AN EVALUATION OF SCHOOL HEALTH SERVICES IN POST PRIMARY SCHOOLS OF KADUNA STATE

BY

MAKAMA, BALA ANDREW

A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIMENT FOR THE AWARD OF DEGREE OF MASTER OF EDUCATION IN HEALTH EDUCATION

DEPARTMENT OF PHYSICAL AND HEALTH EDUCATION
AHMADU BELLO UNIVERSITY
ZARIA
NIGERIA.

APRIL, 2008

DEDICATION

This study is dedicated to God Almighty, who saw me through the period of the programme, my late father and mother who laid a solid foundation for my educational pursuit and to my wife and children for their patience and understanding during the period of the programme.

DECLARATION

I declare that the work in the thesis entitled 'AN EVALUATION OF SCHOOL HEALTH SERVICES IN POST PRIMARY SCHOOLS OF KADUNA STATE' has been performed by me in the Department of Physical and Health Education under the supervision of Professors K. Venkateswarlu , B.A. Ladani and J.A.Gwani.

The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at any university.

Makama, Bala Andrew April 29, 2008

_____	_____	_____
Name of student	Signature	Date

CERTIFICATION

This thesis entitled "AN EVALUATION OF SCHOOL HEALTH SERVICES IN POST PRIMARY SCHOOLS OF KADUNA STATE" by Makama , Bala Andrew meets the regulations governing the award of the degree of Master of Education (M.Ed) in Health Education of Ahmadu Bello University, Zaria , and is approved for its contribution to knowledge and literary presentation.

…….. …….

Prof. K. Venkateswarlu
Chairman, Supervisory Committee Date

…….. …….
PROF.B.A. Ladani Date
Member, Supervisory Committee

…….. ……
Prof. J.A. Gwani Date
Member, Supervisory Committee

…….. ……..
Dr. A. I. Kabido Date
Head of Department

…….. …….
Prof. S. A. Nkom Date
Dean, Post Graduate School

ACKNOWLEDGEMENT

The researcher is most grateful to God for his guidance and protection throughout the period of his study.

The completion of this research work has been possible by the joint efforts and contribution of many people. As a matter of fact, the researcher wishes to express sincere gratitude and appreciation to his supervisor Prof. K. Venkateswarlu for his assistance, encouragement and constant guidance and supervision in making this work a reality.

The researcher is grateful to his second supervisor Prof. B. A. Ladani for his fatherly and scholarly advice that has made it possible for the thesis to come to fruition. The researcher is grateful to Prof. J. A. Gwani who assisted him tremendously. The researcher is most grateful to Dr. A. I. Kabido, Head of Department, for his scholarly and fatherly advice. This work has benefited from the assistance of Dr. (Mrs) C. O. Adegbite for her contribution to the success of the research work. His profound gratitude also goes to Dr. (Mrs) M.A. Suleiman for her contribution to the success of the research work.. His profound gratitude also goes to Dr. K. Sabitu of the Department of Community Medicine, Ahmadu Bello University, Zaria for sparing time to validate the instruments.

The researcher wishes to express his appreciation to Prof. (Mrs) F.B. Adeyanju, Prof. Dikki and Dr. E.J. Chom for their moral and scholarly assistance throughout the period of the course. In the same vein, the researcher is most grateful to Mr. I. Haruna and all the staff of Physical and Health Education for their moral and academic support during the period of the study.

The researcher would not fail to register sincere gratitude to his employer, Shehu Idris College of Health Sciences and Technology Makarfi, Ministry of Health, Kaduna, Kaduna State Aids Control Agency, and Ministry of Education, Kaduna. The researcher highly appreciates the support and pieces of advice given to him at the most critical period of this work by Dr. D. R. Kajang of NACA, Dr. M. D. Anthony, Mr. G. N. Waterfield, Mr. D. D. Dalhatu, Mr. John Hussaini, Mr. J. A. Ndak and Mr. Istifanus Bagu. Others include Mr. H. M. Yarima,

Mr. Joseph Ali, Mr. I. B. Danjuma, Mr. Musa S. Yaki, Dr. Zainab I. Moh., Mrs. Paulina Samuel and a host of others not mentioned here. Their steadfastness, love, concern and interest towards the researcher’s educational pursuit are not only commendable, but highly appreciated with thanks.

ABSTRACT

The School health responsibilities are to provide a healthy environment that is conducive for teaching, learning and healthy living. This is possible only when adequate and appropriate school health services are provided. Secondary schools in Kaduna State, as in other parts of Nigeria, provide different health services. However, the level and quality of these services depend on many factors, like the commitment of the Ministry of Education and the involvement of parents and the community. As it is not clear what kind of health services are provided and to what extent they are maintained and utilised in secondary schools of Kaduna State, this study was conducted to evaluate school health services in secondary schools of Kaduna State.

To achieve the purpose of the study, Ex-Post Facto research design was used to collect the required information. In this design, 318 teachers and health personnel selected at random from urban and rural secondary schools of Kaduna State was selected as sample for this study. Out of these. A self developed and validated questionnaire on school health services was administered on the respondents. The questionnaire contain sections on personal information, appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counselling services, provision of nutritional programme, provision of health personnel and correction of remedial defects among the students in the secondary schools of Kaduna State. Out of the 318, 282(88.7%) responded.

This study reveal that school health services of secondary schools of Kaduna State did not include health services like appraisal of health status and control of communicable diseases. It also reveals that boarding schools have better health services than day secondary schools. On the basis of the findings of the study, it was recommended that Kaduna State Government should provide health personnel, facilities and equipment.

TABLE OF CONTENT

Title - - - - - - - - - - - i

Dedication - - - - - - - - - - ii
Declaration - - - - - - - - - - iii
Certification - - - - - - - - - - iv
Acknowledgement - - - - - - - - - v
Abstract - - - - - - - - - - vi
Table of contents - - - - - - - - - vii
List of Tables - - - - - - - - - ix
Abbreviations - - - - - - - - - x
Operational Definition of Terms - - - - - - - xi

CHAPTER ONE: INTRODUCTION.

1.1 Introduction - - - - - - - - - -1
1.2 Statement of the problem - - - - - - - - -4
1.3 Research questions - - - - - - - - - -6
1.4 Purpose of the study - - - - - - - - - -6
1.5 Basic Assumptions - - - - - - - - - -7
1.6 Research Hypotheses - - - - - - - - - -8
1.7 Significance of the study - - - - - - - - -8
1.8 Scope and Delimitations - - - - - -- - -10
1.9 Limitations of the study - - - - - - - - -10

CHAPTER TWO: REVIEW OF RELATED LITERATURE.

2.1 Introduction - - - - - - - - - -11
2.2 History of the School Health Services- - - - - - - -12
2.3 School Health Services- - - - - - - - - -18
2.4 Health Appraisal - - - - - - - - - -25
2.5 Health Counselling - - - - - - - - - -29
2.6 Healthful School Living - - - - - - - - -30
2.7 Healthful School Environment - - - - - - -32
2.8 Prevention and control of Communicable and Non Communicable Diseases -35
2.9 The School Nutrition Programme - - - - - - -39
2.2.0 First Aid Services - - - - - - - - -41
2.2.1 Health Education and Promotion of Activities of the School Health Services -44
2.2.2 Assessment of Handicapped Children - - - - - -46

2.2.3 The School Dental Service - - - - - - - -48
2.2.4 Home, School and Community Relationship - - - - - -50
2.2.5 School Health Policies - - - - - - - - -51
2.2.6 Social Aspect of School Health Services - - - - - -52
2.2.7 Summary - - - - - - - - - - -54

CHAPTER THREE: METHODOLOGY.

3.1 Introduction - - - - - - - - - -55
3.2 Research Design - - - - - - - - -55
3.3 The Population - - - - - - - - -56
3.4 Sample and Sampling Technique - - - - - - -56
3.5 Instrumentation - - - - - - - - -58
3.6 Validation of the Instrument - - - - - - - -59
3.7 Administration of the Instrument - - - - - - -60
3.8 Data collection and Scoring - - - - - - - -60
3.9 Statistical Techniques - - - - - - - - -61

CHAPTER FOUR: RESULTS AND DISCUSSION.

4.1 Introduction - - - - - - - - - -62
4.2 Results. (Test of Hypotheses) - - - - - - - -64
4.3 Test of Hypotheses - - - - - - - - -82
4.4 Discussion - - - - - - - - - -89

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

5.1 Summary - - - - - - - - - -95
5.2 Conclusions - - - - - - - - - -96
5.3 Recommendations - - - - - - - - -97
5.4 Suggestion for Future Research - - - - - - - -98
References - - - - - - - - - -99
Appendix - - - - - - - - - - -104

LIST OF TABLE

3.1 Distribution of Questionnaire to schools in each inspectorate division.

4.1 Demographic characteristics of the respondents.
4.2 Mean scores of the subject on health appraisal in the secondary schools.
4.3 Mean scores of the respondents on the treatment of common ailments among school children
4.4 Mean scores of the respondents on provision of first aid and emergency care to students and school personnel.
4.5 Mean scores of the respondents on control of communicable diseases in schools.
4.6 Mean scores of the respondents on promotion of sanitary conditions in schools.
4.7 Mean scores of the respondents on counselling of students on health.
4.8 Mean scores of the respondents on the nutritional programme of the schools.
4.9 Mean scores of the respondents on provision of health personnel in schools.
4.1.0 Mean scores of the respondents on the correction of handicapped defects in the secondary schools.
4.1.1 One t-test for differences between observed and expected on each aspect of school health services.
4.1.2 Two tail t-test for differences between urban and rural senior secondary schools in the provision of health care services in Kaduna State.
4.1.3 One way analysis of variance on health services in secondary schools of Kaduna State.
4.1.4 Mean scores on health services by qualification of the respondents.
4.1.5 Two tail t- test for differences between urban and rural senior secondary schools in health care services in Kaduna State.
4.1.6 Two tail t-test on health care services provided in schools by sex of the respondents.
4.1.7 Two tail t-test for differences between government and private senior secondary schools in health care services in Kaduna state.

ABBREVIATIONS

FMOE: Federal Ministry of Environment.

MOH: Ministry of Health.

PTA : Parents' Teachers Association.

VIPL: Ventilated Improved Pit Latrine.

OPERATIONAL DEFINITION OF TERMS

Technical terms used in this study are defined below on their operational sense.

COMMUNICABLE DISEASES: Diseases that can be transferred or communicated from one person or animals to the others. .

EPIDERMIC: Incidence of disease in the entire community.

HANDICAPPED: Students with physical defects.

HEALTH APPRAISAL: Identification of the health problems of the school children and School personnel. .

HEALTH SERVICES: These are services provided in the schools to maintain the health of the staff and students.

RURAL: All schools located outside the Local Government headquarters

URBAN: Schools located at the local government headquarters.

CHAPTER ONE

INTRODUCTION.

The concept of school health services has undergone both evolutionary and revolutionary changes since its inception in the school health programmes. These changes are made possible by advances in medicine and education. The emphasis in school health services has changed from providing only health services for children in our schools to one that is educational in nature and seeks to counsel children and parents in securing their own health services (Igwe, 1996).

It is universally recognized that the health of school children deserves special attention. In order to derive maximum benefit from the educational programme, the child must be healthy, physically, mentally, and emotionally (Lucas and Giles, 2003). They further assert that children at school are exposed to a variety of hazards ranging from physical injury, and infection, to emotional problems. School age is a period during which the child is undergoing rapid physical and mental developments. A healthy environment is required to provide the child with appropriate adjustments that are required during this critical period.

The school provides a unique opportunity for health education, a means of establishing a firm foundation for the health habits of the future adult population. By safeguarding the health of the children of today one is ensuring the health of the adults of tomorrow (Lucas and Giles, 2003).

School health services have existed for more than 100 years, beginning with attempts to control the spread of communicable diseases (Dorothy et al , 2002). Increasingly, health services provided by schools have expanded to meet other acute, chronic and preventive health care needs. Basic school health services, usually provided by nurses include

screening for medical conditions, administration of prescribed medications, care of children with special health needs; assessment for acute and contagious conditions, administration of first aid, health education and promotion activities, assessment of students' immunization status and maintenance of school records. Some local boards of education also partner with universities and other institutions of higher learning, providing expanded services for younger students and opportunities for learning through providing service to communities (service learning) and to college students (Fryer and Igoe, 1996).

The American Academy of Pediatrics recommends that each comprehensive health assessment visit, beginning at age three, includes attention to school health issues (Dorothy et al, 2002) . They further assert that public school districts in the United States provide varying levels of health services to their students, depending on several factors, such as state and federal laws, local boards of education perceptions about the importance of health services; parental and community involvement (Dorothy et al, 2002). In the United States, the health service phase of school health programme had its conception at the end of the nineteenth century. With the increasing prevalence of disease and illness during this period the value of carrying on health services in the schools, especially medical inspection, began to be realized, in 1872, and because of the prevalence of small pox, a "sanitary superintendent" was employed by the Board of Education in Elmira. In San Antonio, Texas, in the year 1890, a school medical inspection service was established. Following the series of epidemics among school children in 1890, while Dr. Samuel Burgin, Health Commissioner of Boston, established a system of medical inspection in schools (Kenneth, 2001).

Obionu, (2001) and Igwe (1996), outlined the scope of school health services to include

- Health appraisal of the pupils .Health Counseling, guidance and interpretation of the findings.

- Emergency care programme for the injured and treatment of ill health among the pupils.
- The control/prevention of communicable diseases.
- Health promotion and protection of the school personnel.
- Educational care and adjustment of pupil with mental health problems in schools.
- School food services and programme

Ademuwagun and Oduntan(1996), contend that the Nigerian school children do not suffer the very high death rate of the pre –school children, but they are subjected to multiple diseases which could hinder them from attaining their maximum physical and mental potentialities. Their health problems are numerous; they vary in severity, ranging from minor conditions like ulcers and common cold to severe conditions, such as cancers, tuberculosis and tetanus. They further assert that a high frequency of diseases and disabilities is encountered in apparently healthy children attending schools and for a great proportion of them, no treatment had been sought to correct the abnormalities. Most of the school children are stunted in growth and may exhibit signs of nutritional deficiencies. Practically all school children in the Nigerian community suffer from one type of worm infection or the other.

School health services care came into existence in 1899 after the Boer war as a result of the defeats the British Soldiers suffered in the hands of the South Americans. Upon the investigation of the cause of the defeat, it was discovered that most of the soldiers used by the British were students that were not medically fit to join the army. This, therefore, prompted the British Government to introduce school health services to help check the status/standards of pupils (Sa'adatu, 2004). Sofoluwe et al (1998), advanced that the school health services started in Nigeria in 1929 , and about the same time as in Uganda and ,that the first full time preventive medical officers were appointed in the two countries to start maternal child and

school child health services. They further maintained that late. Dr. Ladipo Oluwale started school health services in Lagos in 1929.

Sa'adatu (2004), maintained that school health services had been dynamic in the western part of the country but the reverse is the case in the northern part of the country. She advanced that school health services were introduced in Kaduna state in 1980 and formally established in 1985 with proper transfer of health personnel from Ministry of Health to Ministry of Education. This slow take off of the programme was because most of the health care services were catered for by the management of schools which was directly run by missionaries. However, due to unexplainable reasons' the programme had not been on a strong footing in the state, particularly due to lack of funds by the Ministry of Education, to absorb the transferred staff from the Ministry of Health. It is not clear as to what extent school health services were affected by this condition.

1.2 STATEMENT OF THE PROBLEM

The school has an obligation to establish a healthy environment, which will help the students maintain optimum fitness adequate for learning, teaching and maintains condition for healthy living, assure optimum health for individual and make intelligent decisions about personal, family, and community health (Igwe, 1996). The emphasis in school health services had changed from providing only health services for children in our schools to one that is educational in nature and seeks to counsel children and parents in securing their own health services. School health services are the health and related health procedures carried out by the health personnel, teachers and all others connected with school health in order to appraise, protect and promote the health of the child and school personnel (Igwe and Emaharole, 1993).

Secondary schools in Nigeria provide various levels of health services to the students. Level of services depends on many factors, like the State and Federal laws, the commitment

of the Ministry of Education, perception about the importance of health services and parental and community involvement (Obionu,2001).Basic school health services, usually provided by nurses and health education personnel included screening for medical conditions, administration of prescribed medications, care of students with special health needs, assessment for acute and contagious conditions, administration of the first aid, immunization, health education and promotion activities and maintenance of school health records. Some schools also partner with medical and local authorities, providing expanded services for students.

Kaduna State has about 466 secondary schools. Most students came from Kaduna state, mainly from poor families. In addition to pervasive poverty, most schools struggle with two other significant concerns which include academic achievement and students attendance. Most secondary schools can not meet the required academic standard and the attendance rate is less than 75%. If children are healthy, these problems can be minimized, because healthy children are better learners (Igwe, 1996). Unfortunately, the health services provided in the secondary schools appear to be far from adequate.

Perhaps, the negligence of the school health services by the responsible ministries (Health and Education) is attributable to the low level of academic performance and absenteeism in post primary schools in Kaduna state. Despite the effort of the government to improve the facilities of school health services, cases of infection remain high among students in post primary schools. It is therefore not clear how adequate the health services in Kaduna State are. In view of this state of affairs in the Ministry of Education of Kaduna state, it is not clear what kind of health services are provided in secondary schools of Kaduna state and to what extent they are maintained and utilized. This study was therefore an attempt to assess the health services provided in secondary schools in Kaduna state.

1.3. RESEARCH QUESTIONS.

This research was conducted to answer the following specific research questions.

1. Do school health services include appraisal of health status , treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counseling services, provision of nutritional programme, provision of adequate number of health personnel and encouragement of correction of remedial defects among secondary schools children in Kaduna state?.
2. Is there significant difference between respondents of urban and rural secondary schools in their assessment of school health services in Kaduna State?
3. Is there significant difference between respondents in their opinion as influence by their qualification on the health services provided by secondary schools in Kaduna State?
4. Is there significant difference between respondents of boarding and day secondary schools in Kaduna state in their assessment of school health services?
5. Is there significant difference between male and female respondents in the estimation of school health services in secondary schools of Kaduna State?
6. Is there significant difference between respondents from government and private secondary schools in Kaduna state in their assessment of school health services?

1.4 PURPOSE OF THE STUDY.

This research was concerned primarily with the assessment of school health services in Kaduna State to achieve the following purpose:

(a) To identify school health services available in post primary schools in Kaduna State. Health services include counseling services to children, parents and teachers in Kaduna state.

(b) To find out the adequacy of health services provided in the secondary schools of Kaduna State.

(c) To find out the differences between urban and rural secondary schools in the provision of health services in Kaduna State.

(d) To find out the differences between boarding and day secondary schools in Kaduna State in the provision of health services.

(e) To find out the differences between Government and Private secondary schools in Kaduna State in the provision of health services.

(f) To find out the differences between male and female respondents in the assessment of health services in secondary schools of Kaduna State.

1.5 BASIC ASSUMPTIONS.

This study was based on the following assumptions:

i. School health services are provided in secondary schools of Kaduna state.

ii. Health services are influenced by the quality of health personnel, teachers and the quality of drugs provided

iii. The possible factors militating against adequate practice of school health services in Kaduna state can be identified.

iv. School health services in Kaduna state can be objectively assessed.

1.6. RESEARCH HYPOTHESES.

Based on the research questions, the following hypotheses are formulated.

1. School health services do not include appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counseling services, provision of nutritional programme, provision of adequate number of health personnel and encouragement of correction of remedial defects among secondary school children in Kaduna state.
2. There are no significant differences between respondents of urban and rural secondary schools in their assessment of school health services in Kaduna State.
3. There is no significant differences between respondents in their responses on the health services provided by secondary schools in Kaduna State based on qualification.
4. There are no significant differences between respondents of boarding and day secondary schools of Kaduna state in their assessment of school health services.
5. There are no significant differences between male and female respondents in their opinion on the health care services provided in Kaduna State secondary schools .
6. There are no significant differences between respondents from government and private secondary schools in their assessment of school health services in Kaduna state.

1.7 SIGNIFICANCE OF THE STUDY.

The study was justified on the following bases:

1. School health services are provided in all post primary schools of Kaduna State, but it is not clear what kind of services are provided and to what extent they are provided in the secondary schools of Kaduna State. The result of the study will show the kind of health services provided in the secondary schools of Kaduna State. The results will further indicate whether these services were adequate or not.
2. It is a common belief that secondary schools in urban areas are provided with better health services than secondary schools in rural areas of Kaduna State. However, there

is no research evidence to justify this belief. The results of the study shows whether there is any significant differences in the provision of health services between urban and rural secondary schools of Kaduna State. This may help the concerns ministries of Kaduna State to take adequate and appropriate measures to remove any disparity between these two type of secondary schools if it is found.

3. Is widely belief that students in boarding secondary schools in Kaduna State are provided with better health services than students from day secondary schools in Kaduna State, as students residing in the school need medical attention all the time. However, no research evidence has been reported, to the knowledge of this investigator, regarding any such differences. This study will show whether health services in boarding secondary schools are better than day secondary schools in Kaduna State.
4. Is widely belief that private secondary schools provide better health services than government secondary schools in Kaduna State, because they charged fees from students. It's not clear whether private secondary schools really provide better health services than the government secondary schools in Kaduna State. This study will show whether this belief is justified.
5. Usually there are differences between male and female respondents in any assessment. The result of the study will show whether there are such differences between male and female respondents in the assessment of health services in secondary schools of Kaduna State.
6. This study will bring to light new areas for further research related to school health services.

1.8 SCOPE AND DELIMITATIONS.

This study was delimited to the following.

1. Study of all the post primary schools in the State would have been desirable but because of the size of the schools and their accessibilities, only 106 schools out of 446 (20%) registered public and private secondary schools from the twelve (12) inspectorate divisions in the State were used.
2. Only the registered public and private secondary schools were used for this study.
3. Teachers and school personnel constituted the subjects for this study.

1.9 LIMITATIONS OF THE STUDY.

This study was limited in the following respects which would be taken into consideration while interpreting the results of the researcher .

1. The Study is limited by the fact that instrument used was a questionnaire which might not be responded objectively by the respondents correctly, but this was taken care of during the analysis.
2. Accurate and reliable records about school health services are extremely difficult to obtain, as a result of which the researcher relied much on the responses of the subjects.
3. A survey research like this can provide better results if it utilizes interview and observation techniques. Because of time and economic constraints it was not possible to adopt interview and observation techniques.
4. Delay by the typist hinders the completion of the work on timely.

CHAPTER TWO

2.0 REVIEW OF RELATED LITERATURE.

2.1 INTRODUCTION.

The purpose of this study was to assess the activities of school Health services in post primary schools in Kaduna State. The researcher had to depend solely on textbooks, journals, internet ,seminar papers and papers presented by eminent scholars on the related topics for literature review. The information collected from these sources are presented in this chapter under the following sub-headings:

i. History of school Health Services.

ii. School Health Services.

iii. Health Appraisal.

iv. Health Counseling.

v. Healthful School Living.

vi. Healthful School Environment.

vii. Prevention and Control of Communicable Diseases and non-communicable diseases.

viii. The School nutrition programme.

ix. Treatment of common ailments and first aid services.

x. Health Education and Promotion activities of the School personnel.

xi. Assessment of Handicapped children.

xii. The school Dental Services.

xiii. Home, School, Community Relationship.

xiv. School Health Policies.

xv. Social Aspect of School Health Services.

xvi. Summary.

2.2 HISTORY OF THE SCHOOL HEALTH SERVICES

Sofoluwe et al (1998), advanced that the study by (Ware, 1812) on the health of school children was recorded in 1812, when he reported on the eyesight of school children in London, and of students at Oxford University. Similarly, investigations were then stimulated in Sweden in 1840 and in Breslau, Germany, in 1866, and in 1883, the first school doctor was appointed in Frankut-am main, Germany. Two years later two doctors with a similar role were appointed in Lausane, Switzerland and in 1888 school medical inspection was started in all the political divisions of France (Sofoluwe et al, 1998). They further assert that the first medical investigation into school health was conducted in Britain. The first school medical officer in England was appointed in 1890. By 1905, eighty five doctors had been appointed and the school health services were organized on a national basis in 1908.

Kenneth (2001) , contends that health services phase of school health programme had its conception near the end of the nineteenth century. With the increasing prevalence of disease and illness during this period, therefore, the value of carrying on health services in the schools, especially medical inspection, began to be realized. In the year 1872, because of the prevalence of small pox, a “sanitary superintendent” was employed by the Board of Education in Elmira, in San Antonia, Texas. In the year 1890, a school medical inspection service was established and due to a series of epidemics among school children the same year Dr. Samuel Durgin Health commissioner of Boston established a system of medical inspection in the schools and fifty medical visitors were appointed to carry on health work in the schools of Boston. The primary responsibility of these physicians was to visit the schools daily and examine those children suspected of having any sort of communicable diseases. Pupils found to be infected were taken out of school and quarantined (Kenneth, 2001).

According to Sa'adatu (2004), school health services started in 1899 after the Boer war. As a result of the defeat of the British soldiers in the hands of the South Americans, an investigation as to the cause of the defeat revealed that most of the soldiers recruited by the British were students that were not medically fit to join the army. This situation prompted the British Government to introduce school health services in schools to help check the health status and standard of students.

Kenneth (2001), maintained that programmes of school medical inspection were developed in large cities of the country, including Chicago in 1895, New York in 1897, and Philadelphia in 1898. In 1899, the first state law relating to the medical inspection of school children was passed in Connecticut. This law required teachers to test the eyesight of their pupils once every three years. He further advanced that twenty five nurses were appointed to work in the public schools of New York City, in 1902. In 1903 the first school dentist was appointed in Reading, Pennsylvania and in 1904, ear, eye and throat examinations of school children were made compulsory in Vermount. With the aid of Dr. Alfred Fones in 1914, ten dental hygienists were employed in the schools of Bridgeport, Connecticut (Kenneth, 2001).

Kenneth (2001), further subscribes that some of the greatest gains in school health service phase of health programme began to be made after the First World War, and as a result of draft examination of inductees it was realized that over half of the defects detected could have been corrected during school years, thereby challenging the school to inaugurate a remedial programme for young children. Many schools began to improve and broaden the scope of health services provided to their pupils. During the 1920's, the term "health service" came into use to describe the broader responsibilities of the school toward the students. Similarly, between 1930 and 1951, the contributions of several organizations, educational institutions and world events gave additional impetus to the development of a superior programme of health services for school children (Kenneth, 2001).

Kenneth (2001), further maintained that Kilander's report published in 1952 indicated that school health services were in operation in ninety one percent of all school systems in cities with a population of 2,500 or more. The health services provided in these cities included at least a medical and dental examination or inspection. At the present time the health service programme of the more advanced schools include daily health observations, periodic screening examinations, periodic dental and medical examination and vaccination procedures and first aid. Bucher (1979), and Ejifughua (1999), stated that the health programme in the schools now attempt to build in the students sound foundation of scientific health knowledge, health attitudes and health habits. They affirm that health service is a comparatively new subject in the school programme which derives its foundations from the biological, behavioral and health sciences. It is an academic field and subject which help human beings to apply scientific health discoveries to their daily lives.

They further assert that the earlier forms of health programme in the schools were evidenced in the latter part of the nineteenth century and were primarily concerned with the temperance movement. A large amount of time was devoted to discussing the ill effects of alcohol on the human body. They added that a programme of health instruction was introduced in Ohio in 1892 as a result of pressure from the Women's Christian Temperance Union. Early instruction in health, other than that of temperance, emphasized acknowledgement of the structure and function of the human body. During the early part of the twentieth century, a movement started which emphasized the formation of healthful attitudes and habits, instead of stressing the names of the various anatomical parts of the human body or the harmful effects of alcohol; the emphasis was along the lines of better living.

Bucher (1979), reaffirmed that the result of the medical examinations of selective service officials during the Second World War, which pointed out the incidence of dental

carries, postural abnormalities and other defects, gave impetus to an increased emphasis on health in the schools.

These statistics also did much to stimulate thinking towards better preparation of health teacher.

Ejifugha (1999) , asserts that the force of social progress introduced the school as an institution which can be profitably utilized to tackle social problems. She maintained that school health education actually evolved when social factors that concerned health began to be taught as subject matter in schools. The idea of health education in schools came into being in 1779, when Johann Perter Frank, published the four volumes of the medical policy and advanced the following.

i. The supervision of health of school children.

ii. Laid down programme for school meals.

iii. Consideration of child health and comfort in the construction of school furniture.

iv. Teaching of hygiene in school.

v. The need for regular physical exercise for school children.

She further affirmed that Frank wanted to implement these recommendations by the use of authoritarian ship which was prevalent in those days, hence the medical policy. And this was the time the health of school children was considered for inclusion in the educational process. France, in 1933, became a pioneer in the field by setting up a school health programme and making school authorities legally responsible for sanitation in schools. Following the France lead, other European nations set up regulations for the protection of the health of school children in 1946. The International Bureau of Education at its session made a recommendation on the teaching of hygiene in primary and secondary schools. What was

required in the area of school health education was made known to Ministries of Education all over the world (Ogbalu, 1979).

Sofoluwe et al. (1998), contend that school health services started in Nigeria in 1929, about the same time in Uganda and the first full time preventive medical officers were appointed in the two countries to start maternal, child and school child health services. They assert that late Dr. Ladipo Oluwale started the service in Lagos. They observed that over 50% of children of school age (5-19 years) in Africa do not attend any school, yet Africa has not organized any special health services to cover these children.

According to Ejifugha (1999), John Gay, in 1936, organized a health exhibition on health talks, which was given to school children in association with the Dental Board of the United Kingdom. The health talks were given to thirty four schools as well as juvenile instructing centre. She adds that the public health department was mandated to give lectures in hygiene to teacher training college in 1943. After the Second World War, the health department, in association with the Scottish council for health education, founded in 1943, organized a health week in 1946. Film show on health issues were shown in schools and essay competitions were organized for school children and mothers and craft displays were exhibited at health clinics.

She further stressed that the proposal for the school medical service scheme was suggested in 1952 when the director of medical services, Eastern Region, addressed the Honourable Minister of Public Health, Enugu, suggesting an Embryo on school medical service scheme which she said must remain incomplete until many doctors were available.

Similarly, she noted that medical officers were already doing much in schools, visiting them on tours inspecting sanitation, vaccination and nutrition.

The director of medical services observed that a careful physical examination of each pupil, continued observation of all those found abnormal and annual examination of all

normal voluntary agencies and private medical practitioners could be employed for this work on a session basis. The minister welcomes the suggestions for an embryo school medical service proposed by the Director of medical services who happened to be Dr. J. Murray. His suggestion was accepted by his colleagues and he instructed that each senior medical officer should take one well chosen school in his/her area of service to start off the pilot schemes. She further stated that hygiene, as a school subject was rather inherited from the colonial Government in the Southern States of Nigeria. Heath services as applied to the school health programme embody all efforts of the school to conserve, protect and improve the health of the school population which is accomplished through a wide variety of activities and procedures, such as health appraisal, follow through of appraisal findings, health counseling, care of emergency illness and injuries, maintenance of records, control of communicable diseases, health supervision of handicapped and exceptional students and health of the school personnel (Ogbalu, 1979).

Sa'adatu (2004), maintained that school health services had been dynamic in the Western part of the country but the reverse is the case in the Northern part of the country. She further contend that school health services were introduced in Kaduna State in 1980 and formally established in 1985. This slow take off of the programme was because most of the health care services were catered for by the management of school, which was directly run by the missionaries. However, due to unexplainable reason, the programme had not been on a strong footing in the state particularly due to lack of funds.

The Permanent Secretary, Ministry of Health, Kaduna (1985), suggested the need to establish private clinics in various schools and to post nurses to the boarding schools and bigger day institutions who do not already have nurses. In response to this suggestion, the Ministry of Education welcomed the idea but the posting of the school nurses was to be done

in January, 1986, when funds for their salaries might have been provided in the 1986 estimate (budget).

2.3 SCHOOL HEALTH SERVICES

Igwe (1996), defines school health services as all the health services provided for the school age child within the school in order to maintain, promote and appraise his health status. Similarly, Ademuwagun and Oludayisi (1986) and Achalu (2001), viewed school health services as the procedures that are carried out by physicians, teachers and other personnel to appraise, protect and promote the health of school children and school personnel.

While Brooks and Brooks (1979) , advanced that school health services are staffed by a team of professionals who exercise surveillance over the health of the school children in order to identify those in particular need and to provide help when necessary. The team according to them includes doctors, with specialist training, dentists, psychologists, social workers and teachers.

Teachers, according to them are directly involved in the working of the school health service from the point of view that service is designed to help the child to benefit from education and also to help in the identification of the child who is at risk of falling behind his peers in the ordinary school curriculum and who is in need of special help, remedial teaching and follow on assessment. Similarly, they assert that the modern school health programme in large school systems has expanded to include several persons who contribute their specific skills to pupil's health and they include school physicians, school nurses, physical educators, school dentists, dental hygienist, teachers of nutrition, dietitians, audio-merits, psychologists, psychiatrists, health educators, health councilors and health coordinators.

Park (2002), states that school health services are an economical and powerful means of raising community health and more importantly, the future generations. He further

maintained that school health services are a personal health work service and developed during the past 70 years, from a narrower concept of medical examination of children to the present day broader concept of comprehensive care of the health and well being of children throughout the school years.

Dorothy et al (2002), assert that basic school health services, usually provided by nurses, include screening for medical conditions, administration of prescribed medications, care of children with special health needs, assessment for acute and or/contagious conditions, administration of first aid, health education and promotion activities, assessment of students' immunization status and maintenance of school health records. They contend that some local boards of school, also partner with University and other institutions of higher learning, providing expanded services for younger students and opportunities for learning through providing services to communities and to college students.

Obionu (2001), rightly pointed out that the provision of health services for children of school age is very important, especially in developing countries where health service are not easily accessible to many people. He said that school health service aimed at helping the children achieve the maximum physical and mental health necessary for them to obtain full benefit from their education: Children need good health and freedom from disease, handicap or disability in order to benefit from their school. He maintained that some children, especially those from less privileged homes, the school may offer them the only opportunity of benefiting from the health care services.

He further advanced that in most places, the children of school age form as much as 20-30% of the population, so a health service for them takes care of a good portion of the community. Exposure to communicable diseases is highest during school years when the child comes in contact for the first time with people outside his family. During this period, the child is exposed to various physical and emotional hazards. He concluded that the school

child is easy to be molded due to his tender age and health education given at school can be very effective and will not only reach the child but his home and even the next generation when the child becomes an adult or a parent.

Igwe (1996), and Achalu (2001), outlined the services of school health to include:

i. Appraising the health status of pupils and school personnel.

ii. Counseling pupils, parents and others.

iii. Encouraging the correction of remedial defects and proper adjustment of those identified as not remediable.

iv. Assisting in identification and education of handicapped pupils.

v. Helping to prevent and control diseases.

vi. Providing emergency for injuries of sudden illnesses.

Obionu (2001), Ademuwagun and Oduntan (1986), in addition to what had been listed above added school instruction programme and promotion of healthy growth and development as part of the school health services.

While Nancy et al (2000) , viewed school health services in three perspectives. They assert that models of these services usually form a continuum. These models are traditional basic care, expanded school health services and comprehensive primary health care services. Core services provided in the school based health centre or in other locations not on school property. They assert that expanded services vary slightly in degree to which such services are mental health, counseling and social services are included, school health services is also described in terms of staffing.

Dorothy et al (2002) , advanced that school health services existed for more than 100 years, beginning with attempts to control the spread of communicable diseases. Health services provided by schools have expanded to meet other acute chronic and preventive health care needs. They believe that healthy children are better learners. Basic health services

include vision, hearing and dental screening, medication administration, care of children with specialized health needs, first aid assessment of acute health problems, health education and assessment of immunization status. They further assert that Mobile Health Programme section provides enhanced health care services which focus on eliminating medical barriers to student attendance and achievement.

Laura et al (2001), see schools as one important component of community wide violence prevention. They assert that school based nutrition education can improve the eating habits of young persons. School health programme refers to all aspects of the programme that affect the health of school population. It involves all health activities that are planned, organized, and conducted by the school and under the jurisdiction of the school. It includes all school activities that contribute to the understanding, maintenance, and improvement of the health of the school population. Ordinarily a major part of the school health programme is carried on within the confines of the school. The other part may be done on a community-wide basis and may involve numerous community organizations and agencies (Ogbolu, 1979).

Anne (2002), affirms that school health service programme undergo rapid changes to meet the health needs of today's students. These needs stem largely from increased number of students with special health care needs attending school, increased stress and time, pressure on families rapid restructuring of the health care system serving children, and recognition that schools provide opportunities to identify students with health risk.

She affirms that school health services in Massachusetts were under resourced and unrecognized with some standards which include a few laws and regulations, some needing revision. School nurse in Massachusetts, as in other states, practiced in isolated setting. As

licensed health professionals they practiced in an educational environment with a cultural communication system and goal distinctly different from the health care system.

Ademuwagun and Oduntan (1986), viewed school health services as the provision of services to students and school personnel as follows:

i. Appraisal of the health status of the school children.

ii. Treatment of common ailments among school children and the provision of emergency for injuries and sudden illness.

iii. The control of communicable diseases in schools.

iv. The promotion of optimal sanitary conditions in the schools.

v. The counseling of children, parents and teachers.

vi. School nutrition programme.

They outline the objectives of school health services to include:

a. To promote growth and development in all school children

b. To detect any physical and mental defects among students which could affect their learning ability in school.

c. To control the spread of communicable diseases among school children.

d. To instill the principles of health into school children.

e. To promote optimal sanitary conditions in the school

f. To provide emergency care to school children.

g. To counsel pupils, teachers and parents.

h. To offer good guidance to children in the choice of a vocation

i. To provide social and educational therapy for handicapped children.

j. To protect and promote the health of the school personnel.

Igwe (1996) and Brooks and Brooks (1979), hold similar views with that of Ademuwagun and Oduntan(1986). However, Igwe(1996), affirms that these objectives are much more important and with the introduction of free primary education in some states and the 6-3-3-4 system of education with their attendance health problems as thus:

i. Over crowding

ii. Personal cleanliness.

iii. Nutritional difficulties.

iv. Sub-abnormalities or the problems of handicapped.

v. Diffused family background.

vi. Inadequate school health facilities .

vii. Safety and accident problem.

viii. Nuisance disease infection.

ix. Food borne disease infection.

x. Basic environmental problem like littering.

xi. Problems connected with indiscipline and promiscuity.

Sofoluwe et al (1998) ,itemized the functions of school health services as:

i. Regular observations and screening of children, which include early detection of defects in early children that can adversely affect both the child's present physiological functioning and his later educational and social adjustment.

ii. Ascertainment of children with handicapped which necessitate special educational treatment arrangements

iii. Provision of certain curative and specialist clinics e.g. dental

iv. Communicable disease control which is done by prophylactic immunization.

v. Cleanliness e.g. examination of pupil's and control of outbreaks of communicable diseases.

vi. Environmental sanitation which includes inspection of school buildings, lighting and ventilation, sitting arrangements, toilet facilities and availability of play grounds.

vii. Nutritional defects can be corrected by advice on dietary habits and provision of a balance diet to school children. There should be regular examination of cooks, and food handlers who provide the school meal service, and any person found to be carrier of any disease which could be transmitted to the children should not be employed.

viii. Health education is essential to impact knowledge of heath and disease to the school child, which will be useful not only to himself but to his parents.

ix. Children should be taught about accident prevention both in school and at home.

x. Inclusion of training of teachers in health matters in their curriculum of training is an important factor in a programme of school health.

xi. Special surveys and investigations may be carried out in the school health service.

They maintained that school age children in developing countries suffer the effects of chronic malnutrition and multiple infections in early childhood. They assert that major problems of school children in developing countries like Nigeria were related to malnutrition; multiple infections and trauma. Ogunmeken (1973), in a study , high rates of intestinal parasites infection were found among school children in Nigeria, the commonest of which were ascaris lumbricoides, hookworm and trichuristrichura.

2.4 HEALTH APPRAISAL.

Ademuwagun and Oduntan (1986), outline the main objectives of the appraisal of the health of school children is to be able to detect early, any physical, medical and mental defects which might interfere with the child's ability to benefit from the educational opportunities available to him, which includes daily supervision of children by the classroom teachers and routine medical inspection of school children. They affirm that health supervision enables the teacher to identify early, those children who deserve some special attention and to measure some simple parameters which can be used as indices of the children. They further subscribe that teachers should be trained to be observant and be able to recognize the common diseases of school children, alert to subtle changes of appearance or behaviour of the children which may herald the consent of diseases.

Igwe (1996), viewed health appraisal as a realistic appraisal of the well being of children, their needs and the nature and extent of their problems is the basis of school health education programmes which is to identify the health problem of individual child in time and then work constructively for him to enjoy school life or bring him to such a state he can benefit from school experience. He asserts that appraisal of school children is an ideal meeting ground for medical men, educational and public health authorities for mutual benefit and understanding the health, education and welfare of school children. Health appraisal in schools may be achieved in the following ways:

a. Continuous observation and personal inspection of the child in the areas of his appearance, educational progress, behaviour, presence of disease symptoms, speech and obedience to authority and law.

b. Use of screening test by teachers, nurses or other technicians as:

i. Hearing test (audiometer or turning fork).

ii. Vision test (snellen test and flask card).

iii. Height and weight measurement (Height rule and weighting balance).

iv. Posture test through walking on floors and observation through mirrors.

Periodic medical examination and dental examination.

d. Psychological and social evaluation test through the use of sociograms, psychiatric consultations and mental intelligent test and other psychological examination.

e. Physical fitness test which involves, the test of the fitness level of the child by checking such fitness ingredients as endurance, stamina, power, flexibility, speed, balance and coordination.

Achalu (2001), affirms that health appraisal is that phase of the school health programme that attempts to determine the total health status of the child through the use of health history, observations, screening and medical, dental and psychological examination.

Ademuwagun and Oduntan (1986), asserts that teachers should be able to carry out daily inspection of the pupil's to assess their general cleanliness and detect the presence of ulcer, abrasions, common symptoms like discharging ears, infected eyes and skin rashes. They affirm that teachers should measure the heights and weights of children at the beginning of each term to assess the rate of their growth using a standardized potable scales and stripped down to their pants with their shoes removed.

Height should be measured using a standardized vertical scale and children should remove their shoes.

They maintained that records of heights and weights provide valuable information as to the rate of physical development of children. In interpreting the results of the height, emphasis should be on comparison of his present measurements with his previous measurements.

Igwe and Emeharole (1993), viewed school health services as an articulated programme of action designed to determine the health status of the child and school personnel with a view to identifying any defects or disabilities and educate parents and children alike on ways of preventing diseases and aiding the teachers to recognize early signs and symptoms of diseases. They maintained that an effective school health appraisal comprises of:

* Health history.
* Medical examination

* Dental examination.
* Health observation.
* Screening
* Psychological examination.
* Physical fitness examination.

They see health history as the acquisition and entry into the cumulative school records information pertaining to pupils or students medical history that relates to:

a. Records of genetic or inherited health problems.
b. Record of visual acuity.
c. Records of hearing acuity.
d. Records of common allergic signs and symptoms
e. Records of family history in respect of any congenital disease.
f. Records of health related behaviors or environmentally influenced health problems.
g. Records of prenatal and preschool vaccination: kept by parents.

They viewed medical examinations as an initial periodic or routine medical examination undertaken by the school health physician, school health nurse and other Para-medical personnel to assess the health status of the school child. Ademuwagun and Oduntan (1986), contend that periodic medical inspection of school children should be carried out at least twice in the primary school years and twice during post primary school years. They maintained that during the school years these children are under the constant supervision of teachers who have been trained to screen for diseases and refer appropriate cases for treatment.

Ejifugha (1999), discovered that teachers in the Eastern Region of Nigeria were already instructed to undertake the supervision of personal hygiene of pupils, which involve

the inspection of hands, teeth, mouth, head, feet and clothes. She further advanced that many schools went through a form of daily inspection for cleanliness and the need for school medical services were observed in the early forties in Nigeria.

Ademuwagun and Oduntan (1986), subscribed that children should have their eyes examined before starting school and periodically during the school years. They added that many visual screening tests are available but the most appropriate, convenient and intensive for use among school children in developing countries is the snellen test for visual acuity. The test according to them involves reading of test objects, like letters, numbers or symbols on a chart from a measured distance of 6 meters. The objects on the charts are of graduated sizes and each objects numbered to indicate the standard distance at which a person with normal visual acuity should be able to identify it.

2.5 HEALTH COUNSELLING.

Igwe (1996), see health counseling as a method of interpreting to pupils and their parents the findings of health appraisal and encouraging and assisting them to take action as need to realize their full potential. He maintained that health counseling could be done through the school physician, nurse or classroom teacher. Counseling according to him requires preparation and health counselor must be familiar with the pupil's health cumulative health record and previous counseling results. The concept to the entire health counseling procedure is an attempt to have pupils and their parents realize their health problems so that they can actively plan and establish procedures for solving the problem, help pupils and parents help themselves. He concluded that the results of counseling should be reported to parents, directly or through school conferences, Parent's Teachers Association(PTA) and home visit.

Bucher (1979) , supported Igwes' view but added that health appraisal and counseling are of little value unless there is a "follow-through" to see that remediable health defects are corrected. Dorothy et al (2002) , subscribed that several studies examined school health systems and parent follow-up to referrals made as part of school health screenings. They assert that health personnel often become frustrated when a problem requiring further intervention has been identified and parents do not follow through on referrals. Barriers to follow up identified include parents not having time to follow up, not having financial resources, competing priorities, perception or poor communication between the schools and parents, lack of appropriate providers and parental beliefs that the problem referred was not serious enough for follow up.

2.6 HEALTHFUL SCHOOL LIVING.

Achalu (2001), affirms that healthful school living is a term used to designate the plans, procedures and conditions within the school that are most conducive to optimum physical, mental and emotional health and safety of the school population. It includes factors as the provision of a wholesome and favorable environment, all school activities designed to maintain optimum health, satisfactory relationship among teachers, pupils and administrators, satisfactory relationship among pupils, adequate periods of rest, relaxation and recreation, school building facilities and activities free from unnecessary safety hazards.

Igwe (1996) and Brooks and Brooks (1979), contented that healthful school living is the establishment of healthful school environment is one of the basic factors that builds up effective health habits and practices in pupils and makes the environment a place for safe living. He asserts that school age children spend a lot of time in the school in order to acquire adequate knowledge not only in general education but in school specific areas as health knowledge. Health knowledge could be acquired directly or indirectly. He further maintained

that a well planned healthful school living programme go along way to intensify good behavioral attitude, practice and habits in pupils, the concept of healthful school living connotes:

a. Environmental health: Which connotes the setting up of adequate environmental facilities within the school (in the classroom and playing areas) for the safety of the school children?

b. School Management: Which is the planning of school day all through the week, month and the school year all in the establishment of health service programme all in an attempt to establish an adequate academic climate.

c. Interpersonal Relationship: Which entails the establishment of good support between the school administrator, the staff and the pupils.

Ejifugha (1999), advanced that healthful school living has often been seen as one of the main responsibilities of school personnel. She maintained that the New York City Council Authoritatively handed over the physical and psychological environment of the school child to school personnel. Similarly, schools in Nigeria according to her were responsible for the promotion of the healthful school living, the pioneers were rather attached to it through research and publications. This attempts was probably to establish healthful school living as an integral part of school health education. It might also be an attempt to provide materials for study in this area not only to educate prospective teachers but also to help in running the level of awareness of practicing teachers of their roles in the promotion of the physical and psychological environment of the school child.

Incidentally, literature revealed that the urge for healthful school living brought about the development of other components of school health education. She further assert that Williams Alcott was the founding father of hygiene in schools in the United States started by crying out

for adequate physical structures and sanitary measures that would promote the physical health of the child in schools.

She observed an impression made by Alcott on healthful school living through research and publications. In the health education movement that swept through the United States in the first half of the 20th century, none of the pioneers was involved in healthful school living except through research and publications. A similar situation was found in Nigeria. Similarly, none of the pioneers identified in this study was also fully involved in home, school and community relations.

Bucher (1979), argued that healthful school living implies that the time children spend in school should be spent in an environment and atmosphere conducive to physical, social, mental and emotional health. The environment will be sanitary and cheerful, the teacher will have a pleasing personality, the school programme will be well balanced and educational methods will be in accordance with good health standards.

He assert that a sanitary and cheerful school environment have implications for healthful school living and factors such as proper lighting, ventilation, facilities, play areas, controlled temperature, proper seats, school site, grounds and buildings, food and water sanitation, acoustic, (noise) model teachers, willing administrators and custodians should be readily available for healthful school living. These factors according to him enhanced the acquisition of health knowledge to its maximum.

2.7 HEALTHFUL SCHOOL ENVIRONMENT.

Igwe and Emeharole (1993), contend that a healthful school environment means keeping the school humane and physically healthful. Healthful school climate is concerned with the provision of a safe and healthful environment, an effective day by day running of the

school and the establishment of interpersonal relationship favorable to emotional, social and physical well being. They classified school environment into three categories thus:

a. Healthful, social and emotional climate, which could either be an open climate or closed climate.
b. Safe and healthful physical environmental facilities that make for healthful physical environment of the school are the site, building, lighting, ventilation, furniture, sanitary facilities, offices, lockers, classroom, cafeteria, play ground and games. It also include, better teaching, better learning, decreased injuries and infection, better facilities for health services and laboratory for teaching and learning the concepts of environmental health.
c. Healthful organization of the school day, healthful school food and services in a humane school climate (climate where there is self respect, high morale, caring for all, trusting others and love for the school).

Achalu (2001), argued that healthful school environment and healthful school living are used more or less synonymously by many educators and in most of the literature dealing with school health. It is usually through that healthful school living embodies all factors making up a healthful school environment. He re-affirmed that school environment is used in a broader sense to indicate not only the school plant and facilities, but also the surrounding area in the community, such as considering the traffic conditions in the vicinity of the school as a part of the school environment.

Sofoluwe et al (1998), suggest that health superintendents and inspectors might train pupils and class teachers to undertake detailed environmental health inspection of the dormitories in boarding houses, classrooms, assembly halls, water supply, the toilets including, bathrooms and latrines, the refuse dump, the lockers, the bookshelves and kitchen.

The daily sweeping and cleaning of such areas should be made responsibilities of school pupils to ensure that they know how to undertake such tasks in their own homes both now and in the future.

Brooks and Brooks (1979) agreed to what Sofoluwe et al (1998) said, but added that temperature is the most important factors in school ventilation and classroom temperature should be 68^{o}f (20c) in rooms with direct ventilation and between 68^{o}f-74^{o}f in fan-ventilated rooms. They advanced that higher temperature tend to make children more susceptible to cold and to make them feel less like working, gymnasium temperatures of55-65of, play room temperatures of 60-65of, lunch room temperatures of 65of-70of and shower room temperatures of 70oc to 75of are recommended.

Similarly, they further suggested standards for classroom illumination. It is commonly proposed that minimum illumination should be 30 feet candles for reading printed materials, fifty feet candles of illumination or more are recommended for sewing rooms, drafting rooms or rooms in which speech reading is required. An illumination of 10 feet candles is suggested for halls, stairs ways, washrooms locker rooms and cafeterias.

Lucas and Gilles (2003), advanced that school environment is maintained at a high standard in order to safeguard the health of the children and to provide them with a practical example of healthy living. They further affirm that school environment must reinforce the theoretical lessons learnt in the classes.

Obionu (2001), advanced that environmental sanitation in schools should pay attention to water supply, refuse and sewage disposal, prevention of insect breeding and condition of building with regards to overcrowding, ventilation and lighting. There should be at least one toilet facility for 40 girls and one for 60 boys.

FMOE (2005), assert that there should be separate sanitary convenience for boys and girls, male and female staff. The school should have water carriage system of toilet preferably

fitted with squatting bowl to facilitate easy flushing with small quantity of water. He further recommended the construction of multi-compartment ventilated improved pit latrines (VIPLs) in Rural areas and in Urban and semi-Urban areas where water supply is inadequate the water carriage system shall be complimenting with VIPLs and there should be at least a toilet for every 30pupils.

Kenneth (2001), assert that several publications in the 19th century indicate that school hygiene was primary concerned with problems of school sanitation and construction. He further advanced that in 1829, Williams A. Alcott expressed the need for improving school buildings in his publication, construction of school houses and in 1837 Homes discussed the problems of school hygiene in his first annual report and in that same year Henry wrote an essay on school architecture which later spurred discussion of school housing. After the civil war and up to the beginning of the twentieth century progress in this area of the school health programme continued to be made at a slow pace.

Ejifugha (1999), observed a problem in waste disposal in and around the villages and towns alike. The demerits of bucket latrine were observed. She further asserts that Dr. Craig in 1918 suggested the first idea of bucket latrine in schools in the Southern providences and Conquered, (1927), proffered opinion in favour of trenches latrine. Similarly, she asserts that Bucher (1927), opted for the salga (pit) system which he thought would be cheapest and effective for use in schools.

2.8 PREVENTION AND CONTROL OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES.

Obionu (2001), assert that the prevention and control of communicable and non-communicable diseases includes exclusion of sick children from school and the closure of schools during outbreak of infectious diseases. He further added that immunization against

common diseases can be carried out in schools and measures to control spread of infectious disease include routine screening of school teachers, to exclude diseases like tuberculosis and food handlers for enteric infections.

Schools are morally obliged to exert effort to prevent the occurrence of diseases among their pupils. School attendance makes this obligation greater. He observed that this situation is more imperative in Nigeria with the introduction of free primary education in some states. The school environment is frequently conducive to the transmission of most communicable diseases. Legally the control of communicable diseases in Nigeria is the function of public health department.

However, there are aspects that should be familiar to every one in education and teachers should be familiar with the law concerning immunization, attendance to school of sick students and the responsibilities of parents. School should know diseases legally reportable, policies concerning isolation, exclusion from and readmission to schools. The decision regarding the closing of schools whenever epidemics occurs should be made legally on basis of conditions in the community (Igwe, 1996).

According to Kayode (2004) , good health is very important for school activities in children. Children with health problems such as vision and hearing deficiencies, malnutrition, dental pains, emotional disturbances, skin infections and hear diseases have been identified in schools. Communicable diseases can be easily transmitted in schools if children are not protected or if they have bad health habits, children with emotional problems may have trouble learning to read, malnutrition or lack of break fast will discourage concentration and cause insufficient stamina to endure classroom activities, dental health problems may be of sufficient severity or degree to cause young people constant pain or emotional upsets thereby affecting concentration and attention in school, and a host of other things.

He further asserts that school has a role to play in solving these problems. Since health is vital for effective growth and development and since many parents are not aware of or do not give adequate attention to their children's health problems, the decision by schools on whether to assist in the improvement of pupils levels of wellness or not should not be difficult. Many schools have therefore, assumed the responsibilities of providing assistance to pupils and parents. The achievement of this is largely dependent on a variety of processes involving the interaction of school and community health personnel, pupils, and parents, and the understanding and resolution of health matters through self effort and direction.

Ademuwagun and Oduntan (1986) ,argued that although the measures of control will depend to a large extent on individual diseases, the basic principles of control of communicable diseases in schools should include:

a. Early diagnosis of communicable diseases within the school community.

b. Isolation of infected children

c. Notification of health authorities which is important for the following reasons:

    i. Confirm the diagnosis for instance not all skin rashes are infectious.

    ii. Treat the infected school children.

    iii. Trace, examine and treat other students who had been in close contact with the infected children .

    iv. Institute other measures designed to curtail the infection.

    v. Fumigate the school compound

d. Immunization of children.

e. Promotion of good environmental sanitation within the school.

f. Inclusion of health education courses in all school curricula.

Igwe (1996) , outlined that specific control measures in school include:

a. Immunization.

b. Medication by school doctors.

c. Case finding (at home and community level).

d. Isolation and exclusion, notification, referral and readmission techniques.

e. Health education programme and instructions.

f. Environmental/personal sanitation.

g. General education.

He further maintained that the health of the staff directly affects the health of the pupils. There are some issues related to the health of teaching staff which reflects interest in an employee's welfare of the fact that good health increases the teachers competent in school. These areas are generally considered for the health of the school personnel which include:

a. The establishment of policies regarding pre-employment examinations.

b. Welfare service such as confirmation of appointment, salaries e.g. adequate or inadequate and the regulatory in payment and sick leave provisions.

Insurance policies for those in higher risk areas (e.g. physical education, science and agriculture). Covering hospital expenses, workman compensation and disabilities and retirement benefit

c. Teacher administrative relationship

d. Other factors which affect the health are his academic load, school environment, facilities for teaching, policies for advancement and trade unionism, present status such as physical factors like present health and heredity

Bucher (1979) and Anne (1987), assert that communicable disease prevention and control should be included in school health services. This aspect should be coordinated by the school and should work with the local department of health. Measures such as isolating the child suspected of having a contagious diseases, educating the parents to take advantage of

immunization and other preventive measures, informing the health department of suspected cases of communicable diseases, encouraging sick children, teachers to stay at home and teach the causes of the development and spread of diseases.

2.9 THE SCHOOL NUTRITION PROGRAMME.

Comfort (1990), maintained that the provision of adequate balanced diet was compulsorily organized in 1958 in order to fight against protein malnutrition in all schools in Nigeria. Similarly, beans was introduced into the school meal by the vendors to make children have protein in their diet. Sofoluwe et al (1998), Subscribed that the kitchens of food sellers in schools must be examined and the food seller medically examined to detect carriers and sufferers from food-borne diseases. They further advanced that the reasons for the low level of education in Africa might be the long term cumulative effects of malnutrition. They discovered that over 90% of primary school children in Nigeria had their first meal of the day at 17.00 hours (5.00pm) each day. They argued that experiments in supplying balanced nutrients to school children have been pioneered in Africa. These include the Lagos, Nigerian experiment which built one or two central school kitchens from which school meals are prepared and served to individual schools. Kayode (2004), contend that school mid-day meal should be seen as an important aspect of school routine because it makes for the opportunity to supplement the nutrition of students. Hence it should be properly organized, planned and supervised. Malnutrition should be guarded against.

Anne (1987), opines that there are two basic aims when considering a healthy and nourishing diet for school children. The diet should supply all the necessary nutrients for growth and not in excess and the diet should prepare the child for a lifetime of healthy eating. In 1907, elementary schools began to provide meals for children who were unable to take full advantage of their education due to poverty and malnutrition. Since that time meals have

been provided in state schools and have been free to families of low income. However, following the 1981 education Act schools are no longer required to serve meals of recommended nutritional Standard. Where they are provided there is a tendency towards cafeteria type meals offering a choice to students.

Ademuwagun and Oduntan (1986), subscribed that school nutrition programme is the broad range of activities needed to improve the nutritional status of school children and to encourage better dietary habits amongst students. School meals according to them were originally introduced for the primary aim of preventing hunger among school children, but there are more important reasons to justify its establishment in Nigerian schools.

They further assert that studies carried out in Nigerian schools attest that children go to school without break-fast, an appreciable proportion of the school children are malnourished. Similarly, there is a close correlation between sound nutrition, educational attainment and working efficiency. Infection with intestinal parasites are common among Nigerian school children and these infections exert an adverse effect on the degree of absorption of food nutrients from the bowels, resulting to poor nutrition. Also Nigeria is a country with well-established customs, which are not conducive to good nutritional status of the children. It was also pointed out that a large proportion of the students are from low income families, where parents could only afford to give their children cheap staple foods mostly carbohydrate.

Monica and Bennett (1973), maintained that sound nutrition ensured that the child will grow well physically and mentally and have the energy to cope with the demands of school life. For this the students need at least 3 good meals a day. They noted that day students are more difficult problem, as some of the children do not bring food to school at all and others have money to spend which is used on useless things like drinks.

Kenneth (2001), maintained that the first formal lunch programme was installed in 1910 in the public schools, making it possible for children and school personnel to have a warm and nutritious lunch daily. The National School Lunch Act (public Law 396), passed by congress in 1916 served as an impetus for the development of kitchens and cafeteria facilities and services in public schools throughout the country to safeguard the health and well-being of the nations children and to encourage the domestic consumption of nutritious agricultural commodities and other foods, by assisting the status through granting aid and other means in providing adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of non-profit school lunch programmes. He added that the installation of kitchen and cafeterias in public schools led to an increased emphasis on the maintenance of sanitary and safe cooking, eating facilities, equipment and the importance of hiring healthy food handlers was stressed.

Ademuwangun and Oduntan (1986), submit that school meals should be compulsory in all Nigerian schools. Various factors will however, determine the extent and the type of programme to be adopted in individual communities as knowledge of the nutritional needs of the community, type of programme take into consideration, resources, health status of the children, dietary habits and the social and economic background of the community. Similarly, the use of Local food stuff and products from school farms should be utilized. The duration and cost, facilities for storage along side with adequate supervision should be enforced.

2.2.0 FIRST AID SERVICES.

Obionu (2001), opines that provision of simple treatment and first aid service for minor injuries can be rendered through a school nurse or trained school personnel, while serious conditions are referred to the hospitals. There should be a simple equipped first aid box and someone trained in its use. Classes of first aid should be organized for teachers and

children. Igwe (1996), postulates that every school should have a planned written programme related to emergencies. For emergency care programme each classroom teacher is a potential first aider by the virtue of the training and the role of the physician relating to emergency care in delivering policies and procedures rather than in rendering first aid. He advanced that every member of the school personnel should have a copy of the written policies for its emergency care programme. He said, this protects the health and safety of the students, teachers and the school against legal liability. He further assert that the school has a responsibility in place of parents for providing emergency care in the events of accidents or illness until the services of a physician are obtained. He upheld that an important aspect of safety education is legal liability; which is somehow completely absent in Nigerian society. Legal liability can only be established if the teacher can be proven negligent in the performance of his duties, ordinarily associated with his position or imprudent in the discharge of those responsibilities attached to the use of health facilities. A teacher's legal liability falls within the following broad categories.

a. The ability to anticipate fore-seeable risk to students
b. The establishment of reasonable steps to prevent those risk from occurring.
c. The establishment of warning signs and care addressed towards risk areas.
d. An established note to aid the injured or the sick
e. Ability to reduce risk rather than increase severity of the injured or condition (Igwe, 1996).

Ademuwagun and Oduntan (1986), assert that one of the most important causes of absenteeism from school is due to children spending considerable time at school clinics and hospitals for diseases and injuries that could have been effectively treated at school. They maintained that a room in the school should be designated as a health room, where treatment should be carried out and a bed should be provided for students to rest on while waiting for

transportation home or to hospitals. Fully equipped medicine boxes should be provided in schools and a trained teacher in first aid procedure should be in charge. They maintained that the school personnel are responsible for emergency care to the students who becomes ill or injured while at school. A laid down policy should be in place in each school for dealing with emergencies and in any emergency the school is responsible for:

a. First aid treatment

b. Notification of parents.

c. Transporting the students to the nearest and most appropriate medical institution.

d. Conveying the students to his home after receiving treatment.

e. Recording the circumstances leading to the emergencies and steps taken to receive treatment.

They defined first aid treatment as any procedure that is applied to save life, to prevent further injuring or to reduce suffering. It includes such measures as rest, dressing of abrasions or open wounds, application of cold compression to swellings, control of hemorrhage, and instituting artificial respiration. They further maintained that current home and office addresses of parents with their telephone numbers should be kept in the school record books and available for all emergencies.

Brian (1977), postulates that school clinics are provided so that school children can attend follow-up clinics and have minor ailments treated without having to spend much time away from school. He upheld that treatment is not really part of the school health service but there are so many problems connected with getting children eyes tested for glasses that it has been found most convenient for an eye specialist to hold an ophthalmic clinic in a school clinic periodically.

Sofoluwe et al (1998) , added that good record keeping is the sure foundation to maintaining a first class health level in schools. It is desirable to have the anti-natal, intra-natal, post-natal and under five child health records of each of the school children in one folder or merged together on one record card. Thus, a health record from the womb to the primary, secondary and even university stages will have successfully monitored and integrated. Registration of defects like visual defects, defects of hearing, epilepsy, asthmatic attacks, emotional, social, mental and other defects will help direct attention to those children who require closer medical attention and will thus minimize emergencies.

2.2.1 HEALTH EDUCATION AND PROMOTION ACTIVITIES OF THE SCHOOL PERSONNEL.

Anne (1987), pointed out that health promotion usually involves the teacher, school nurse and clinical medical officer. She maintained that many infant juniors and secondary schools have health promotion programmes which span the school years so that a wide range of health issues are covered. These are carefully designed so that the material is presented in a suitable and attractive way for children at a particular stage of development.

Kenneth (2001), maintained that the health education phase of the school health programme, which consists primarily of health and safety instruction, had its conception during the second half of the Nineteenth century. When Horace indicate the need for health instruction in the public schools in1842. During this time physicians were active in advocating the teaching of physiology in the public schools. Elementary facts of physiology were combined to form textbooks, which were used to teach the subject. Similarly, Ejifugha (1999), maintained that the need for health education is more urgent in the 20^{th} century which witnessed an unprecedented increase in the crime rate due to drug addition, prostitution, over population, environmental pollution and the call for health for all by the year 2000. All these

support the necessity for health education as a fundamental tool for handling most of the current issues in health. She asserts that health education is an integral aspect of the school curriculum for every level of development.

Brooks and Brooks (1979), maintained that appropriate health promotion for pupils includes a planned programme of physical activities requiring suitable play ground, gymnasiums and play rooms in suitable locations with adequate space and appropriate equipment supplemented by showers and dressing rooms. They upheld that health education in schools should provide a systematic programme for the development of desirable habits, attitudes, concepts and knowledge in the field of individual and community health. She further maintained that health promotion entails any planned combination of education, political, environmental, regulatory or organizational mechanism that support actions and conditions of living conducive to the health of individuals, groups and communities.

Dorothy et al (2002), submit that administrators, educators, nurses, physicians, dentists, dental hygienist, psychologist, councilors, social workers, nutritionists, deities and other Health professionals work cooperatively with parents and the community to achieve the common goal of providing children and adolescents with the programme, services and environment necessary to promote health and improve learning. Ken and Miranda (2002) maintained that physical activity is viewed as a desirable health related behaviour and the most suitable vehicle for the promotion of active healthy lifestyles among young people. This they said concern for the promotion of health through physical education has manifested itself in the form of one development. The teachers emphasized sports as the primary vehicle for the health promotion, often over and above any contribution that health related exercise was deemed capable of making. While Lucas and Gilles (2003), contend that health education programme at school is to make the children value health as a desirable asset, and to know what the individual and the community can do to maintain and promote health. The

aim is to ingrain in children healthy lifestyles with regard to such issues as diet, exercise, abuse of alcohol, smoking, use of illegal drugs and unsafe sex. They further assert that the course of instruction include basic information about the normal structure and function of the human body, the agents of disease, the role of the environment in maintaining good health.

2.2.2 ASSESSMENT OF HANDICAPED CHILDREN

Anne (1987), affirmed that some handicapped conditions like spinal bifida are apparent from birth and some are recognized later during infancy, for instance hearing loss and others are acquired during childhood as a consequence of either illness or accident. She remarks that some handicapping conditions are life threatening, for instance muscular dystrophy and cystic fibrosis and others like visual or hearing loss, may remain throughout a natural lifespan. Lucas and Gilles (2003), stressed that school health programme must include some mechanism for finding children who are physically or mentally handicapped, assessing them, supervising them and placing them in the most appropriate institution if special care is needed. The categories of handicapped children include, blind and partially sighted, hearing defects or speech, epileptic, educational sub-normal, maladjusted and psychotic and physically handicapped.

Anne (1987), attest that diagnosis of a handicapping condition is likely to be devastating time for parents. Some react with disbelief and stunned shock and may express anger towards the doctor in an irrational attempt to apportion blame for something so terrible that they cannot immediately accept. Whatever the nature of the condition the parent is likely to suffer additional stress, an increased financial burden and many hours in hospitals. Similarly, she affirms that in discussing limitations and try to help the child to accept his limitations it is always possible to focus the child's mind on the parts of his body which do

work well and which he can take pride in. She maintained that the report of the committee of enquiry into the education of handicapped children and young people.

Warnock (1978), stated that children should no longer be categorized according to a specific handicap, but rather considered according to their individual educational needs. She further assert that children with complete and long-term disabilities assessed by a multidisciplinary team of professionals, who in conjunction with the parents decide on the best form of provision.

Sofoluwe et al (1998) and obionu (2001), claim that categories of pupils requiring special educational treatment are defined as follows:

a. Deaf pupils.

b. Partially deaf pupils.

c. Blind pupils.

d. Partially blind pupils

e. Mentally handicapped pupils

f. Maladjusted pupils.

g. Physically handicapped pupils e.g. cripple.

They further advanced that the principle of education of handicapped children is to provide the type of training, which is appropriate to their disability. They maintain that Nigeria has a special school for the blind where pupils undergo normal primary education and those who have the ability proceed to secondary schools where they are taught alongside with sighted pupils. Special textbooks in Braille are provided for them and they type out their answers during examination. In some parts of the country the blind pupils attend normal primary schools and a visiting teacher of the blind goes round to give the pupils assignments and the class teachers of blind pupils monitor their progress until the visiting teacher comes round to correct the assignment.

Obionu (2001), further maintained that the school health service has a vital part in the ascertainments and supervision of handicapped children.

Anne (1987), subscribed that learning involves using other senses especially touch. She recalled the words of Helen Keller who was both blind and deaf remember that you, dependent on your sight, do not realize how many things are tangible". Blind children are educated at special schools or normal schools using special schools as a resource. Many Universities and colleges of further education are equipped for blind students. Similarly, Brooks and Brooks (1979), itemized three types of activities carried on in the interest of those children for whom the school has a record of physical abnormalities as:

i. Follow-up service through which parents are notified about the existence of the abnormality and later visited by the nurse.

ii. The operation of free clinics by local health departments, hospitals and other agencies in the community for children whose parents are unable to pay medical bills.

iii. The adjustment of the child's life at school with due consideration to his or her physical condition.

2.2.3 THE SCHOOL DENTAL SERVICE.

Anne (1987), asserts that dental service is part of the school health service that is concerned with prevention, education and treatment. She maintained that good dental care established during school days is likely to be continued in adult life. The district dental officer needs to take careful note of the standard of dental health within the health authority and in areas where children have large number of dental caries, special health promotion programme should be instituted. Preventive measures include regular brushing with fluoride

toothpaste, avoidance of sweet foods and regular dental checks which may include fluoride treatment in areas with naturally low level.

Brian (1977), agreed with Anne (1987) , but added that unlike the rest of the school health services, the school dental service is both a diagnostic and treatment service. The dental surgeon visits every school every six months and every child is examined dentally and defects noted. Ward-Dalzell (1975), maintained that the school dental service makes its contribution to health education in addition to its primary function which is to inspect all school children at least annually so that pupils, and parents may be made aware of any comment that is needed and advised to obtain such treatment either from the school or dental service from a private dental practitioner. He contended that school dental service is staffed by full and part time dental surgeon assisted by dental auxiliaries who had received a two year training in refilling extraction of primary teeth under local anesthesia and other minor procedures. He maintained that dental hygienist do scaling and cleaning of teeth while dental surgeon assistant work with the surgeon.

Ward-Dalzell (1975), outlined that some local authorities carry out some form of dental health education. Talks are given by dentist in the classroom and public campaigns are frequently undertaken along side with other agencies like general dental councils health education section, the British Dental Association and the oral hygiene service. He stated that some local health authorities issue free toothpaste, toothbrushes and beakers to children who have just entered school. The general medical council supplies posters, leaflets and booklets to schools to encourage oral hygiene. To stimulate interest in the care of the teeth and to persuade children to avoid dangerous sticky and follow a diet which helps to build Sound teeth.

2.2.4 HOME, SCHOOL AND COMMUNITY RELATIONSHIP.

Igwe (1996) , opines that the home/school and community can establish effective co-operation in order to help solve the school health problems of the child, thereby making learning and teaching meaningful. The relationship can be achieved through the following:

i. Utilization of Parents/Teachers Association.

ii. Visits to either homes of pupils by teachers and other school personnel and visit to school by parents/guidance

iii. Parents/Teacher, and sometimes pupil's conferences.

iv. The three units collaborating with health authorities in their areas of authority.

v. Contact with medical personnel

vi. Use of school community health committee

vii. Communication with voluntary health councils.

viii. Through public meeting.

ix. The use of old Boys and Girls Association including, Alumni Association.

Anne (1987) , affirmed that in all aspects of child care the involvement of parents is crucial. In 1907 legislation regarding school health and one of the stated objectives of school health services was to stimulate a sense of duty in matters affecting health in the homes of people to enlist the best services and interest of parents. It is in the home that the seed and fruits of public health are to be found. Brooks and Brooks (1979) , outlined that contact between school and home chiefly involves visits of parents to the school, parents make informal visits to the classroom, present at the health examination of pupil and participate in Parent Teacher activities and various school functions. They further assert that school also has relationships with community agencies. Board co-operative participation in planning both school health programmes and community's health programme is a common practice.

2.2.5 SCHOOL HEALTH POLICIES.

Nancy et al (2001), assert that the first school health policies conducted in 1994 provide a more comprehensive assessment of school health services in the United States. These policies require students to certain immunizations before entering school and students who have not received the required immunization are excluded from attending the classes. They further maintained that HIV infection policies have been adopted in some states on students and faculty and staff with HIV/AIDS. The policies require schools to keep information on student records. Igwe (1996), submits that legally the control of communicable diseases in Nigeria is the function of public health department. However, there are aspects that should be familiar to everyone in education and teachers should be familiar with the state laws concerning immunization, attendance to school of sick pupils and the responsibilities of parents. Schools should know disease legally reportable, policies concerning isolation, exclusion from and readmission to schools, the decision regarding the closing of schools whenever epidemics occur should be made locally on basis of conditions in the community.

Anne (2002), delineated on regulation governing administration of prescriptions in public and private schools which should be done by licensed personnel only and if schools opt to delegate. They must register with the department of Public Health and meet defined requirements, including staffing. She maintained that approximately 55 schools district and private schools are registered for full medication delegation and some chose to increase the numbers of registered nurses on staff and restrict medication administration to licensed personnel.

Sofoluwe et al (1998), subscribed that every African country should appoint at least one school health doctor or physician, who should work out a

policy, organize and supervise health care delivery services in and outside schools. The physician should be a public health trained doctor and should be based at the National Ministry of Health and should prescribe standards for school health programmes at National, State and Local Government levels.

2.2.6 SOCIAL ASPECT OF SCHOOL HEALTH SERVICE.

Ejifugha (1999), upholds that the force of social programme introduced the school as an institution which can be profitably utilized to tackle social problems, school health education evolved when social factors that concern health began to be taught as subject matter in schools. Similarly, she asserts that social-ecological concept observes that for a dynamic equilibrium to be maintained, personal behaviour factors should be annexed to the etiologic agents as causative factor. Factors such as smoking, alcoholism, prostitution, drug addiction, excessive anxiety, worry have the capacity to cause disease as any other pathogenic organism.

Richard et at (2001), postulate that child and adolescent development theories provide a central role for bonding as attachment theory, control theory and the social development model. The attachment describes a process through which interactions between parents and infant establish internal working models for how a child forms social connections with others. They assert that interactions between a child and care givers build the foundation for bonding ,a key to developing the capacity for motivated behaviour. Attachment to parents appears to have a positive effect in childhood, adolescence and its effects last into adulthood. The attachment theory broadened the theoretical preview of bonding to include attachment with adults other than parents, have positive effects on a child's resilience to adversity. They maintained that bonding to school represents an important area where bonding to positive adults can occur and has increased positive developmental experiences and decrease negative

developmental experiences and buffer the effects of risk, thus school bonding promotes healthy development and prevent problem behaviour.

Similarly, they conceived that control theory of deviant behaviour which is bonding within a socialization unit like school or family consist of four elements namely involvement in the unit, attachment or affective relationships, investment or commitment to the unit and belief in the values of the unit and once established, the social bonding exerts an informs control on behaviour, inhibiting deviant behaviour.

Furthermore, the social development model employed a narrower concept of bonding as composed of attachment and commitment to socializing unit involvement is seen as part of a socialization process that leads to bonding, while beliefs in the social unit value are seen as a consequence of the effect of bonding on behavioral outcomes.

Anne (1987), strongly revealed that learning to manage successfully one's own personal difficulties is part of the propagation for becoming a well adjusted and healthy adult and achieving this is an important responsibility of the schools educational aims. Children's emotional response to the difficulties which the experience will differ according to their age and vary from child to child. Similarly, she asserts that sometimes counseling and support from teacher, school nurse or educational welfare officer is required and sometimes psychiatric referral is warranted and are often seen by the child and family guidance. Kenneth (2001), substantiated that wholesome teacher-pupils and staff relationship, was stressed. It become increasingly recognized that the mental health of students and school employee were greatly affected by the human relationships that existed within the schools.

2.2.7 SUMMARY.

This chapter has focused on the background history of school health services in and outside Nigeria. In doing this, a brief history of school health services was discussed. Health Appraisal and Counseling was highlighted, Healthful School Living and Environment were reviewed, prevention and treatment of diseases and the school nutritional programme were also reviewed. To maintain a high level of well-being among the students and school personnel, health education activities, dental services and assessment of the handicapped students were also reviewed. Similarly, the aspects of home/school and community relationship along side with school health policies were discussed.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

The study was on assessment of school health services in secondary schools of Kaduna State. This chapter deals with the methods used by the researcher in gathering information for the study. In conducting this research, the methods adopted are described under the following sub-headings:

a. Research design

b. The population

c. Sample and sampling technique

d. Instrumentation.

e. Validation of the instrument

f. Administration of the instrument

g. Data collection and scoring

h. Statistical techniques.

3.2 RESEARCH DESIGN

As this was a non experimental study no independent variables was control. The information required was already available as the independent variables were already manipulated before the conduct of the research. Therefore, ex-post facto research design was use to collect information required for this study. In this design, a self developed and validated questionnaire was administered on 318 randomly selected male and female teachers

and school personnel ,from 106 secondary schools, from urban and rural areas of Kaduna State.

3.3 THE POPULATION

The population for the study was made up of teachers and school personnel from secondary schools of the twelve (12) inspectorate divisions of Kaduna State.

3.4 SAMPLE AND SAMPLING TECHNIQUES

The sample for this study comprised of 318 male and female teachers and school personnel (nurses and non teaching staff) chosen from 106 secondary schools of the urban and rural areas of Kaduna, Sabon Tasha, Birnin Gwari, Kachia, Zonkwa, Kafanchan, Godogodo, Rigachikun, Zaria, Giwa, Anchau and Lere inspectorate divisions of Kaduna State secondary schools from each Inspectorate division were randomly selected, using hat drawn method. In using this method, the names of all the post primary schools in each inspectorate division of the state were written out on small pieces of paper rolled and then put into a hat. Each time the hat was shaken, one of these rolled papers was taken out and the name on it was written down. This process was repeated until the desired number of schools from each inspectorate division was selected.

Schools located at the head quarters of the local government areas were regarded as urban schools, while the rural schools were schools located outside the local government headquarters. From each inspectorate division, 20% of the schools from each of urban and rural areas were selected using the hat drawn method. They included all the public and private secondary schools. Three (3) subjects were selected from each of the randomly selected schools using hat drawn method. In using this method , all the teachers and school personnel in each of the randomly selected schools in the 12 inspectorate divisions were used. Three (3) yes and no equal to the number of the respondents in each selected schools were

written on small pieces of paper, rolled and put into a hat. Each time the hat was shaken, one of these rolled papers were taken out by the respondents, those that picked Yes were then given the questionnaire to fill. Thus a total of three hundred and eighteen subjects from106 secondary schools were used in this study. 165 male and 117 female teachers and schools personnel returned the questionnaire out of the 318 questionnaire distributed selected. The distribution of the questionnaire to schools in each inspectorate division is shown in table 3.1

Table 3.1: Distribution of questionnaire to schools in each Inspectorate Division.

Inspectorate Division	No. Of Schools Selected In Each Inspectorate Division	No. of Questionnaire Administered	No. of Questionnaire Returned	No. of Questionnaire Unreturned
Kaduna	**14**	**42**	**37**	**5**
Sabon Tasha	**15**	**45**	**39**	**6**
Birnin Gwari	**5**	**15**	**13**	**2**
Kachia	**6**	**18**	**15**	**2**
Zonkwa	**7**	**21**	**19**	**2**
Kafanchan	**8**	**24**	**22**	**2**
Godogodo	**7**	**21**	**18**	**3**
Rigachikun	**5**	**15**	**15**	**0**
Zaria	**18**	**54**	**46**	**8**
Giwa	**6**	**18**	**16**	**2**
Anchau	**10**	**30**	**28**	**2**
Lere	**5**	**15**	**14**	**1**
Total	**106**	**318**	**282**	**36**

3.5 INSTRUMENTATION

Instrument used for data collection in this study was the questionnaire. The questionnaire was worded unambiguously in order to elicit the correct responses. It was ideally suited for the collection of factual information because it was relatively quick and cheaper method of gathering data. Respondents were anonymous.

The questionnaire consisted of two sections. Section one was on personal information of the respondents with six (6) statements. Section two (2) was on assessment of school health services, which had nine (9) sub-sections on different aspects of school health services. These subsections were on appraisal of health status of school children, treatment of common ailments among school children, provision of first aid and emergency care to students and school personnel, control of communicable diseases in school, promotion of sanitary conditions in school, counseling of students and parents, provision of school nutritional programme, provision of health personnel in school and correction of handicapped defects. Each sub-section contained nine to twelve statements under items a- i that were to be responded on a five point Likert scale. 318 questionnaire were administered and 282 questionnaire were retrieved from the respondents.

3.6 VALIDATION OF THE INSTRUMENT

Structured questionnaire using Likert type scale of measurement was used to design the questionnaire. After the initial draft, a copy of the questionnaire was corrected and validated by the researcher's supervisors. The structured questionnaire was distributed to four (4) professional experts for their critical evaluation in order to establish the face and content validity. These experts were drawn from physical education, institute of education and community medicine, A.B.U Zaria in order to ensure reliability of the instrument. After incorporation of all the suggestions and observations made by these experts, the final questionnaire was prepared which included the same number of sub-heads and statements though modified in some respect based on the suggestions and recommendations of the jurors.

3.7 ADMINISTRATION OF THE INSTRUMENT

The questionnaire was administered to schools of the twelve (12) inspectorate divisions chosen for the study with the assistance of four research assistants chosen from the Ministry of Education, Inspectorate Division, Ministry of Science and Technology and Federal Government Girl's College, Zaria. The questionnaire was administered on the subjects with the help of principals who directed the researcher and the research assistants to the vice principal. The research assistants visited the subjects twice with an interval of about two weeks between the visits. The research assistants collected the duly completed forms from 282 out of 318 questionnaire administered to the respondents for statistical analyses. The response rate was therefore 88.7%.

3.8 DATA COLLECTION AND SCORING

The responses collected were coded and recorded on the data scoring sheets. Likert scale format was used in determining the scores. The most favorable responses were given the highest score as follows:

a. Strongly agree 5 points.

b. Agree 4 points.

c. Undecided 3 points.

d. Disagree 2 points.

e. Strongly disagree 1 point.

3.9 STATISTICAL TECHNIQUES

The responses from section one and two of the instrument were analyzed using the means and standard deviations. The mean of each item was interpreted in relation to the real limits of the values to the response categories of the instrument. The hypotheses were tested using the t-test in order to find out the significant differences between the variables included in the study. All the hypotheses were tested at 0.05 alpha level of significance.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this study was to assess school health services in post primary schools of Kaduna State. To achieve this purpose, the data collected in the study were statistically analyzed, the results of which are presented and discussed according to hypotheses in this chapter.

4.2 RESULTS.

Demographic Characteristics of the Respondents: Before the results are presented according to hypotheses, the demographic characteristics of the respondents are shown in table 4.1

Table 4.1: Demographic Characteristics of the respondents

Variables	Variable options	Frequency	Percentage
Location	Urban	178	63.1
	Rural	104	36.9
	Total	282	100.0
Highest qualification	Post primary	9	3.2
	Graduate	203	72.0
	Masters/PhD/ Others	70	24.8
	Total	282	100.0
Position held in school	Principal	14	5.0
	Senior Master	40	14.2
	Games Master	14	5.0
	P.E. Teachers	22	7.8
	Teacher	169	59.9
	School Nurse	23	8.1
	Total	282	100.0
Nature of School	Boarding	131	46.5
	Day	151	53.5
	Total	282	100.0
Gender	Male	165	58.5
	Female	117	41.5
	Total	282	100.0
Ownership of School	Government	148	52.5
	Private	134	47.5
	Total	282	100.0

Table 4.1 shows that out of a total of 282 respondents, 178(63.1%) were from secondary schools located in urban areas, while 104 (36.9%) were from secondary schools located in rural areas. Most of them were graduates (203, 72%).They were mainly teachers (191, 67.7%). There was almost equal representation of boarding and day secondary schools (131,46.5%,151,53.5% representatives),males 165,58.5%) and females(117,41.5%) and Government (148,52.5%) and Private (134, 47.5%)secondary schools.

The Demographic Characteristics of the Respondents.

Among the demographic characteristics of the respondents selected for the study were the location, highest educational qualification, position held in the school and the nature of the school. Others were sex of the respondents and the type of ownership of the schools. Two hundred and eighty two (282) respondents made up of principals, teachers of various designations and school nurses in Kaduna State secondary schools were involved in the study. The selected demographic variables included in the study are presented in Table 4.1

4.2 **RESULTS**: Assessment of Health Services in Post Primary Schools in Kaduna State.

The main objective of this study was to assess the health services of secondary schools in Kaduna state. Towards this end, some health related variables were selected for evaluation. The selected variables are the role of the school teachers in the health services, the available treatment for common ailments for children within the secondary schools and the provision of first aid and emergency care to students and other personnel. Other variables of health related services in the secondary schools selected for the study are the control of communicable diseases, promotion of general sanitation in the schools and counseling of students and parents on health related matters. Nutritional programme , handicapped/remedial

defects and provision of health personnel for the secondary schools were other variables that were health related and included in the study for evaluation.

In the analysis of these variables, the mean score for each of the items and the corresponding standard deviation were used. The mean was based on the five point interval scale used in the measurement of the respondents' opinion. Mean of 3.5 and above of the scale implied agreement with the suggested item while mean lower than 3.5 implied disagreement. The first question the study intended to provide a solution is:

1. Do school health services include appraisal of health status of school children and teachers in Kaduna state?

The appraisal of health status of the students in the selected secondary schools was assessed in terms of physical inspection of the students, record of health status and general examination of the health facilities and equipment for health care services available in the selected secondary schools. The opinion of the respondents on the appraisal of the health status of the secondary school is presented in Table 4.2.

Table 4.2: Mean scores of the subjects on health appraisal in the Secondary schools

S/N	Appraisal of health status of school children.	Mean	SD
1	Teachers observe and assess health status of school children regularly.	3.264	1.194
2	Teachers generally observe the parts of eyes, ears, nose, throat, skin and mouth of school children.	3.791	1.027
3	School children are physically examined for their health status periodically by the health personnel.	3.794	0.976
4	School has sick bay/health centre, where school children periodically undergo medical examination for any medical defects.	3.449	1.043
5	Follow up action is taken on the basis of physical and medical examinations.	3.896	0.990
6	Information collected from physical and health examination is correctly recorded in a standard form.	3.748	0.999
7	Equipment and facilities like weighing scales, growth chart, thermometer and stethoscope are available in school for health appraisal of school children.	3.442	1.348
8	Teachers are trained to assess the physical status of children.	3.390	1.186
9	Medical personnel are available to conduct medical examination of children.	3.352	1.008
10	Health appraisals are conducted regularly.	2.940	1.184

With a mean score of 3.264 for item 1 in the table, the respondents disagreed with the suggestion that the secondary school teachers usually observe and assess health status of school children on a regular basis in the secondary schools. The respondents agreed as indicated with a mean of 3.791 for item 2, that the secondary school teachers generally observe the parts of eyes, ears, nose, throat, skin and mouth of school students. In the same vein, the respondents agreed that the school children are physically examined for their health status periodically by the health personnel. But the respondents did not agree that the secondary schools have sick bay/health centre, where school students periodically undergo medical examination for any medical care. These are indicated from the scores for items 3 and 4 in table 4.2

There is always a follow up of action taken by the medical personnel as indicated by the response to item 5 in the table. The mean score (3.896) implied that the respondents were in agreement that follow up action is always taken on the basis of physical and medical examinations. And they agreed as observed in item 6 that Information collected from physical and health examination is correctly recorded in a standard form. However, the necessary equipment for the medical care like scales, growth chart, thermometer and stethoscope are not available in schools. The teachers are not trained to assess the physical status of the students. These are indicated with the score of items 7 and 8 respectively in table 4.2. There were also no medical personnel to conduct medical examination of the students on a regular basis. The scores on items 9 and 10 in the table imply that the respondents were of this view.

The second question in the study is on the treatment of common ailments among the students in the secondary schools. The question is:

2. Do school health services include treatment of common ailments among students of secondary schools in Kaduna State?

The treatment of common ailments was evaluated on the basis of the immediate care offered to students with sudden illnesses or injuries while in the school and the availability of health personnel to administer the treatment. The care for the injured students and other referral services rendered to the students are part of the treatment considered in this regard. The opinion of the respondents on the available treatment in the schools is expressed in means and standard deviations in Table 4.3

Table 4.3: Mean scores of the respondents on the treatment of common ailments among school students

S/N	Treatment Of Common Ailments Among School Students	Mean	SD
1	Teachers give immediate care to school children in case of sudden illness or injury.	4.007	0.835
2	The school notifies parents about accidents regarding their children.	4.379	0.676
3	Parents allow their children to be treated in the school clinic.	3.695	1.175
4	4. Health personnel in school are well trained to treat students.	3.486	1.266
5	Teachers/health personnel in school refer complicated conditions to general hospital.	4.113	0.955
6	Students pay for medical treatment received in school.	3.525	1.277
7	Teachers take children home or to other places of safety when injured.	4.028	0.958
8	Teachers guide parents to places where their children can receive further treatment.	3.702	0.989
9	Teachers and health personnel make a follow up of students on referral.	3.695	0.872
10	The school clinic is stocked with relevant drugs.	3.284	1.262

The scores for item 1, 2 and 3 in the table clearly indicated that the teachers usually take the necessary action when students are injured or develop sudden illness while in the school. For item 1, for example, the mean score of 4.007 implied that the respondents agreed that teachers usually give immediate attention and care to school children who develop sudden illness or injury while in the school. In item 2, the mean score is 4.379 while the mean score

for item 3 is 3.695 all indicating that the school usually notifies parents about accidents regarding their children and that parents usually allow their children to be treated in the school clinic where they existed. The mean score on item 4 in the table implied that the respondents did not agree that health personnel available in some of the schools were well trained to treat students. There is agreement among the respondents that complicated cases were usually referred to general hospital.

The respondents agreed that students pay for medical treatment they received in the school. Teachers usually take children home or to other places of safety when injured while in the school, teachers often provide some guidance to parents on where their injured children can receive further treatment and teachers and health personnel usually make a follow up of students on referral. These are indicated by the means for items 1, 2, 3, 4, 5, 6, 7, 8 and 9 respectively. But the respondents did not agree that the school health personnel are well trained to treat students and that the school clinics are stocked with relevant drugs. This then means that treatment of common ailment was restricted to what was available medically within the schools.

The third question is on first aid provision in the schools for both teachers and students. The question is:

3. Do school health services provide first aid and emergency care to secondary school students and personnel in Kaduna State?

In the provision of first aid in the selected secondary schools, the quality of the personnel providing the first aid, the medicaments available to the personnel in the school and the school policy on emergency treatment were parts of the components of the first aid considered. The mean score on the suggested items on first aid in the secondary schools are presented in Table 4.4.

Table 4.4: Mean scores of the respondents on provision of first aid and emergency care to students and school personnel

S/N	Provision of first aid and emergency care to students and school personnel.	Mean	SD
1	Teachers and health personnel are trained on first aid procedures.	3.688	1.088
2	The school has a policy on first aid and emergency treatment.	3.638	1.028
3	The school has a well equipped first aid box for emergency care.	3.755	1.027
4	Teachers send accident victims to the hospital.	4.096	0.774
5	Teachers and health personnel convey accident victims to the hospital.	4.110	0.739
6	Teachers and health personnel keep health records on accidents and illnesses in school.	3.830	1.057
7	First aids classes are organize for Teachers and students in school.	3.209	1.221
8	First aid training is part of physical educators training.	3.943	0.863
9	Teachers and health personnel handle emergency care for the injured.	3.848	0.985

The mean scores in the table for all the items excluding item 7, shows clearly that the respondents agreed that first aid was provided in all the schools. The mean scores also provide evidence that all students and teachers were instructed on first aid But as indicated in the mean score on item 7, no regular classes were organized for teachers or students on first aid in the schools. From the mean scores in the table, the schools' policy on first aid was effective as provision was made for the necessary requirement, like equipping the first aid box for emergency care and ensuring that serious cases were referred to the hospital immediately after they occur.

The control of communicable diseases among the students in the selected secondary schools is the focus of the fourth question in the study. The question is:

4. Do school health services control communicable diseases within secondary schools in Kaduna State?

The evaluation here includes the schools' policy, the type of records kept of such occurrences and the method of control used by the school authorities. In Table 4.5 the mean scores of the respondents on the items of control of communicable diseases in the secondary schools is presented along with their standard deviations (SD).

Table 4.5: Mean scores of the respondents on control of communicable diseases

S/N	Control of communicable diseases in school.	Mean	SD
1	School has a policy on the control of communicable diseases.	3.348	1.037
2	Teachers exclude and re-admit students suffering from communicable diseases from school.	3.610	0.979
3	Teachers require students to be immunized against communicable diseases.	3.904	0.878
4	Teachers/health personnel maintain records of students immunization.	3.574	1.011
5	The school notifies the health authority about an outbreak of communicable diseases.	3.770	0.943
6	School authority closes the school during an outbreak of communicable disease.	3.032	1.085
7	The school authority request students to undergo a medical examination before they are registered.	3.351	1.120
8	Teachers and school personnel routinely screen students suffering from infectious diseases.	3.160	1.144
9	Teachers/medical personnel give medication to students.	3.500	1.114
10	Teachers and health personnel maintain records of communicable diseases in the school.	3.252	1.121

From the mean score (3.348) on item 1 in the table, the schools did not have any policy on the control of communicable diseases. The mean score (3.610) on item 2 in the table indicates that teachers used their dispositions to exclude and re-admit students suffering from communicable diseases from school. As a control measure, the respondents agreed as indicated in item 3 with a mean score of 3.904, that teachers require students to be immunized against communicable diseases and the mean score for item 4 shows that the respondents were of the opinion that health personnel within the schools maintained records of students' immunization. As indicated in item 5, the respondents agreed that the school usually notifies the health authority about an outbreak of communicable diseases but the school authority did not usually close the school during an outbreak of communicable disease. This is shown in item 6 with a mean score of 3.032. The respondents also disagreed that the school authority usually request students to undergo a medical examination before they are registered. The mean scores of items 8 and 9 in the table imply that the school teachers and personnel do not routinely screen students suffering from infectious diseases, and that teachers and health personnel maintain records of communicable diseases in the school. This means that control of communicable diseases is left to the individual class teacher with such cases in the school.

Sanitation is another area of health which was evaluated in the secondary schools. The question the study intends to provide a solution here is:

5. Do school health services promote sanitary conditions within secondary schools in Kaduna State?

Promotion of sanitation here included maintaining hygienic environment, provision of toilet facilities, well ventilated classrooms and provision of potable water. Other items also considered in this regard included necessary equipment like chair and desk, the optimum population for classrooms and hostels and a good waste disposal system. The opinions of the

respondents in terms of mean scores and standard deviations are presented in Table 4.6

Table 4.6: Mean scores of the respondents on Promotion of sanitary conditions in school.

S/N	Promotion of sanitary conditions in school	Mean	SD
1	Teachers maintain hygienic environment in school.	4.191	0.826
2	The school building is well planned and constructed with durable materials.	4.099	0.875
3	Teachers inspect school routinely to determine the cleanliness of the school.	4.262	0.712
4	The school has adequate toilet and urinal facilities for males and females.	4.124	0.925
5	The class rooms are well ventilated, lighted and provided with wash hand basins.	3.904	1.010
6	Doors and windows are fitted with wire gauze and occupy 1/8 of the total floor area.	3.472	1.217
7	The school has potable and adequate water supply.	3.801	1.075
8	Desks and chairs are constructed according to the age of the students.	3.762	1.189
9	Students are over-crowded in the class room and in the hostel.	3.457	1.293
10	The school has play grounds for physical education programmes and recreation.	4.025	0.963
11	The school has a good waste disposal system, dustbins and refuse dump for the disposal of waste.	4.078	0.665
12	The hostels are well lighted, clean, safety and provided with	3.574	1.130

adequate toilet facilities.

The mean scores for items 1 and 2 in the table are indications that the respondents agreed that the teachers maintain hygienic environment in schools and that school buildings are well planned and constructed with durable materials. The mean score (4.262) for item 3 , implies that the respondents agreed that the school teachers inspect the schools routinely in order to determine the cleanliness of the school. In item 5, the respondents agreed that the class rooms were well ventilated, lighted and provided with wash hand basins but the respondents did not agree that doors and windows were fitted with wire gauze and occupy 1/8 of the total floor area of the school. But they agreed that the schools had play grounds for activity involving physical education programmes and recreation. In item 11, the respondents agreed that the schools have good waste disposal systems such as dustbins and refuse dump for the disposal of waste. The respondents agreed also that the hostels were well lighted, clean and provided with adequate toilet facilities. Thus on the part of the teachers and the students effort could be said to have been made to promote sanitation in the secondary schools in the state.

The sixth question for the study bordered on whether counseling on health matters is provided along with health services in the selected secondary schools in the state. The question is:

6. Do school health services include counseling services to children, parents and teachers of secondary schools in Kaduna State?

Issues considered here are whether health personnel counsel students on health as well as communicate students' health related issues to parents. The mean scores of the respondents on the items used in evaluating counseling as part of the health services in the secondary schools are presented in Table 4.7

Table 4.7: Mean scores of the respondents on counseling of students on health

S/N	Counseling of students and parents	Mean	SD
1	**Teachers and health personnel counsel students on the findings of health appraisal.**	**3.975**	**0.985**
2	**Teachers interpret to students the findings of their health conditions.**	**3.809**	**0.900**
3	**Teachers and health personnel counsel parents on the findings of health appraisal.**	**3.674**	**0.991**
4	**Teachers refer parents to places where the problems of their children can be treated.**	**3.652**	**0.976**
5	**5. Teachers ensure that parents make a follow up on referral of their children.**	**3.543**	**0.936**
6	**Teachers communicate effectively to the parents about the health of their children.**	**3.777**	**0.971**
7	**Teachers and school personnel are familiar with the child health cumulative records and previous counseling result.**	**3.660**	**1.036**
8	**Counseling services improve the health status and academic outcome of students.**	**4.011**	**0.953**
9	**Teachers and school personnel are well trained on counseling.**	**3.773**	**1.029**
10	**Counseling centers/services are provided in schools.**	**3.602**	**1.217**

The mean scores of the respondents on the items are all on the agreement side of the scale used in the measurement of the opinion. This means that counseling on health matters is

provided to students in the selected secondary schools. For example, the mean scores for items 1, 2 and 3 are 3.975, 3.809 and 3.674 respectively. And these are indications that the respondents agreed that teachers and health personnel counseled students on health, interpreted students' health condition as well as counseled the parents of their wards' health status. The mean score (3.652) for item 4 is another proof of this counseling provided in the school. Here the respondents agreed that the teachers usually referred parents to places where the problems of their children could be treated. This counseling was achieved as indicated in the table on items 7 and 9 in the table where the respondents agreed that the teachers and school health personnel are familiar with the child health cumulative records and previous counseling result and also that the teachers and school health personnel have some knowledge on counseling. The table also shows that the schools have counseling center as indicated with a mean score of 3.602 for item 10 in the table.

As part of the health services, the nutritional programme in the secondary schools was also evaluated. The question the study intended to answer in this respect is as follows:

7. Do school health services provide nutritional programme for students of secondary schools in Kaduna State?

Nutritional programme of the school evaluated in this respect include provision of meals for students in the secondary schools by the school authorities, allowing food vendors into the school to sell food to students, maintaining hygienic condition of food facilities and equipment in the school, and keeping the environment where food is distributed neat and ensuring that persons dealing in food for the students are physically healthy. The mean score of the respondents on the items are presented in Table 4.8

Table 4.8: Mean scores of the respondents on the nutritional programme of the schools

S/N	Provision of school nutritional programme.	Mean	SD
1	The school provides meals to students in schools.	3.020	1.592
2	The school authority allows food vendors to sell food to students.	3.766	1.206
3	Cooks and food vendors are subjected to medical examination once a year.	3.092	1.290
4	Teachers inspect routinely the health status of cooks and food vendors in school.	3.511	1.203
5	The kitchen and cooking utensil are hygienically maintained.	3.539	1.181
6	Cooks and food vendors suffering from diarrhea, T.B or running nose are prevented from handling food.	3.415	1.275
7	Food master inspects the food and ensures that the food served or sold to students is wholesome.	3.766	1.091
8	School cooks are provided with apron and cover their heads while cooking food.	3.273	1.220
9	Teachers provide instructions on food sanitation for all food vendors.	3.461	1.217
10	The school has a school farm.	3.578	1.209

From the mean score of 3.020 on item 1 in the table, the respondents could be said to disagree with the notion that the school provided meals for their students. However, the score for item 2 in the table implied that the respondents agreed that the school authorities allowed food vendors to sell food to students in the respective schools. But such food vendors were

not subjected to medical examination. In item 3, the respondents disagreed that cooks and food vendors were subjected to medical examination once a year. However, the respondents agreed that teachers usually inspected routinely the health status of cooks and food vendors in the schools. And in item 7, the respondents agreed that the respective food master usually inspected the food and ensures that the food served or sold to students was wholesome and in item 10 the respondents agreed that the schools had farms. The impression from these responses is that apart from the allowance being given to food vendors, no real nutritional programme was provided in the secondary schools

The next question which the study was set to provide an answer in relation to the health services in the secondary schools within the state is:

8. Do school health services provide adequate number of health personnel in the school in Kaduna State?

The number of health personnel for the health services provided by the secondary school was assessed by the type of employment given to them in the various schools, the type of training and experiences they had and how they handled cases of illnesses and injuries in the schools. Their condition of service, like welfare and other benefits were also considered. The major question here is whether the schools provide health personnel for health service, in the secondary schools. The mean scores of the respondents on the items used in the assessment of the respondents are presented in Table 4.9.

Table 4.9: Mean scores of the respondents on Provision of health personnel in school

S/N	Provision of health personnel in school	Mean	SD
1	**School authority employs health personnel to work in the school clinic.**	**3.280**	**1.343**
2	**The health personnel working in school clinics are trained and licensed by the various registering bodies.**	**3.209**	**1.278**
3	**Health personnel working in the school clinic are well experienced and treat students effectively.**	**3.344**	**1.282**
4	**Teachers and health personnel refers more serious conditions and complicated cases to hospital.**	**3.869**	**1.051**
5	**Teachers and health personnel maintain health records of their students.**	**3.656**	**1.083**
6	**Teachers and health personnel provide social and developmental therapy to handicapped students.**	**3.344**	**1.119**
7	**Teachers and health personnel provide social and educational therapy to handicapped children.**	**3.316**	**1.167**
8	**Health personnel prescribe drugs for students.**	**3.262**	**1.209**
9	**Health personnel/teachers enjoy in-service programme.**	**3.291**	**1.142**

The respondents disagreed with the suggestion that the school authorities of the respective schools, employed health personnel to work in the school clinic. In the table, the mean score for the item (1) is 3.280 while the mean score for item 2 is 3.209, which means

that the respondents disagreed with the suggestion that the health personnel working in the school clinics were trained and licensed by the various registering bodies and in item 3, the respondents also disagreed with the suggestion that the health personnel working in the school clinic were well experienced and treat students effectively, illnesses and injuries. Thus the respondents agreed that the teachers and the school health personnel referred more serious conditions and complicated cases to hospital.

The respondents did not agree that the secondary school teachers and health personnel provide social and developmental therapy to handicapped students and in item 7, the respondents disagreed with the suggestion that teachers and health personnel provide social and educational therapy to handicapped children. The mean scores for the items (6 and 7) in the table are 3.344 and 3.316. And in item 8 and 9, the respondents did not agree that the health personnel prescribed drugs for students nor that the health personnel enjoyed in-service programme as an in-service.

The last section of the questions was dealt on the correction of remedial defects among the secondary school students in the state. The question related to this section is:

9. Do secondary school health services include correction of remedial defects in Kaduna State?

Among the items used in this evaluation are whether teachers helped in the identification of handicapped children in the secondary schools, and whether they provided special attention to such children. The skill for dealing with such handicapped children, the ability to provide the necessary correction and make recommendations to parents towards the provision of special training for the handicapped children are some of the items used in this evaluation. In table 4.10, the respondents' opinions are scored in means and their corresponding standard deviations for each of the items.

Table 4.10: Mean scores of the respondents on the Correction of handicapped defects in the secondary schools

S/N	Correction of handicapped defects	Mean	SD
1	**Teachers help in identifying handicapped children.**	**3.585**	**1.027**
2	**Teachers supervise and give attention to handicap children promptly.**	**3.589**	**0.921**
3	**Teachers are skillful in handling handicapped students.**	**3.344**	**1.022**
4	**Teachers refer school children for correction of their eye defect.**	**3.415**	**1.006**
5	**Teachers give attention in treating handicapped children in school.**	**3.401**	**1.001**
6	**Teachers and health personnel screen the eye of students.**	**2.908**	**1.083**
7	**Teachers identify students with hearing defects.**	**3.259**	**1.103**
8	**Teachers refer handicapped students to special schools.**	**3.358**	**0.985**
9	**Teachers advise parents on where they can obtain treatment of their children.**	**3.383**	**0.974**
10	**Teachers provide appropriate training according to student's handicap conditions.**	**3.280**	**0.945**

From the mean score of item 1, the respondents agreed that teachers usually helped in identifying handicapped children within the secondary schools. And in item 2, the respondents agreed that the teachers supervised and gave attention to handicapped children

promptly but the respondents did not agree that the teachers were skillful in handling handicapped students. Thus the respondents also disagreed that the teachers referred school children for correction of their eye defect, gave attention to the treatment of handicapped and screened the eye of students in the secondary schools. These are indicated in the mean scores for items 4, 5 and 6 in the table respectively. The respondents did not agree that the teachers in the school can identify students with hearing defects and that the teachers referred handicapped students to special schools nor that teachers advised parents on where they can obtain treatment for their children and they did not agree that teachers provided appropriate training according to student's handicap conditions. The impression from these mean scores is that the health services in the secondary schools could not be said to include correction of remedial defects among the students in the secondary schools within the state.

4.3 Test of hypotheses

Hypothesis 1: School health services do not include appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counseling services, provision of nutritional programme, provision of adequate number of health personnel and encouragement of correction of remedial defects among secondary school children in Kaduna State .

One major hypothesis consisting of nine components was raised in this study. The hypothesis were raised to confirm statistically the solution proffered to the questions raised in the study. The main concern of the hypotheses is to determine whether the respondents agreed with the fact that the major variables of investigation (appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary condition, provision of counseling services, provision of nutritional programme, provision of health personnel and correction of remedial defects among the students in the secondary school) are adequately effective in the secondary

schools or not. The basic test here is to measure each of the observed mean of the variables being investigated, whether it is on the agreement side of the five point interval scale or on the disagreement side of the five point interval scale. Generally a mean of 3.5 and above is considered to be on the agreement side while a mean of less than 3.5 implies no agreement. The means of the variables were therefore compared with a constant of 3.4 to enable the conclusion on each of the variables, t-test was used for the differences between what were observed and the expected .The results of which are shown in table 4.11.

Table 4.11: One tail t-test for differences between observed and expected on each aspect of school health services.

S/NO	HEALTH SERVICE	MEAN	SD	t
1.	**Health appraisal**	**3.2638**	**0.916**	**2.50**
	Constant	**3.4000**	**0.000**	
2	**Treatment of common ailments.**	**3.7915**	**0.608**	**10.81**
	Constant.	**3.4000**	**0.000**	
3.	**Provision of first Aid and emergency care.**	**3.7908**	**0.661**	**9.92**
	Constant.	**3.4000**	**0.000**	
4.	**Control of communicable diseases.**	**3.4500**	**0.677**	**1.24**
	Constant.	**3.4000**	**0.000**	
5.	**Promotion of sanitary conditions.**	**3.8960**	**0.516**	**8.10**
	Constant.	**3.4000**	**0.000**	
6.	**Counseling services.**	**3.7525**	**0.731**	**0.85**
	Constant.	**3.4000**	**0.000**	
7.	**Nutritional programme.**	**3.4401**	**0.793**	**0.85**
	Constant.	**3.4000**	**0.000**	
8.	**Provision of health personnel.**	**3.3968**	**0.869**	**0.060**
	Constant.	**3.4000**	**0.000**	
9.	**Correction of handicapped defects.**	**3.3521**	**0.752**	**1.07**
	Constant.	**3.4000**	**0.000**	

t (281)=1.96<.05

Table 4.11 shows significant differences between expected responses and obtained responses on health appraisal because the expected responses were more than obtained responses. This indicates that health appraisal was not collected in secondary schools of Kaduna State. Similar significant differences on treatment of common ailments, provision of first aid and emergency care, promotion of sanitary conditions, and counseling services indicate that these were provided in secondary schools of Kaduna State. The insignificant differences shown in table 4.11 on control of communicable diseases, provision of nutritional programme, provision of health personnel, and correction of handicapped defects suggest that they were not included in the health services of secondary schools of Kaduna State. These results that partially support hypothesis one according to which school health services were not provided in secondary schools of Kaduna State.

Hypothesis II: There is no significant difference between respondents of urban and rural secondary schools in their assessment of health care services.

To test this hypothesis, the mean scores for all the nine variables investigated in relation to the health services provided in the selected secondary schools were summed up and subjected to a two tail t-test. The use of the two tail t-test was informed by the involvement of two independent groups involved in the test. The result of the test is presented in Table 4.12

Table 4.12: Two tail t-test for differences between urban and rural secondary schools in the provision of health care services in Kaduna State.

Location	Mean	SD	SE	DF	t	P
Urban	**3.5887**	**0.575**	**0.043**	**280**	**0.690**	**0.489**
Rural	**3.5401**	**0.554**	**0.054**			

t (280) = 1.96< .05

Table 4.12 shows insignificant difference between the schools in the urban and rural areas. The observed t-value (0.690) for the test is lower than the critical value (1.96) and the level of significance observed for the test is higher than 0.05. The null hypothesis is therefore retained (P > 0.05). This means that the schools did not differ significantly in the provision of health care services in the different locations.

Hypothesis III: There is no significant difference between respondents in their opinion as influenced by their qualification on the health services provided by secondary schools in Kaduna State. To test this hypothesis, the qualifications of the respondents were used as the independent variable while the aggregate mean score of the respondents on the nine variables was used as the dependent variable. The One way analysis of variance was used in the test of the hypothesis because of the multiple levels of the independent variable. The results of this analysis are shown in Table 4.13.

Table 4.13: One way analysis of variance health services in secondary schools of Kaduna State.

Source	DF	SS	MS	t-value	P
Between group	**2**	**1.0684**	**0.5342**	**1.6201**	**0.2000**
Within group	**241**	**79.4623**	**0.3297**		
Total	**243**	**80.5307**			

t (2,241) = 3.000 < .05

The observed t- value (1.6201) in the table is lower than the critical value (3.000). The level of significance observed in the test is higher than 0.05. These means that the respondents did not differ in their opinion on the health services provided in the secondary schools. In other words their level of education did not significantly influence their opinion on the health care services provided in the secondary schools. The null hypothesis is thus

retained. The mean scores of the groups by their qualification on the health care services in the secondary schools is provided in Table 4.14

Table 4.14: Mean scores on health services by qualification of the respondents

Qualification	Mean	Standard Deviation	Standard Error
Post secondary	**3.8586**	**0.5487**	**0.1940**
Graduate	**3.5669**	**0.5569**	**0.0391**
Master and above	**3.4576**	**0.6779**	**0.1180**
Total	**3.5617**	**0.5757**	**0.0369**

Table 4.14 reveals that the mean score by the groups were approximately the same and hence the non-significant observation in the hypothesis. The mean score however implied that the respondents were in agreement with the expressed opinion on the health care services of the secondary schools.

Hypothesis IV: There is no significant difference between respondents of Boarding and Day secondary schools in their health care services in Kaduna State.

The two tail t-test was used to test of this hypothesis. The dependent variable was the summation of the means for the nine variables itemized in the study. The result of the t-test is shown in Table 4.15.

Table 4.15: Two tail t-test for differences between urban and rural secondary schools in health care services in Kaduna State.

Nature of school	Mean	SD	SE	DF	t	P
Boarding	**3.6986**	**0.467**	**0.041**	**280**	**3.620**	**0.000**
Day	**3.4592**	**0.619**	**0.050**			

t (280) = 1.96 < .05

Table 4.15 shows significant difference between the boarding schools and the day schools in their health care services. As indicated in the table, the observed t-value for comparing the two groups is 3.620 and it is higher than the critical value of 1.96. The observed level of significance is 0.000 (P < 0.05). The null hypothesis is therefore rejected. From the mean scores of the two groups, the health care services provided in the boarding schools were significantly better than those in the day secondary schools.

Hypothesis V: There is no significant difference between male and female respondents in their opinion on the health care services provided in Kaduna State secondary schools.

The influence of sex in the opinion of the respondents on the health care services provided in the schools is tested here. The two tail t-test was used in the hypothesis. The result is presented in Table 4.16.

Table 4.16: Two tail t-test on health care services provided in the schools by sex of the respondents.

Sex	Mean	SD	SE	DF	t	P
Male	**3.6035**	**0.545**	**0.043**	**280**	**1.23**	**0.220**
Female	**3.5195**	**0.593**	**0.055**			

t (280) = 1.96 < .05

Table 4.16 shows that the male and female respondents did not differ significantly in their opinion on the health care services provided in the secondary schools. The observed t-value for the test is lower than the critical value and the observed level of significance is higher than 0.05 (P > 0.05). The null hypothesis is therefore retained since the respondents did not differ by sex in their opinion on the health care services provided in the selected secondary schools.

Hypothesis VI: There is no significant difference between respondents from private and government owned secondary schools in their assessment of health care services in Kaduna State.

The ownership of the secondary school was used here as the independent variable to test for possible difference in the health care services provided in the secondary schools. Since the schools were classified into two groups (Private and Government), the t-test was used in the test for significance difference between the two groups. The result is presented in Table 4.17.

Table 4.17: Two tail t-test for differences between government and private secondary schools in health care services in Kaduna State.

School ownership	Mean	SD	SE	DF	t	P	
Government	**3.5811**	**0.589**	**0.048**	**280**	**0.320**	**0.746**	**1.96**
Private	**3.5591**	**0.542**	**0.047**				

t(280) = 1.96 < .05

Table 4.17 shows that the observed t-value (0.320) is lower than the critical value of 1.96. And the probability level of significance observed in the test is 0.746 (P > 0.05). This means that the two groups are not significantly different in the provision of health care services for students in their schools.

The null hypothesis is supported by this test.

4.4 Discussion.

The purpose of this study was to assess health services in secondary schools of Kaduna State. For the purpose of this study, school health services included appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counseling services,

nutritional programmes, provision of health personnel, and correction of remedial defects. The results of this study showed that treatment of common ailments among school children, provision of first aid and emergency care to children and school personnel, promotion of sanitary conditions in schools, and counseling of students and parents were all followed in secondary schools of Kaduna State. However, appraisal of health status of school children, control of communicable diseases in schools, correction of remedial defects, provision of health personnel and provision of school nutritional programme were either not adequate or not included at all.

Health appraisal: The results of this study revealed that health appraisal of school children was not conducted in secondary schools of Kaduna State. The perception of the respondents is the reflection of the actual situation in the secondary schools in Kaduna State.

This finding is contrary to the observations of Igwe (1996) and Achalu (2001) who said that health care services of school included appraising the health status of pupils and personnel in the schools. This inadequacy or absence of appraisal of health status of children of secondary schools in Kaduna State may be attributed to the fact that the trained health personnel to conduct such evaluation were not adequate as observed by Ademuwagun and Oduntan (1986). This problem should be overcome because appraisal of health of school children is very important to detect any possible physical, medical and mental defects that might interfere in the learning process of children and the utilization of educational opportunities. Therefore, it is very necessary, as suggested by Igwe (1996) that only trained personnel should be appointed but also available teachers should be trained to conduct appraisal of school children.

Treatment of common ailments: This study revealed that the school health services included the treatment of common ailments. The respondents agreed that this aspect of the health care services in the school was really effective. In line with this finding, Brian (1977) pointed out

that school clinics are provided so that school children can attend clinics and have minor ailments treated without spending much time away from school. This finding is in line with Ademuwagun and Oduntan (1986) who pointed out that treatment of common ailments among school children and the provision of emergency care for injury and sudden illness were part of health services that schools provide. In a similar report, Kenneth (2001) reported that most schools in the United States of America maintain health care systems that cater for common ailments among school children.

Provision of First Aid and Emergency services: This study showed that the school health care services included the provision of first aid and emergency health care services for the students and teachers in the secondary schools. The result revealed that the schools provide first aid and emergency health care services for illnesses and accidents involving students and other school personnel. This finding is in line with Ademuwagun and Oduntan (1986) who pointed out that school health care services were for the treatment of common ailments among school children and the provision of emergency services for injury and sudden illness among children and staff of the school. This finding agrees with the observation of Obionu (2001) where it was pointed out that first aid services and simple treatment can be rendered in school while major illnesses and injuries could be referred to hospitals.

Control of Communicable Diseases: The respondents of this study were of the opinion that the schools do not include the control of communicable diseases in their health care services. This finding is contrary to the report by Bucher (1979) and Anne (1987), where it was suggested that control of communicable diseases should be included in school health care services. The non-control of communicable diseases observed here could be attributed to the lack of appraisal of health status of students which according to Ademuwagun and Oduntan (1986) could only be detected by early diagnosis.

Promotion of Sanitation: This study showed that the school health care services included the promotion of sanitation. The respondents agreed that the promotion of sanitation was part of the health care services provided in the schools. This finding is in line with the report by Ademuwagun and Oduntan (1986) where it was pointed out that the promotion of optimal sanitary condition in the school should be one of the objectives of any school health care services.

Counseling: This study showed that the health care services provided in the secondary schools made provision for health care counseling. This finding is in line with Ademuwagun and Oduntan (1986) where it was pointed out that any effective school health care services should include the provision of health care counseling services for the school children, teachers and parents in some cases. In the sameway, Ejifughua (1999) reported that the health care programme in most schools now attempt to build in the students a sound foundation of scientific health knowledge, health attitude and health habits through appropriate counseling.

Nutritional Programme: In this study, the schools were observed to be lacking any nutritional programme provided by the school. The finding is contrary to the view of Ademuwangun and Oduntan (1986) according to which schools need meals and that such meals should be made compulsory in all Nigerian schools. This may be attributed to the non-availability of funds, which may be due to lack of political will and determination.

Health Personnel: This study showed that the schools were lacking in the area of health personnel. This was partly because they were not provided by the school authorities through employment and also because of the management of those who have been employed. With the absence of the health personnel, the schools are not expected to effectively carry out their health care services which according to Igwe, (1996) require the knowledge and attention of medically trained personnel.

Correction of Remedial Defects: One other variable that was of major concern and was observed to be neglected in this study was the correction of remediable defects among students in the secondary schools. This was important because such handicaps constitute learning obstacles to students who are affected by such disabilities. The remedy of such defects could help to refocus such students on their academic pursuit. In line with this finding, Warnoek (1978) pointed out that children should no longer be categorized according to their handicap but rather according to their individual educational needs.

Among these variables investigated in the study, which were rather lacking in the schools health care services included health appraisal, control of communicable diseases, nutritional provision, and correction of remedial defects among students of the secondary schools. Apart from these, there were no provisions for health personnel to man the health care services of the secondary schools where they existed. The inadequacies of this variable compound the health care services provided in the schools since the teachers are not professionally trained to handle this aspect of the school.

Differences between urban and rural secondary schools in health services in Kaduna State. The results of this study showed insignificant difference between the schools in the urban and rural areas. This means that the schools did not differ significantly in the provision of health care services in the different locations. In other words, the inadequacies and adequacies in the provision of health service in secondary schools were much the same irrespective of their location.

Differences between boarding and day secondary schools in the provision of health care services in Kaduna State. The result of this study showed that boarding secondary schools in Kaduna State provide better health services compare to day secondary schools. This may be justify by the fact that management of schools, whether private or government provide trained health personnel, facilities and equipment for boarding schools more than

they provide for day schools, because children reside in the schools. They need to be attended when ever health problem arise at any time (Ministry of Health, 1985). On the other hand day secondary schools do not even have clinics because children do not stay in the schools, they did not require much attention as students who reside in the school.

Differences between private and government secondary schools in the provision of health services. It is normally expected that provision of health care services to be better in private schools than in government schools because private schools charged much higher fees than the government schools. Contrary to this expectation, this study showed insignificant differences between private and government secondary schools in the provision of school health services. It shows that, despite charging more fees, private schools do not seem to provide better health care amenities, because of which they have the same inadequacy in school health service at the government secondary schools. As a matter of policy, in order to ensure the health of school children for better learning and utilization of educational opportunities, it should be made mandatory for all private schools to allocate certain percent of the fee they charged for the provision of school health services Kenneth, (2001).

Influence of demographic characteristics on the perception of the respondents on the provision of school health services.

One of the purposes of this study was to find out whether the demographic characteristics of the respondents influence the perception of the provision of school health services. The result of the study showed that, irrespective of their educational level, gender status and the location, the respondents had similar perception about the provision of health services in secondary schools of Kaduna State. In other words the demographic characteristics of the respondents did not significantly affect the perception about provision of health services in secondary schools of Kaduna State. This shows that the result of the study were very reliable despite the differences between the respondents.

CHAPTER FIVE

5.1 SUMMARY, CONCLUSIONS AND RECOMMENDATION:

This study was conducted to assess the school health services in post primary schools of Kaduna state. This study was therefore conducted to find out whether school health services included appraisal of health status, treatment of common ailments, first aid and emergency care, control of communicable diseases, promotion of sanitary conditions, provision of counselling services, provision of nutritional programme, provision of health personnel and encouragement of correction of remedial defects among secondary school children. Differences between urban and rural schools in health appraisal, boarding and day schools, male and female respondents, government and private secondary schools in health appraisal in Kaduna state were also investigated.

To achieve the purpose of the study, a questionnaire was developed and standardised. It consisted of two sections, section one was on personal information, while section two was on school health services. Ex post facto research design was used. In this design, the questionnaire thus prepared was distributed to 106 secondary schools in the twelve inspectorate divisions and administered on 318 respondents, out of whom 282 returned the questionnaire. The data thus collected were statistically analysed by using the mean score, standard deviation and t-test.

The findings showed that health appraisal of school children, control of communicable diseases, provision of nutritional programme, provision of health personnel and correction of remedial defects were lacking among students in the secondary schools. Similarly, the findings of this study revealed that school health services included treatment of common ailments, provision of first aid, promotion of sanitation and counselling services in secondary schools of Kaduna State. It was also revealed that boarding secondary schools have better

provision of health care services than the day secondary schools .The findings further showed that schools did not differ significantly in the provision of health care services in their different locations and the level of education of the respondents did not influence their opinion in the health care services provided in secondary schools, neither did the respondents differ by sex in their opinions on health care services provided in secondary schools and the government and private secondary schools were not significantly different in the provision of health care services for students and school personnel.

5.2 CONCLUSIONS

In view of the limitations of the study and on the basis of the results presented in chapter four, the following conclusions are drawn.

1. Health services in secondary schools of Kaduna State do not include appraisal of health status, control of communicable diseases, provision of nutritional programme, provision of health personnel, and correction of remedial defects of students.
2. Health services included in secondary schools of Kaduna State are the treatment of common ailments, provision of first aid and emergency services, promotion of sanitation and counselling services among students.
3. Boarding secondary schools have better provision of health care services than the day secondary schools.
4. The perceptions of the respondents about health services in Kaduna State were not affected by their demographic characteristics, suggesting that all the respondents had similar perception irrespective of the demographic characteristics about the availability of health services in secondary schools of Kaduna State.

5.3 RECOMMENDATIONS.

On the basis of the findings of the study, the following recommendations are made;

1. The state government should employ health personnel and post them in public schools to take charge of the school health services, as the study showed that there was inadequate provision of health personnel in secondary schools of Kaduna State.
2. Government should make it mandatory for private schools to employ health personnel to take charge of school health, as this study showed that some of the private schools did not have health personnel.
3. The school authority should make sure that equipment, like scale, growth chart, thermometer and stethoscope be provided, as they where not available in secondary schools.
4. School health services in Kaduna State should include appraisal of the health status of students and school personnel, as this was not practiced in the secondary schools.
5. The control of communicable diseases in schools should be included as part of the school health services, as this was not practiced in some of the secondary schools.
6. Food vendors should be screened before they are allowed to cook or sell food to school children, as this was not practiced in secondary schools.
7. Health personnel should be able to carry out medical examination of students and referrals when the need arises as this was not practiced in the secondary schools.
8. The government should compel schools to have a school clinic before such schools are allowed to operate, as this study showed that some of the secondary schools did not have school clinics.

5.4 SUGGESTION FOR FURTHER RESEARCH.

Similar study across the nation be conducted to determine the schools that provide health services to students and those that do not provide the services in line with recommendation of school health services.

REFERENCES.

Achalu, E.I.(2001). Health education concept, methods and planning . Simarch Nigeria Limited, Lagos,Nigeria.

Ademuwagun, Z.A., and Oduntan, S. O. (1986). A school health education hand-book . University press Limited, Ibadon, Nigeria.

Ademuwagun, Z. A., and Oduntan, S, O. (1998). A school health education hand-Book. University press Limited, Ibadon, Nigeria.

Anne, B. (1987). Personal and community health. 3rd edition, Alden press oxford, London, England.

Anne, H.S.(2002). Developing a strategic plan for School Health services in Massachutts. The Journal of School Health. 72 (7): 1-5.

Brian, M.D. (1977) . Community health and social services. 3rd edition, Braillere Tindal, London England.

Brooks, S. M., and Brooks, N.A. (1979). Personal and community health. 15th edition, C.V. Moby Company, London, England .

Bucher, C.A., Olsen, E. and Willgoose, C. (1979) . The foundations of health . Prentice Hall Inc, Englewood Cliffs, N. J.

Comfort, L.A. (1990) . An evaluation of the impact of school health services on primary health care . Unpublished project School of Health Technology, Kaduna, Nigeria.

Conquard, J.F. (1927). Memoranda to the Director of Education, Southern Province. "Teaching of hygiene in schools" Ministry of Education, Enugu, Nigeria.

Dorothy, C., Carla, C., Adrienne, S., and Elvira,R.J.(2002) . Parent knowledge and opinions of school health services in an urban public school system. The Journal of School Health , 72 (1) : 18-22.

Ejifugha, A.U. ,(1999) . Development of health education in Nigeria 1882-1992 . Cannun publishers Nigeria Limited , Owerri, Nigeria .

Fryer,G ., and Igoe, J.B., (1996) .Functions of school nurses and health assistants in U.S. school health programmes. The Journal of School Health, 66 (2) : 55-58.

Federal Ministry of Environment (2005). Policy guidelines on school sanitation . Abuja, Nigeria.

Igwe, O.M.B. and Emeharole, P.O. (1993). Fundamentals of health science. Pacific publishers, Obosi, Anambra, Nigeria.

Igwe, O.M.B. (996). Basic health science for teachers and nurses. Pacific publishers, Uruowulu-Obosi,Anambra, Nigeria.

Kayode, O. (2004).Managing the health of school children . The Nigeria School Health Journal , 16 (1 and 2): 155-160.

Kenneth, E.V. (2001). Historical steps in the development of the modern school health programme. The Journal of School Health ,71 (8) : 1-6.

Laura, K ., Nancy, D.B. and Diane ,D .A. (2001). Health education: Results from the school health policies and programmes study. The Journal of School Health, 71 (7): 1- 4.

Lucas, A.O. and Gilles, H.M. (2003). A short text book of preventive medicine for the tropics. 3rd edition. Edward Arnold, London, England

Miranda, T. and Ken, G.(2002) . Physical education and health promotion: A qualitative study of teachers' perceptions . Health Education Journa l, 102 (3) : 113-123.

Ministry of Health ,(1985). Establishment of clinics in various schools . M H S W/ 752/vol.T /37 (pp 37-70). Kaduna state, Nigeria.

Monica,B. and Bennett,F.J.(1973). Community nursing in developing countries. A manual for the auxiliary public health nurses. Oxford University press, Makere- Kampala, Ghana.

Nancy, D .B .,Gale, R.B., Martha, L.D. and Mary, E.V. (2001). Health services: Results from the school health policies and programmes study. The Journal of School Health, 71 (7) : 1-3.

Obionu,C.N.(2001). Primary health care for developing countries . Delta publications Nigeria Limited, Enugu, Nigeria.

Ogbalu,A.I. (1979). Public health education . university publishing company , Onitsha, Nigeria.

Ogunmekan, D.A. (1973) . " A comparison of combantrin with Antepar and Alhopar in Helminthiasis in school children in Lagos. West African Medical Journal 22.(3) : 12-18.

Park, K. (2002). A Text book of preventive and social medicine . M/S Banarsidas Bhanot, Delhi, India.

Richard, C ., Kevin ,P .H., Sabrina , O., Charles B. F. and David, J.H. (2001). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. The Journal of School Health, 74 (7) : 1-16.

Sa,adatu, B.(2oo4). Assessment of school health services. Unpublished HND Project , School of Health Technology ,Kaduna Nigeria.

Sofoluwe,C.O. , Schram, R. and Ogunmekan , D. A. (1998) . Principles and practice of public health in Africa. Volume 2. 2nd edition , University Press PLC , Ibadon, Nigeria .

Ward-Dalzell, A. J.(1975). A text book of health education for students in colleges of education, teachers and health educators. Harper and Row Publishers INC , New York..

Warnock, M. (chair man) (1978). Report of the committee of enquiry into the education of handicapped children and young people. HMSO, London, England.

APPENDIX I.

Department of Physical and Health Education,
Ahmadu Bello University, Zaria.
3rd October, 2006.

Associate Prof. J.A.Gwani.

Dr.(Mrs) C.O. Adegbite.

Dr. (Mrs.) M. A. Suleiman.

Dr. Kabir Sabitu.

REQUEST TO VET QUESTIONNAIRE.

Mr. Makama Bala Andrew is a M. Sc student of this department in Health Education. In partial fulfilment of the requirements of the programme, he is conducting a research on the Assessment of School Health Services in Post Primary Schools of Kaduna State. In this regard, he has prepared a questionnaire.

In view of your expertise and experience, you have been selected as one of the jurors to critically examine the questionnaire.
I am sending herewith a copy of the questionnaire. Kindly examine it critically and make necessary suggestions to enhance its face validity and return it to the student at the earliest.

Thank you.

Signed
Prof. K . VENKATESWARLU

Major Supervisor.

APPENDIX II.

Department of Physical and Health Education,
Ahmadu Bello University, Zaria.
7th November, 2006.

The Hon. Commissioner,
Ministry of Education .
Kaduna State.

Sir/Madam,

LETTER OF INTRODUCTION.

The bearer Mr. Makama Bala Andrew is a M.SC (Health Education) Student of this Department. He is currently engaged in his thesis work as part of his course requirement . He is collecting data for his thesis titled “Assessment of School Health Services in post primary schools of Kaduna State .
We shall be grateful if you would give him the assistance and co operation he might need from you in this regard.

Thank you.

Signed.
Prof. K. Venkateswarlu
Major Supervisor

APPENDIX III

LIST OF SELECTED PUBLIC AND PRIVATE SECONDARY SCHOOLS IN KADUNA STATE BY INSPECTORATE DIVISIONS

KADUNA INSPECTORATE DIVISION.

1. Government Secondary School Kawo, Kaduna.
2. Government College Kurmin Mashi, Kaduna.
3. Rimi College Kaduna.
4. Government Technical College Malali ,Kaduna.
5. Capital School Kaduna.
6. Government Secondary School Ungwan Sarki,Kaduna.
7. Clara Secondary School Hayin Banki, Kaduna.
8. Yeshing Secondary school Ung/Dosa, Kaduna,
9. Anji Secondary School Ung/Dosa , Kaduna.
10. Essence International School Kaduna.
11. Zamani College Kaduna.
12. Turaki Secondary School Kaduna.
13. Prudent International School Malali, Kaduna.
14. Federal Government College Malali, Kaduna.
15. Imaculate International Secondary School Kabala W/ Kaduna.

SABON TASHA INSPECTORATE DIVISION

1. Government Secondary School Kakuri, Kaduna.
2. Queen Amina College Kakuri, Kaduna.

3. Government Girls Secondary School Barnawa, Kaduna.
4. Government Junior Secondary School Narayi, Kaduna.
5. Government Secondary School Sabon Tasha , Kaduna.
6. Government Secondary School Television, Kaduna.
7. ECWA Secondary School Narayi, Kaduna.
8. Danbo International School Kaduna.
9. Dabo Secondary School Television, Kaduna.
10. Jupavi International School Television, Kaduna.
11. Elite Secondary School Television, Kaduna.
12. Christ Ambassador College, Sabon Tasha, Kaduna.
13. Our Lady's of Fatima Girl's School Sabon Tasha,Kaduna.
14. Gracious International School Romi, Kaduna.
15. Government Secondary School Kawo (Formal Teachers College) Kaduna.
16. Joy International Secondary School Kankan Abuja RD. Kaduna.

ZONKWA INSPECTORATE DIVISION

1. Government Secondary School Zango
2. Government Girls Secondary School Zonkwa
3. Government Secondary School Zuturun
4. Government Secondary School Fadan Kamantan
5. St. Francis College Zonkwa
6. Government Secondary School Fadan Kaje
7. Tafawa Balewa Memorial Commercial College Samarun Kataf

ANCHAU INSPECTORATE DIVISION

1. Government Secondary School Pambegua
2. Government Science School Ikara.
3. Government Girls Secondary School M/Kubau
4. Government Commercial College Makarfi
5. Government Secondary School Kauru
6. Government Secondary School Kwassam
7. Government Secondary School Zuntu
8. Government Junior Secondary School Kaibi
9. Government Secondary School Dandura
10. Government Secondary School Kubau.

LERE INSPECTORATE DIVISION

1. Government Secondary School Saminaka
2. Government Secondary School Yarkasuwa
3. Government Secondary School Lere
4. Government Secondary School Kahugu
5. Girls College of Beatitude Saminaka

BIRNIN GWARI INSPECTORATE DIVISION

1. Government Secondary School Udawa
2. Government Science School Birnin Gwari
3. Government Girls Secondary School B/Gwari
4. Government Secondary School Kuyallo

KAFANCHAN INSPECTORATE DIVISION

1. Government College Kagoro
2. Government Secondary School Manchok
3. Government Secondary School Fadan Kagoma
4. Government Girls Science School Kwoi
5. Baptist Science Academy Kafanchan
6. Government Girls Secondary School Kafanchan
7. St. Peters Clearers Creatures Mind Secondary School Aduwan III
8. Nakowa College Kafanchan

RIGACHIKUN INSPECTORATE DIVISION

1. Government Secondary School Jaji
2. Government Secondary School Rigachikun
3. Government Secondary School Birnin Yero
4. Government Secondary School Farakwoi
5. Government Secondary School Gamagira

GIWA INSPECTORATE DIVISION

1. Government Secondary School Bomo (SNR)
2. Government Secondary School Shika
3. Government Secondary School Kudan
4. Government Secondary School Giwa
5. Aunty Grace Secondary School Hanwa
6. Model Secondary School Zangon, Shanu

GODOGODO INSPECTORATE DIVISION

1. Government Secondary School Godogodo
2. Government Secondary School Fadan Karshi

3. Government Junior Secondary School Gidan Waya
4. ECWA Secondary School Fadan Karshi
5. Nag Community Secondary School Randa
6. Government Secondary School Gwantu

ZARIA INSPECTORATE DIVISION

1. Barewa College Zaria
2. Kufena College Zaria
3. Government Secondary School Dailet Zaria
4. Federal Government Girls College Zaria
5. Government Girls Secondary School Kango Zaria
6. Government Secondary School Murchiya
7. A.B.U Demonstrations Secondary School Zaria.
8. BUKs International Secondary School Zaria
9. St. Batholomem Secondary School Wusasa
10. Government Technical College Soba
11. Comprehensive College Zaria
12. Alhuda –Huda Zaria
13. Zaria Academy Zaria
14. St. Joseph Secondary Zaria
15. God's Time Secondary School Zaria
16. Government School Basawa
17. Government Commerical College Zaria
18. Government Girls Secondary School Soba

KACHIA INSPECTORATE DIVISION

1. Government Secondary School Kachia
2. Government Secondary School Gumel.
3. Government Secondary School Sabon Sarki
4. Government Junior Secondary School Kachia
5. ECWA Secondary School Kurmin Gyada
6. St. John's Secondary School Kachia.

APPENDIX IV

QUESTIONNAIRE ON THE EVALUATION OF HEALTH SERVICES IN POST PRIMARY SCHOOLS OF KADUNA STATE

This questionnaire has been prepared to assess health services in secondary schools of Kaduna State. It has two sections. Section one is on personal information and section two on school health services. Section two has nine sub-sections on different aspects of school health services.

Each sub-section contains nine to twelve statements. Each statement is to be assessed on a five point Likert scale as shown below.

SA = Strongly agree

A = Agree

UD = Undecided

D = Disagree

SD = Strongly disagree

There are no right or wrong answers.

All your responses will be treated strictly confidential

SECTION ONE

PERSONAL INFORMATION

Please tick (x) the column against each statement that best suits you.

1. Location of school: a. Urban ☐ b. Rural ☐

2. Highest educational qualification:

a. Primary ☐

b. Post Primary ☐

c. Graduate ☐

d. Masters ☐

e. Ph.D ☐

f. Others Specify ☐

3. Position held in school:

a. Principal ☐

b. Senior master ☐

c. Games master ☐

d. P.E Teacher ☐

e. Teacher ☐

f. School nurse ☐

4. Nature of school: a. Boarding ☐ b. Day ☐

5. Gender: a. Male ☐ b. Female ☐

6. Ownership of school: a. Gov't ☐ b. Private ☐

SECTION TWO

Please tick (x) the column against each statement below that best represents your feeling.

		Strongly agreed (AS)	Agreed (A)	Undecided (UD)	Disagreed (D)	Strongly Disagree (SD)
A.	Appraisal of health status of school children.	5	4	3	2	1
i.	Teachers observe and assess health status of school children regularly.					
ii.	Teachers generally observe the parts of eyes, ears, nose, throat, skin and mouth of school children.					
iii.	School children are physically examined for their health status periodically by the health personnel.					
iv.	School has sick bay/health centre, where school children periodically undergo medical examination for any medical defects.					
v.	Follow up action is taken on the basis of physical and medical examinations.					
vi.	Information collected from physical and health examination is correctly recorded in a standard form.					
vii.	Equipment and facilities like weighing scales, growth chart, thermometer and stethoscope are available in school for health appraisal of school children.					
viii.	Teachers are trained to assess the physical status of children.					
ix.	Medical personnel are available to conduct medical examination of children.					
x.	Health appraisals are conducted regularly.					

		SA	A	UD	D	SD
B.	Treatment of common ailments among school children	5	4	3	2	1
i.	Teachers give immediate care to school children in case of sudden illness or injury.					
ii.	The school notifies parents about accidents regarding their children.					
iii.	Parents allow their children to be treated in the school clinic.					
iv.	Health personnel in school are well trained to treat students.					
v.	Teachers/health personnel in school refer complicated conditions to general hospital.					
vi.	Students pay for medical treatment received in school.					
vii.	Teachers takes children home or to other places of safety when injured.					
viii.	Teachers guide parents to places where their children can receive further treatment.					
ix.	Teachers and health personnel make a follow up of students on referral.					
x.	The school clinic is stocked with relevant drugs.					

		SA	A	UD	D	SD
C.	Provision of first aid and emergency care to students and school personnel.	5	4	3	2	1
i.	Teachers and health personnel are trained on first aid procedures.					
ii.	The school has a policy on first aid and emergency treatment.					
iii.	The school has a well equipped first aid box for emergency care.					
iv.	Teachers send accident victims to the hospital.					
v.	Teachers and health personnel convey accident victims to the hospital.					
vi.	Teacher and health personnel keep health records on accidents and illnesses in school.					
vii.	First aids classes are organize for Teachers and students in school.					
viii.	First aid training is part of physical educators training.					
ix.	Teachers and health personnel handle emergency care for the injured.					

		SA	A	UD	D	SD
D.	Control of communicable diseases in school.	5	4	3	2	1
i.	School has a policy on the control of communicable diseases.					
ii.	Teachers exclude and re-admit students suffering from communicable diseases from school.					
iii.	Teachers require students to be immunized against communicable diseases.					
iv.	Teachers/health personnel maintain records of students immunization.					
v.	The school notifies the health authority about an outbreak of communicable diseases.					
vi.	School authority closes the school during an outbreak of communicable disease.					
vii.	The school authority request students to undergo a medical examination before they are registered.					
viii.	Teachers and school personnel routinely screen students suffering from infectious diseases.					
ix.	Teachers/medical personnel give medication to students.					`
x.	Teachers and health personnel maintain records of communicable diseases in the school.					

		SA	A	UD	D	SD
E.	Promotion of sanitary conditions in school	5	4	3	2	1
i.	Teachers maintain hygienic environment in school.					
ii.	The school building is well planned and constructed with durable materials.					
iii.	Teachers inspect school routinely to determine the cleanliness of the school.					
iv.	The school has adequate toilet and urinal facilities for males and females.					
v.	The class rooms are well ventilated, lighted and provided with wash hand basins.					
vi.	Doors and windows are fitted with wire gauze and occupy 1/8 of the total floor area.					
vii.	The school has potable and adequate water supply.					
viii.	Desks and chairs are constructed according to the age of the students.					
ix.	Students are over-crowded in the class room and in the hostel.					
x.	The school has play grounds for activity physical education programmes and recreation.					
xi.	The school has a good waste disposal system, dustbins and refuse dump for the disposal of waste.					
xii.	The hostels are well lighted, clean, safety and provided with adequate toilet facilities.					

		SA	A	UD	D	SD
F.	Counseling of students and parents	5	4	3	2	1
i.	Teachers and health personnel counsel students on the findings of health appraisal.					
ii.	Teachers interpret to students the findings of their health conditions.					
iii.	Teachers and health personnel counsel parents on the findings of health appraisal.					
iv.	Teachers refer parents to places where the problems of their children can be treated.					
v.	Teachers ensure that parents make a follow up on referral of their children.					
vi.	Teachers communicate effectively to the parents about the health of their children.					
vii.	Teachers and school personnel are familiar with the child health cumulative records and previous counseling result.					
viii.	Counseling services improve the health status and academic outcome of students.					
ix.	Teachers and school personnel are well trained on counseling.					
x.	Counseling centers/services are provided in schools.					

		SA	A	UD	D	SD
G.	Provision of school nutritional programme.	5	4	3	2	1
i.	The school provides meals to students in schools.					
ii.	The school authority allows food vendors to sell food to students.					
iii.	Cooks and food vendors are subjected to medical examination once a year.					
iv.	Teachers inspect routinely the health status of cooks and food vendors in school.					
v.	The kitchen and cooking utensil are hygienically maintained.					
vi.	Cooks and food vendors suffering from diarrhea, T.B or running nose are prevented from handling food.					
vii.	Food master inspects the food and ensures that the food served or sold to students is wholesome.					
viii.	School cooks are provided with apron and cover their heads while cooking food.					
ix.	Teachers provide instructions on food sanitation for all food vendors.					
x.	The school has a school farm.					

		SA	A	UD	D	SD
H.	Provision of health personnel in school	5	4	3	2	1
i.	School authority employs health personnel to work in the school clinic.					
ii.	The health personnel working in school clinics are trained and licensed by the various registering bodies.					
iii.	Health personnel working in the school clinic are well experienced and treat students effectively.					
iv.	Teachers and health personnel refers more serious conditions and complicated cases to hospital.					
v.	Teachers and health personnel maintain health records of their students.					
vi.	Teachers and health personnel provide social and developmental therapy to handicapped students.					
vii.	Teachers and health personnel provide social and educational therapy to handicapped children.					
viii.	Health personnel prescribe drugs for students.					
ix.	Health personnel/teachers enjoy in-service programme.					

		SA	A	UD	D	SD
I.	Correction of handicapped defects	5	4	3	2	1
i.	Teachers help in identifying handicapped children.					
ii.	Teachers supervise and give attention to handicap children promptly.					
iii.	Teachers are skillful in handling handicapped students.					
iv.	Teachers refer school children for correction of their eye defect.					
v.	Teachers give attention in treating handicapped children in school.					
vi.	Teachers and health personnel screen the eye of students.					
vii.	Teachers identify students with hearing defects.					
viii.	Teachers refer handicapped students to special schools.					
ix.	Teachers advise parents on where they can obtain treatment of their children.					
x.	Teachers provide appropriate training according to student's handicap conditions.					