



**PREVENTIVE AND CURATIVE HEALTH SERVICES  
IN SECONDARY SCHOOLS IN BORNO STATE, NIGERIA:  
IMPLICATIONS FOR COUNSELLING**

**Ngohi, Bukar Umar<sup>1</sup>,**

**Domiya G. Ali<sup>2i</sup>,**

**Kpanja, K. L.<sup>3</sup>,**

**Mallam Bulama Kobre<sup>4</sup>**

<sup>1</sup>Mohammed Goni College of  
Legal and Islamic Studies (MOGCOLIS),  
Maiduguri, Borno State, Nigeria

<sup>2</sup>Dr., Faculty of Education,  
Department of Vocational and Technical Education  
University of Maiduguri,  
Borno State, Nigeria

<sup>3</sup>Dr., Faculty of Education  
Department of Educational Foundations  
Nasarawa State University, Keffi  
Nasarawa State, Nigeria

<sup>4</sup>Muhamat Lawan College of Agriculture (MULCA),  
Maiduguri, Borno State, Nigeria

**Abstract:**

The study which was a survey, investigated preventive and curative health services in secondary schools in Borno State. Target population of the study comprised of 6,786 senior secondary school students. However, 7,500 staff and students constituted the sample for the study. Researchers' self-authored instrument tagged "School Health Services Questionnaire" (SHSQ) was used in collecting data for the study. Data collected was analyzed using descriptive and inferential statistics. Three research questions and two null-hypotheses piloted the study. Descriptive statistics of frequency counts and percentages were used in answering the research questions while t-test was used in testing the null-hypotheses at 0.05 alpha level. Results of the study revealed that nutritional, medical, immunization and preventive health services are the top most preventive and curative health services rendered in secondary schools in Borno State, while health evaluation and health counselling constituted the least health services rendered. The study also revealed significant differences between school location and health services rendered in secondary schools and that significant differences also exist

---

<sup>i</sup> Correspondence: email [dgagulak@gmail.com](mailto:dgagulak@gmail.com)

between school type and health services rendered in secondary schools in Borno State, Nigeria. The implications of these findings to counselling were discussed.

**Keywords:** preventive, curative, health services, implications for counselling

## 1. Introduction

Preventive and curative school health services should be geared towards enhancing the general health status of students to enable them fully benefit from the school system. Welfare of students in schools is jeopardized if there are no adequate, quality and functional health services in place to ensure their stable health conditions. The most obvious health services to be provided for students should include immunization, nutrition, health counselling, evaluation and treatment as a preventive measure and treating acute ailments such as malaria and cold that are prevalent in school settings (Mutah, 2016). School health services are essential components of effective school health programmes to ensure that students are healthy and ready to learn.

The World Health Organization (WHO, 2005) defined health as a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity. The World Health Organization (WHO, 2005) Experts Committee on Comprehensive School Health Education and Promotion (ECCSHEP) noted that to learn effectively, students need good health. Good health supports successful learning and vice-versa. The Joint Committee on Health Problems in Education of the National Education and the American Medical Association (AMA, 2004) defined school based health services as part of the school health programme provided by physicians, nurses, dentist, health educators, social workers, teachers and other allied health personnel to appraise, protect and promote students' health conditions. The Federal Ministry of Education (FME, 2006) opined that school health services are preventive and curative services provided for learners within school settings with the sole purpose of helping them achieve maximum health possible to maximize full benefits from their education.

Health status according to the American Thoracic Society (ATS, 2007) refers to individual's relative level of wellness and illness, taking into account the presence of biological or physiological dysfunction, symptoms and functional impairment. Basch (2010) stressed that health status of students connotes students' state of health at a given time which can be basically expressed as students' health stand at a point in time. Students' health status is a priority because healthier students have demonstrated to be better learners. Meckel & Richard (2013) reported that 10% to 25% of injuries to students occur while in school, 85% of infections occurring to students are transmitted while in school, 15% of students suffer from emotional or behavioural problems, One-third of them may have serious dysfunction. It is expected that school health services will boost health status of students to effectively participate and functionally perform in all academic and extra-curricular activities and subsequently image with achievable results. In the same vein, Ken & Miranda (2002) posited that health, knowledge, attitude and behaviour of students are seemingly underpinned by school health services. Hence,

students' health status is a key factor not only in terms of school entry but also in full participation in general school activities and achievement. Similarly, Mutah (2016) opined that students' health status is influenced by certain school health services such as health evaluation services, communicable diseases prevention services, health counselling services and medication services among others.

Health evaluation services according to Selekmán (2005) refers to checkup activities aimed at detecting signs, symptoms or health conditions of students periodically. However, constant evaluation of students' health foster early detection of diseases which will warrant early treatment to forestall deterioration of students' health or spread in case of communicable diseases. Kayode (2004) reported that the overall goal of evaluation services is early detection and prompt treatment of ailments which often involve investigation of such signs as blood pressure, temperature, X-ray and tumor size among others which occasionally results in threat to the health, prosperity, social well-being or stability and security of students. Mutah (2016) reported that communicable diseases prevention services is concerned with forestalling the outbreak or transfer of contagious/infectious diseases from one student to another. This service becomes very crucial as the outbreak of communicable/infectious diseases may translate to severe disruption of school routine and expensive/classy control measures.

Idowu (2002) posits that several types of germs cause infections including bacteria, viruses, fungi, protozoa and parasites. Infectious diseases caused by bacteria include scarlet fever and meningitis. Viruses which are much smaller than bacteria cause diseases such as measles, mumps, rubella (German measles), chicken-pox and HIV. Fungal infections include ringworm and athlete's foot and parasites include head lice and scabies. Many of these infections are easily transferable in environments with poor sanitary conditions. This causes much concern for schools within Maiduguri Metropolis and Jere Local Government Areas where researchers (Njodi, 1991 and Umar, 2002) have found low standard of sanitation and health workers. Njodi (1991) for example, reported paucity of health teachers and nurses in boarding secondary schools in Maiduguri, Borno State which according to him is compounded by poor state of sanitary facilities in male schools. Umar (2002) posited that the constant cases of mosquitoes in secondary schools in Maiduguri Metropolis is not unconnected with the poor sanitary conditions of the hostels and none supply of mosquito nets or insecticides by the government and other stakeholders in the education industry.

Nutritional services are aimed at providing balanced diet prepared in a hygienic environment. Good nutrition is a prerequisite for child growth and crucial for socio-economic and educational development. Inadequate nutritional intake can result in malnutrition and its attendant consequences (Mutah, 2016). The Federal Ministry of Education (FME, 2006) stressed that healthy eating patterns are essential parameters for students' achievement of their full academic potentials, physical and mental growth, life-long health and well-being. Akinyemi & Ibrahim (2009) assessed the nutritional status of secondary schools in Lagos State, Nigeria and their findings revealed generally low nutritional intake and consequent malnutrition among the students and have a long term damaging effects on the students' academic and all round development.

Immunization services according to Mutah (2016) hinged on the belief that preventing an illness is preferable to treating it once it has developed. There are now many safe and effective vaccines against many serious and deadly ailments such as polio and tetanus. Some vaccines are given routinely to all the individuals while some are only given to those thought to be the risk of contracting certain infections. The World Health Organization (WHO, 2005) reported that immunization of all students would ultimately curtail the tempo of infections thus, reduce the likelihood of a susceptible student being exposed to infections. However, studies by Ajero (2003) revealed the reluctant nature of parents and school heads in facilitating immunization of their wards and students. This is believed to underpin vulnerability/susceptibility of students to most diseases around their school vicinities. As captured by WHO, Mutah (2016) reported that this circumstance poses great setback to the realization of the Millennium Development Goals by 2020.

Health counselling services is very crucial in secondary schools especially boarding schools not just for fostering school based health services but because of the need to help boarding students imbibe healthy habits capable of keeping them away from germs and other infections. School based health counselling focuses on students' health, wellbeing and habits that promote good health. It is a therapeutic relationship aimed at fostering better and healthier living. Enable students stay healthy through an exploration of good attitude and healthy habit (Mutah, 2016). Marmot (2004) expressed that knowledge and social skills provided through counselling can better equip students to access and use information services to maintain and improve their health status. Alexandra cited by Mutah (2016) found that increased morbidity in most schools are often due to communicable diseases most of which can be effectively prevented or readily treated such as malaria, dysentery, pneumonia, tetanus, tuberculosis and cholera among others with effective sensitization through the active involvement of school teachers in a well-planned school health services. This will eventually lead to improvement in personal hygiene of students and subsequent reduction in related morbidities.

Medication administration refers to substances given in schools to prevent, cure, diagnose, and relieve signs and symptoms of students' ailments. This simply implies the acceptable practices involved in selecting the correct medication, deliver it through the correct route and give it to the right student at the appropriate time prescribed (Craven & Hirnle cited by Mutah, 2016). When administered, drugs may elicit adverse effects. Adverse effects of drugs refer to undesirable response produced by administered drug. All drugs are capable of producing undesirable effects alongside desirable effects ranging from rare, mild and localized to widespread, severe and life threatening, depending on the drug and the person receiving it. However, undesirable effects are reduced to endurable minimum. Mutah (2016) reported that several variables affect drug actions in human body, some of these variables include dosage, route of administration, age, body weight, sex, drug-diet interactions, drug-drug interactions, pathological conditions and psychological considerations among others which must always be considered before administering drugs to students. It is against this

background that this study cast its searchlight on the impacts of school health services on status of students in boarding secondary schools in Borno State, Nigeria and to proffer some counselling implications.

### **1.1 Statement of the Problem**

Health needs of secondary school students deserve much attention and such needs can be provided at best through the provision of functional school health services. All conditions liable to students contracting various forms of communicable and non-transferable diseases are very common in secondary schools. Some of these include lack of portable water for drinking and general purpose, poor sanitary facilities such as toilets, poor nutrition, absence of refuse/waste disposal points, and congested hostels/dormitories with poor ventilation, overcrowded classrooms and absence of health service providers. These have resulted in numerous cases of students falling sick ranging from headache, stomachache, ulcer, dysentery and conjunctivitis to severe cases of HIV, blood pressure, diabetes and other communicable and non-infectious ailments caused by viruses, bacteria and fungus. Considering these problems, the researchers attempt to investigate the preventive and curative health services provided in secondary schools in Borno State, Nigeria.

### **1.2 Objectives of the Study**

The study is designed to investigate the following:

1. Preventive and curative health services rendered in secondary schools' in Borno State, Nigeria
2. Determine the difference between school location, type and health services rendered in secondary schools in Borno State, Nigeria.
3. Determine the difference between school location, type and drugs available in the schools' clinics in Borno State, Nigeria.

### **1.3 Research Questions**

The following research questions were answered in the study:

1. What are the preventive and curative health services rendered in secondary schools based on location and type in Borno State, Nigeria?
2. What are the preventive and curative drugs available in secondary schools' in Borno State, Nigeria?
3. What are the preventive and curative drugs available in secondary schools based on location and type in Borno State, Nigeria?

### **1.4 Hypotheses**

The following null-hypotheses were tested:

**HO<sub>1</sub>:** There is no significant difference between school location and health services rendered in secondary schools in Borno State, Nigeria

**HO<sub>2</sub>:** There is no significant difference between school type and health services rendered in secondary schools in Borno State, Nigeria

## 2. Methodology

The study was a survey design to investigate school health services in secondary school clinics in Borno State, Nigeria. Researchers' self-authored instrument tagged "School Health Services Questionnaire (SHSQ)" was used to elicit data for the study. The instrument was divided into Three (3) sections (A- C). Section A contained biographic data of the subjects such as age, sex, status, school type, school location and level among others. Section B sought data on preventive and curative substances available in the schools' clinics. Section C elicited responses on the types of school health services rendered, Face and content validity of the instrument was validated by experts in the fields of Measurement and Evaluation, Counselling Psychology and Health Education at the University of Maiduguri, Borno State, Nigeria. The instrument was pilot tested among two senior secondary schools in Maiduguri Metropolis and Jere Local Government Areas that are outside the sampled schools but have same characteristics. Using Cronbach Alpha, a reliability of .692 was obtained which was considered relevant and adequate for the study.

Target population comprised of all the 6,786 senior secondary school staff and students in Borno State, Nigeria. However, sample for the study consisted of 7,500 staff and students selected from senior secondary schools in Borno State. Two schools each were picked from each of the four educational zones in the State. The sampled subjects were made up of male and female senior secondary school students, principals, vice principals, health masters, schools' nurses, counsellors/para counsellors and health prefects. Cluster and stratified random sampling techniques were adopted in selecting the samples. Each educational zone served as a cluster while the stratification was based on school type, school location and gender. Three (3) research questions and two (2) null-hypotheses piloted the study. Descriptive and inferential statistics were used in answering the research questions and testing the null-hypotheses. Descriptive statistical techniques of frequency distribution and percentages were used in analyzing data on the research questions while t-test was employed in testing the null hypotheses 1 and 2 at 0.05 alpha level. The results are presented in Tables 1 to 5.

## 3. Results

**Research Question One:** What are the preventive and curative health services rendered in secondary schools based on Location and Type in Borno State, Nigeria?

**Table 1a:** Preventive and Curative Health Services Rendered in Secondary Schools Based on Location in Borno State, Nigeria

S/No	Health Services	Urban		Rural	
		Responses	Rank	Responses	Rank
1.	Nutrition	1542(20.40)	1 <sup>st</sup>	602(8.16)	2 <sup>nd</sup>
2.	Medication	1122(14.85)	2 <sup>nd</sup>	649(8.80)	1 <sup>st</sup>
3.	Immunization	976(12.92)	3 <sup>rd</sup>	322(4.36)	5 <sup>th</sup>
4.	Prevention	789(10.44)	4 <sup>th</sup>	339(4.59)	4 <sup>th</sup>
5.	Health Evaluation	514(6.80)	5 <sup>th</sup>	359(4.87)	3 <sup>rd</sup>
6.	Health Counselling	196(2.59)	6 <sup>th</sup>	90(1.22)	6 <sup>th</sup>
<b>Total</b>		<b>5139(68%)</b>		<b>2361(32%)</b>	

**Note:** All figures in parentheses are percentages of the raw score.

Table 1a indicated that nutritional, medical and immunization ranked the top most health services rendered in the urban secondary schools in Borno State while preventive, health evaluation and health counselling ranked the least health services rendered. Conversely, medical, nutritional and health evaluation ranked the top most health services rendered in the rural secondary schools in Borno State while preventive, immunization and health counselling ranked the least health services rendered in the study areas.

**Table 1b:** Preventive and Curative Health Services Rendered in Secondary Schools Based on School Type in Borno State, Nigeria

S/N	Health Services	Boarding		Day	
		Responses	Rank	Responses	Rank
1.	Nutrition	1469(19.44)	1 <sup>st</sup>	218(2.95)	4 <sup>th</sup>
2.	Medication	1161(15.36)	2 <sup>nd</sup>	1113(15.09)	1 <sup>st</sup>
3.	Immunization	1128(14.93)	3 <sup>rd</sup>	571(7.74)	2 <sup>nd</sup>
4.	Prevention	573(7.58)	4 <sup>th</sup>	174(2.36)	5 <sup>th</sup>
5.	Health Evaluation	522(6.91)	5 <sup>th</sup>	252(3.42)	3 <sup>rd</sup>
6.	Health Counselling	286(3.78)	6 <sup>th</sup>	33(0.44)	6 <sup>th</sup>
<b>Total</b>		<b>5139(68%)</b>		<b>2361(32%)</b>	

**Note:** All figures in parentheses are percentages of the raw scores

Table 1b showed that nutritional, medical and immunization ranked the top most health services rendered in boarding secondary schools in Borno State while prevention, health evaluation and health counselling ranked the least health services rendered. Correspondingly, medication, immunization and health evaluation ranked the top most health services rendered in day secondary schools in Borno State while nutritional, preventive and health counselling ranked the least health services rendered in the study areas.

**Research Question Two:** What are the preventive and curative drugs available in secondary schools in Borno State, Nigeria?

**Table 2:** Preventive and Curative Drugs in Secondary Schools in Borno State, Nigeria

S/No	Drugs	Frequency	Percentage
1.	Analgesics	1825	24.33
2.	Antibiotics	1655	22.07
3.	Antiemetic	1533	20.44
4.	Antimalaria	1312	17.49
5.	Antiulcer	312	4.16
6.	Antispasmodics	209	2.79
7.	Antifungal	205	2.73
8.	Antihistamine	111	1.48
9.	Antiworms	97	1.29
10.	Eye drop	90	1.21
11.	Multivitamins	84	1.12
12.	Dressing materials	67	0.89
<b>Total</b>		<b>7,500</b>	<b>100.00</b>

Table 2 revealed analgesics, antibiotics, antiemetic and antimalaria as the major drugs made available in secondary schools in Borno State, Nigeria while antiworms, eye drops, multivitamins and dressing materials constituted the least supplied.

**Research Question Three:** What are the preventive and curative drugs available in secondary schools based on location and school type in Borno State, Nigeria?

**Table 3a:** Preventive and Curative Drugs in Secondary Schools in Borno State, Nigeria Based on School Location

S/No	Drugs	Urban		Rural	
		Responses	Rank	Responses	Rank
1.	Analgesics	997(13.19)	1 <sup>st</sup>	267(3.62)	1 <sup>st</sup>
2.	Antibiotics	821(10.86)	2 <sup>nd</sup>	267(3.62)	1 <sup>st</sup>
3.	Antiemetic	796(10.53)	3 <sup>rd</sup>	197(2.67)	7 <sup>th</sup>
4.	Antimalaria	536(7.09)	4 <sup>th</sup>	200(2.71)	3 <sup>rd</sup>
5.	Antiulcer	402(5.32)	5 <sup>th</sup>	197(2.67)	7 <sup>th</sup>
6.	Antispasmodics	402(5.32)	5 <sup>th</sup>	183(2.48)	9 <sup>th</sup>
7.	Antifungal	260(3.44)	7 <sup>th</sup>	200(2.71)	3 <sup>rd</sup>
8.	Antihistamine	227(3.00)	8 <sup>th</sup>	183(2.48)	9 <sup>th</sup>
9.	Antiworms	198(2.62)	9 <sup>th</sup>	200(2.71)	3 <sup>rd</sup>
10.	Eye drop	177(2.34)	10 <sup>th</sup>	198(2.68)	6 <sup>th</sup>
11.	Multivitamins	172(2.28)	11 <sup>th</sup>	151(2.05)	11 <sup>th</sup>
12.	Dressing materials	151(2.01)	12 <sup>th</sup>	118(1.60)	12 <sup>th</sup>
<b>Total</b>		<b>5139(68%)</b>		<b>2361(32%)</b>	

**Note:** All figures in parentheses are percentages of the raw scores.

Table 3a indicated analgesics, antibiotics, antiemetic and antimalaria as the major drugs provided in urban secondary schools in Borno State, Nigeria while Antiworms, eye drops, multivitamins and dressing materials comprised the least drugs supplied. Conversely, analgesics, antibiotics, antimalaria, antifungal and Antiworms formed the major drugs provided in rural secondary schools in Borno State, Nigeria while



antispasmodics, antihistamine, multivitamins and dressing materials constituted the least drugs supplied in the study areas.

**Table 3b:** Preventive and Curative Drugs in Secondary Schools in Borno State, Nigeria based on School Type

S/No	Drugs	Boarding		Day	
		Responses	Rank	Responses	Rank
1.	Analgesics	759(10.04)	1 <sup>st</sup>	339(4.59)	1 <sup>st</sup>
2.	Antibiotics	759(10.04)	1 <sup>st</sup>	339(4.59)	1 <sup>st</sup>
3.	Antiemetic	759(10.04)	1 <sup>st</sup>	121(1.64)	7 <sup>th</sup>
4.	Antimalaria	572(7.57)	4 <sup>th</sup>	339(4.59)	1 <sup>st</sup>
5.	Antiulcer	572(7.57)	4 <sup>th</sup>	278(3.77)	4 <sup>th</sup>
6.	Antispasmodics	572(7.57)	4 <sup>th</sup>	102(1.38)	8 <sup>th</sup>
7.	Antifungal	572(7.57)	4 <sup>th</sup>	278(3.77)	4 <sup>th</sup>
8.	Antihistamine	177(2.34)	8 <sup>th</sup>	96(1.30)	9 <sup>th</sup>
9.	Antiworms	146(1.93)	9 <sup>th</sup>	85(1.15)	10 <sup>th</sup>
10.	Eye drop	100(1.32)	10 <sup>th</sup>	278(3.77)	4 <sup>th</sup>
11.	Multivitamins	97(1.28)	11 <sup>th</sup>	63(0.85)	11 <sup>th</sup>
12.	Dressing materials	54(0.71)	12 <sup>th</sup>	43(0.58)	12 <sup>th</sup>
<b>Total</b>		<b>5139(68%)</b>		<b>2361(32%)</b>	

**Note:** All figures in parentheses are percentages of the raw scores.

Table 3b revealed that analgesics, antibiotics and antiemetic were the major drugs provided in boarding secondary schools in Borno State, Nigeria, while eye drops, multivitamins and dressing materials formed the least drugs supplied in the study areas. Similarly, analgesics, antibiotics and antimalaria formed the major drugs supplied in Day Secondary schools in Borno State, Nigeria, while Antiworms, multivitamins and dressing materials comprised the least drugs provided in the study areas.

**HO<sub>1</sub>:** There is no significant difference between school location and health services rendered in secondary schools in Borno State, Nigeria.

**Table 4:** Rank Difference Correlation Coefficient ( $r'$ ) Results Comparing Health Services Rendered in Secondary Schools on the Basis of Location in Borno State, Nigeria

Variable	N	X	Df	$r'$ cal.	$r'$ crit.	Decision
Urban	5139	69	2	.982	.954	Significant
Rural	2361	32.12				

Results in Table 4 revealed that there is significant difference between school location and health services rendered in secondary schools in Borno State, Nigeria. This is because the  $r'$  calculated .982 is greater than the  $r'$  critical .954 at 0.05 alpha level thus, the hypothesis was rejected.

**HO<sub>2</sub>:** There is no significant difference between school type and health services rendered in secondary schools in Borno State, Nigeria.

**Table 5:** Rank difference correlation coefficient ( $r'$ ) results comparing health services rendered in secondary schools on the basis of type in Borno State, Nigeria

Variable	N	X	Df	$r'$ cal.	$r'$ crit.	Decision
Boarding	5139	106.11	2	.920	.452	Significant
Day	2361	71.84				

The result of  $r'$  in Table 5 indicated that the calculated value of  $r'$  is given as .920. The degree of freedom (df) is 2 and the level of significance is 0.05. The critical value of  $r'$  is given as .452 thus; the null-hypothesis which states that there is no significant difference between school type and health services rendered in secondary schools in Borno State was rejected.

#### 4. Discussion

This study revealed the preventive and curative health services rendered in urban, rural, boarding and Day Secondary Schools in Borno State, Nigeria. The health services rendered include nutritional, medical, immunization, preventive, evaluation and health counselling. The findings of this study corroborated the earlier findings of Idowu (2002), Ajero (2003), Selekman (2005), Akinyemi & Ibrahim (2009), Omeje (2010), Okafor (2011), Ogundipe (2011) and Mutah (2015). Ogundipe (2011) and Mutah (2015) for example reported that nutritional and immunization health services are the most common health services in Secondary Schools irrespective of schools' location and type. That nutritional health services were aimed at providing adequate balanced diets three times daily and that the immunization services hinged on the notion that prevention is better than cure. In affirmation of the findings of this study, Tanimu (2014) reported that health counselling despite its tremendous importance in keeping students away from germs and infections as it focuses on students' wellbeing and healthy habits is the least health services rendered in Secondary Schools due to inadequate trained counsellors.

On the preventive and curative substances available in secondary in schools, findings of this study revealed Analgesics (Paracetamol Tablets, Ibumol Capsules, Deep Heat Cream, Felden Capsules, Ibuprofen Tablets, Diclofenac Tablets, Aspirin Tablets and Nimesulide Tablets), Antibiotics (Ampiclox Capsules, Ampicillin Capsules, Amoxicillin Capsules, Ciprofloxacin Tablets, Metromadzole Tablets, Septrin Tablets, Tetracycline Capsules, Doxycyclin Capsules, Erythromycin Tablets and Augmenting Tablets), Antimalaria (Coartem Tablets, Lonart DS Tablets, Fansidar Tablets, Amodiquine Tablets and Chloroquine Tablets), Antiemetic (Plasil Tablets and Promethazine Tablets), Antiulcer (Cimetidine Tablets, Omeperazole Capsules, Gestide Suspension, Barolo Capsules, MMT Suspension, Ranitidine Tablets and Gascol Suspension), Antispasmodics (Boscopan Tablets, Baragin Tablets and Mistportcit Solution), Cough/Antihistamine (Procold Tablets, Mixagrip Tablets, Cold Time Tablets, Priton Tablets, Loratidine Tablets, Beneline Syrup and Ascorex Syrup), Antifungal (Fulcin Tablets, Ketokomazole Tablets/Cream and Mycoten Tablets/Cream) and

Multivitamin (Vitamin C, Tablets, Vitamin B Complex Tablets, Folic Acid Tablets and Chemeron Capsules).

Others include Antiworms (Albendazole tablets/suspension and Mebendazole Tablets/Suspension), Eye drops (Gentamycin, Chloromphenicol and Betadron) and Dressing Materials (Cotton Wool, Gauze, Crap Bandage, Hydrogen Peroxide Solution, Iodine Solution, Cicatrix Powder, Savlon Solution, Plasta, Spirit, Septol, Dressing Forceps and Gentian Violet Paint-G.V. Paint) constitute the preventive and curative substances made available in secondary schools in Borno State, Nigeria. The findings of this study agreed with the studies of Tanimu (2014), Sadiq (2014), Bolaji (2015), Chilleh & Omotara (2016) and Godwin & Festus (2016) that analgesics, antibiotics, anti-malaria, anti-ulcer, anti-warms, eye drops, multivitamins, cough syrups, anti-fungal and dressing materials are the basic health substances available in secondary schools because they are less expensive, commonly found in pharmacies/medicine stores and easy to administer. Bolaji (2015) however expressed that others such as dispensing spoons, dispensing envelopes, thermometers, stereoscopes, B/P Apparatus, face mask and hand gloves are also made available in especially boarding private schools in Nigeria.

The findings of this study also affirmed the earlier studies of Tanimu (2014) and Sadiq (2014) that in addition to pharmacies, patent medicine stores, drug vendors and special dealers, school health centers/clinics equally serve as one of the sources of substances abused by secondary school students in Borno and Yobe States, Nigeria. Findings of this study negates the studies of Afolabi & Chidi (2011), Alex, Steven & Bello (2012) that preventive and curative health services are equally distributed in secondary schools across the nation irrespective of schools' location and type. This variation could be due to time factor, inadequate health specialists in secondary schools and the changing socio-economic climate. This study also tested two null-hypotheses at 0.05 alpha level using rank difference correlation coefficient statistics. The results showed that significant differences do not exist between schools location, type and health services rendered in secondary schools in Borno State, Nigeria. Such differences may not be unconnected with time factor, inadequate health specialists in secondary schools and the changing socio-economic predicaments

#### **4.1 Implications for Counselling**

Preventive and curative school health services are very significant and should be geared towards ensuring that students are healthy and able to learn at all times. Students' health status should not only be considered as an integral factor in school entry but also a key factor in proper and continuous active participation in school extra-curricular activities in addition to positive academic performance and subsequent educational achievement. Thus, efforts need to be made by the State government through ministries of education and health to ensure that quality and required drugs are made available to all secondary schools across the State.

The nutritional status of students significantly contributes in their development physically, psychologically and ultimately enhances their levels of perception and

achievement thus, adequate and qualified personnel (nurses) needs to be employed by the State government and be posted to all secondary schools across Borno State in addition to providing each secondary school with ambulance to facilitate easy conveyance of ill students to the nearest medical centers in case the school clinics may not adequately handle the case.

The schools managements should consider health status of students as a priority because healthier students have demonstrated to be better learners (Basch, 2010) and this can be achieved by enforcing checkup activities of detecting signs, symptoms and early detection of diseases for prompt treatment with a view to avoiding deterioration of students' health or spread in case of airborne or any form of communicable diseases. Additionally, there is the need for the senior masters, discipline masters, labour masters, health masters, kitchen masters and duty masters to in collaboration with school prefects to intensify checks on the general sanitary condition of their school environments some of which include toilets/bathrooms, hostels/dormitories, kitchens and water for consumption and general purposes with a view to curtailing the contamination rate and propensity of contracting water/airborne diseases or food poisoning. Proper sanitary condition can as well curtail the risk of contracting infectious or contagious diseases caused by bacteria, viruses, protozoa, parasites and fungal ailments such as fever, mumps, measles, ringworm, head lice and athlete's foot.

The schools management should as well re-introduce the culture of sanitation on weekly basis such as every Saturdays so as to sanitize the whole schools environments to avoid the menace of providing breeding grounds for cockroaches, mosquitoes, rats and other rodents that will not only multiply in their numbers but contaminate students' foods and other belongings. Treated mosquito-nets, insecticides, detergents and Izzal should also be provided to students.

## 5. Conclusion

Based on the findings of this study, it can be concluded that:

1. That nutritional, medical, immunization and preventive health services are the top most preventive and curative health services rendered in secondary schools in Borno State while health evaluation and health counselling constituted the least health services rendered.
2. Paracetamol, Panadol, Aspirin, Gelusil, Multivite, Fersolate, Folic-acid, Vitamin C, Buscopan, Priton, Septrin, Flagyl, IBUPROFEN, really extra and tetracycline as the top most drugs provided in secondary schools in Borno State while Purit lotion, Chloromphenicol, Gentamycin, injections, cotton wool, crepe and ordinary bandage, plaster, hydrogen peroxide, germicides and sanitary pads constitute the least preventive and curative substances made available in secondary schools in Borno State, Nigeria.
3. That there is significant difference between school location and health services rendered in secondary schools in Borno State, Nigeria.

4. That the null-hypotheses which stated that there is no significant difference between school type and health services rendered in secondary schools in Borno State was rejected.

## References

- Afolabi, A.S. & Chilleh, E. G. (2011). Health status of boarding secondary school students in Kaduna State, Nigeria. *Journal of Family Education*, 5(2), 93-103.
- Ajero, M. (2003). Assessment of immunization programme for children in teaching hospital Kano State. In P. M. Mutah (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.
- Akinyemi, O. E. & Ibrahim, G. K. (2009). Physical education, sports and academic achievement. *International Journal of behavioural nutrition and physical activity*, 8(2), 47-51.
- Alex, L. V., Steven, P. H. & Bello, S. D. (2012). Challenges in school health services: The way forward. *International Journal of behavioural nutrition and physical activity*, 11(1), 82-88.
- American Medical Association (2004). A survey of school based health programme. Retrieved from <http://www.ama/healthview/schoolbasedhealthprogramme/gtth/edu.4377> on 10/06/17.
- American Thoracic Society (2007). Health status and its perceptions. Retrieved from <http://qol.thoracic.org/sections/key-concepts/health-status-healthperceptions.html> on 21/02/17.
- Basch, C. E. (2010). Healthier students are better learners: A missing link in school reforms to closing the achievement gap. A research initiative of the campaign for educational equity. *Columbia University Research Review*, 6(1), 12-19.
- Bolaji, I. B. (2015). School hygiene in senior secondary schools: Implications for counselling. A seminar paper presented at Gidan Matasa, Minna-Niger State, Nigeria from 14<sup>th</sup> to 16<sup>th</sup> September.
- Chilleh, F. F. & Omotara, K. W. (2016). Impediments to immunization of secondary school students in Imo State, Nigeria. Unpublished M. Ed dissertation, Bayero University Kano, Kano State, Nigeria.
- Chukwuocha, U. M., Ashiegbu, K. K., Dozie, I. N. S. & Aguwa, O. C. (2009). The perspectives of secondary school students on common diseases and medicines used: Implications for the implementation of a school based health programme in Nigeria. In P. M. Mutah (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.

- Federal Ministry of Education (2006). Implementation guidelines on national school health programme in Nigeria. In P. M. Mutah (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.
- Godwin, J. F. & Festus, I. T. (2016). Diet quality, school health facilities and students' academic performance. *Journal of School Health*, 2(2), 77-82.
- Idowu, J. N. (2002). Relationship between health care and communicable diseases in Nigerian boarding secondary schools. A seminar paper presented to the Faculty of Education, Osun State University, Osun, Nigeria on 17<sup>th</sup> August.
- Kayode, O. (2004). Managing the health of school child. *The Nigeria School Health Journal*, 16(1 & 2), 155-160.
- Ken, G. & Miranda, T. (2002). Physical education and health promotion: A qualitative study of teachers' perception. *Health Education Journal*, 102(3). 113-123.
- Marmot, M. (2004). Status syndrome: How your social standing directly affects your health. London: Bloomsbury.
- Meckel, C. & Richard, P. (2013). Classrooms and clinics: Urban schools and the perception and promotion of child health. New Brunswick, NJ: University Press. 1870-1930.
- Mutah, P. M. (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.
- Njodi, I. (1991). School health programme: An assessment of sanitary facilities in boarding secondary schools in Borno State. Unpublished M. Ed dissertation, University of Maiduguri, Nigeria.
- Ogundipe, A. (2011). Evaluation of medication service component of school health services in Abeokuta, Unpublished M. Ed dissertation, Ogun State University, Ogun, Nigeria.
- Okafor, S. R. (2011). Role of physical environment on students' health education. *Journal of Environmental Health and Education*, 6(1), 122-129.
- Omeje, D. (2010). Advocating full implementation of school health programme in Nigerian schools. Paper presented at a workshop organized for school health workers in Ibadan from 12<sup>th</sup> to 14<sup>th</sup> July.
- Sadiq, U. B. (2014). Knowledge, attitude and practice on healthy eating among special needs boarding school students. *International Journal of Dairy Science*, 6(2), 86-94.
- Selekman, A. B. (2005). School-based health programme and health status in Nigeria. In P. M. Mutah (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.
- Tanimu, B. B. (2014). Counselling for better health. Retrieved from <http://www.counsellingservices/counsellingforbetterhealth/edu.54999043> on 25/07/17.
- Umar, A. G. (2002). Challenges and prospects in school health research and evaluation. *Journal of Academy of Sciences*, 8(3), 271-295.

World Health Organization Report (2005). Why do health systems matter? In P. M. Mutah (2016). Influence of school health services on health status of students in boarding secondary schools, Yobe State, Nigeria. Unpublished M.Ed Dissertation, University of Maiduguri, Nigeria.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).