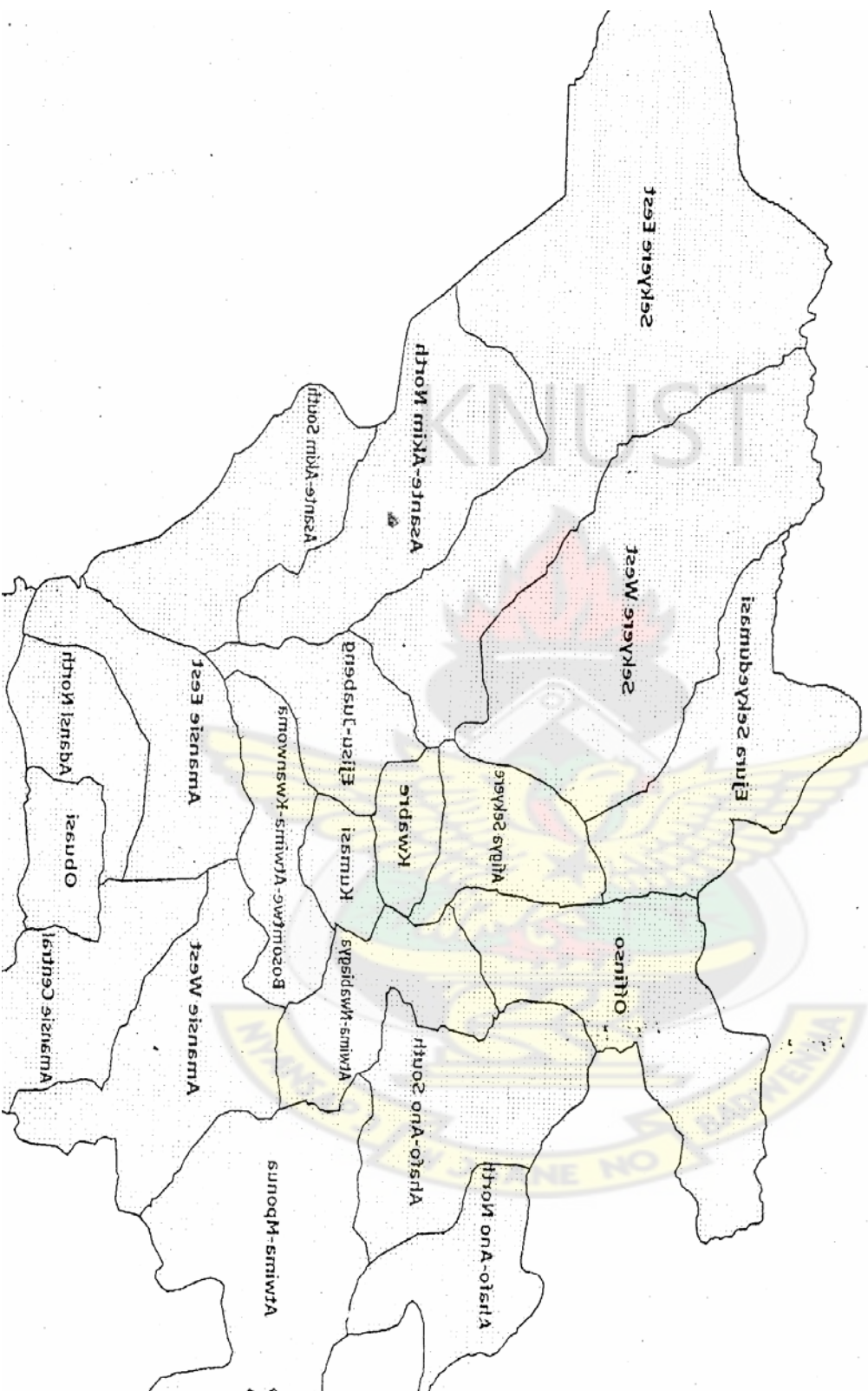
playing ground covered with green grass? Yes \ No

WATER OF THE SCHOOL COMPOUND

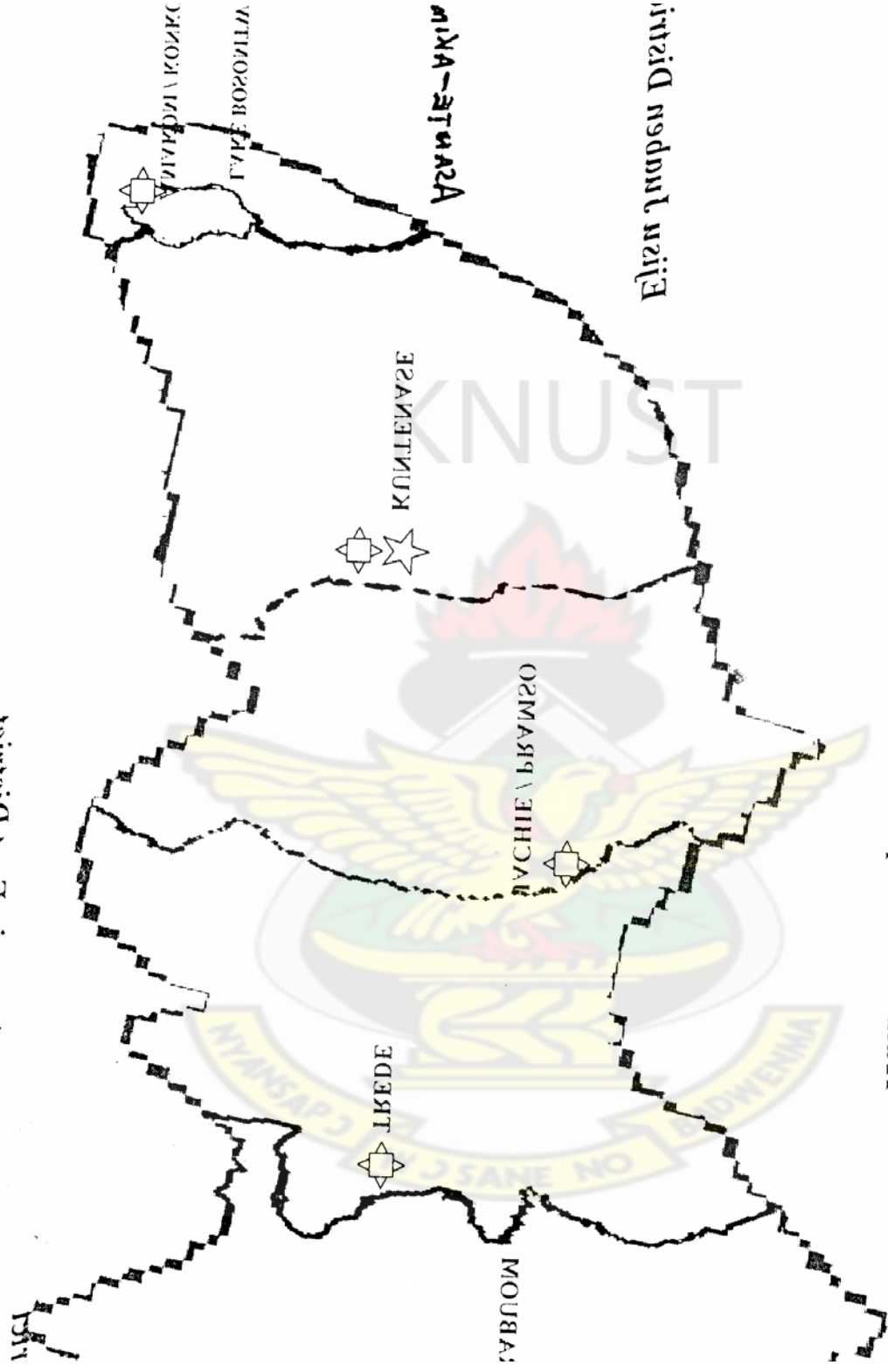
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Itai bna Japiciɔnum oɔɔm gnɔwɔnɔ qam Janoigɔ.



Amuzie East District



Егиз Игден District

Қызыл Метрополитан Агез

ВОЗМОЛ - АМУЗИЯ - АМУЗИЯ - ВОЗМОЛ

