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ASSESSMENT OF DISEASE CONDITIONS OCCURRING AMONG STUDENTS OF THE BAYELSA STATE COLLEGE OF HEALTH TECHNOLOGY, NIGERIA, FROM 2012 - 2013

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Abstract

Background: Students in various institutions of learning have been found to be affected by a number of disease conditions which are usually related to various factors including their environment, habits and social factors amongst others. It was thus the aim of this study to determine the distribution of the disease conditions that were prevalent among students of the Bayelsa State College of Health Technology.

Materials and Methods: A retrospective archival research design was used to determine the distribution of disease conditions among students of the Bayelsa State College of Health Technology, Otuogidi, Ogbia town, Nigeria. Data was gotten from clinic records of all students whom received treatment at the College clinic between January 2012 and December 2013.

Results: Various disease conditions including malaria, mental stress, peptic ulcer disease, helminthic diseases, sexually transmitted infections and cases of vaginal discharge amongst others; were found to have been affected the students whom visited the College clinic between January 2012 and December 2013.

Conclusion: Malaria and mental stress are disease conditions prevalent among students within our study area with an interesting relationship with seasons for malaria and a relationship with semester examinations for mental stress. Other disease conditions were also present but to a far much lesser degree to the occurrence of malaria. The use of Insecticide-Treated Nets by students, proper environmental sanitation as well as health education was recommended to tackle prevailing health issues in our study area.

Keywords: Distribution, Disease conditions, Students.

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INTRODUCTION

The school environment is indeed a challenging one which exposes the student to a number of influences that shapes the life of such an individual within the academic environment. Ranging from academic challenges, peer pressure influence, risky health behaviours, socio-economic problems, environmental factors amongst others, these challenges can either make or mar the student in his desire to excel. The student however, needs to make a concerted deliberate effort which is multi-dimensional if any success would be recorded in the face of a rather challenging academic environment. This notwithstanding, the student still remains exposed to various environmental, socio-economic and behavioural factors which can greatly influence exposure to infection, spread of the infection as well as morbidities and mortalities associated with infection; thus making the student prone to a number of

transmissible disease conditions as well as influence the occurrence of various non-transmissible diseases which inadvertently affects academic performance and overall output of such a student. (Babalola, Ogunwale and Akinhanmi, 2013; Benjamin et al, 2009; Dessie, Ebrahim and Awoke, 2013; Jephtha et al, 2014; Onyechi and Okolo, 2008). Seeing that the physical health of a student is an integral part of the general development of the student within the academic environment, it is very necessary to ensure that the student remains mentally and physically fit in order to effectively achieve the central purpose of education which involves the development of the mental faculties of an individual. All around the world, students are affected by a vast number of diseases which in one way or the other affects their academic performance. The occurrence of parasitic infections including; malaria, helminthiasis, skin infections, and ocular diseases have been reported. Other diseases that have been found to affect students

included cardiovascular diseases, gall bladder diseases, mental illness, ulcer, menstrual-related problems, sexually transmitted diseases, stomach ache, fever, diabetes as well as obesity (Adegun, Adegboyega and Peter-Ajayi, 2013; Ajaiyeoba, Isawumi, Adeoye and Oluleye, 2006; Babalola, Ogunwale and Akinhanmi, 2013; Benjamin et al., 2009; Cefai and Camilleri, 2009; Onyechi and Okolo, 2008; Jephtha et al., 2014; Reavley, Jorm, McCann and Lubman, 2011; Ujunwa, Ikefuna, Nwokocha and Chinawa, 2013; Wang, Xing and Wu, 2013). The occurrence of some of these diseases affecting students are however related to a reduction in behaviours that promote health and an increase in negative health behaviours and lifestyles practiced by these students which include substance abuse, improper diet, lack of sleep, unhygienic living conditions amongst others. It has been stated in previous reports that “60% of an individual’s health-related quality of life depends on his/her lifestyle” (Wang, Xing and Wu, 2013). It is thus not far-fetched to have students whom suffer from certain diseases as a result of their practice of poor health promoting behaviours coupled with the fact that they are faced with an environment that generally has to do with different patterns of life as well as an increased level of stress and work to cope with. (Akindutire and Adegboyega, 2012; Al-Naggar and Al-Naggar, 2012; Awosusi and Adegboyega, 2013; Shehu, Onasanya, Yahaya, Ogunsakin and Oniyangi, 2010; Wang, Xing and Wu, 2013). Within the academic environment, students especially those in higher institutions experience a level of independence from their parents seeing they are away from home and have to learn to manage their own affairs and adjust to new conditions of living without a family member of greater experience to guide them and are thus easily driven to practice various unhealthy behaviours which grow into habits of continual practice which in most cases makes them vulnerable candidates of disease morbidities. This research was thus aimed at determining the distribution of disease conditions that were prevalent among students of the Bayelsa State College of Health Technology from 2012 – 2013.

A retrospective archival research design was used to determine the distribution of disease conditions among students of the Bayelsa State College of Health Technology, Otuogidi, Ogbia town, Nigeria. Data was gotten from clinic records of all students whom received treatment or were admitted at the College clinic from January 2012 to December 2013. Permission to access the needed clinical records was gotten from the Management of the Bayelsa State College of Health Technology through the Research and Manpower Unit of the College and all data gotten were treated with optimal confidentiality. Data was analyzed using the Statistical Package for Social Sciences (SPSS) version 20 statistical software. The student’s t-test was used to determine any statistically significant difference in the distribution of the disease conditions presented at the College clinic from January to December in 2012 as well as in 2013. Statistical significance was set at $p < 0.05$.

RESULTS

Disease Conditions Occurring Among Students of the Bayelsa State College of Health Technology from January – December, 2012

From this study, it was observed that various disease conditions were presented at the College clinic by students of the Bayelsa State College of Health Technology from January to December 2012. These diseases included malaria, mental stress, peptic ulcer disease, helminthic diseases, sexually transmitted infections and cases of vaginal discharge amongst others. Cases of malaria and mental stress manifested a seasonal predominance within our study area in 2012. Malaria cases presented mostly during the rainy season of the year and mental stress peaked during examination periods of January and July. This difference in distribution was statistically significant. This is shown in Table 1.

Table 1. Disease Conditions Occurring from January – December, 2012

Disease conditions	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
Malaria $p = 0.00$	36	46	60	46	71	92	99	100	81	111	82	99	923
Mental Stress $p = 0.03$	60	Nil	8	2	4	16	28	Nil	5	10	8	10	151
Diabetes	2	2	Nil	1	1	Nil	Nil	Nil	2	Nil	2	Nil	10
Cases of Road Traffic Accidents	6	1	2	1	3	5	4	Nil	Nil	4	3	4	31
Peptic Ulcer Disease	10	4	8	3	4	3	10	11	7	10	5	4	79
Vaginal Discharge	4	1	1	3	6	3	5	2	Nil	3	2	2	32
Skin infection	1	Nil	3	2	3	8	9	5	2	6	6	5	50
Insomnia	1	2	1	1	Nil	1	Nil	Nil	3	Nil	Nil	Nil	9
Sexually Transmitted Infections	4	1	1	Nil	3	2	1	8	2	Nil	Nil	3	25
Helminthes	Nil	Nil	2	1	Nil	5	6	3	1	Nil	Nil	1	21
Appendicitis	2	2	1	4	Nil	3	Nil	Nil	Nil	4	4	2	21

Table 2. Disease Conditions Occurring from January – December, 2013

Disease conditions	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
Malaria $v p = 0.00$	31	30	62	56	61	80	100	109	95	110	92	80	906
Mental Stress $p = 0.03$	55	Nil	4	2	5	12	25	Nil	5	10	8	10	136
Diabetes	2	Nil	Nil	Nil	1	Nil	Nil	2	2	4	2	Nil	13
Cases of Road Traffic Accidents	3	Nil	Nil	1	3	5	4	Nil	Nil	4	3	4	27
Peptic Ulcer Disease	9	4	8	3	4	3	10	11	7	10	5	4	78
Vaginal Discharge	2	Nil	Nil	Nil	Nil	3	5	2	Nil	3	2	2	19
Skin infection	3	Nil	Nil	2	Nil	7	10	5	2	6	7	5	47
Insomnia	1	Nil	Nil	1	Nil	Nil	Nil	Nil	3	Nil	Nil	2	7
Sexually Transmitted Infections	2	Nil	1	Nil	Nil	4	Nil	4	Nil	Nil	Nil	3	14
Helminthes	Nil	Nil	2	1	Nil	5	6	2	Nil	Nil	2	4	22
Appendicitis	3	2	Nil	4	4	2	3	2	Nil	4	3	2	29

Disease Conditions Occurring Among Students of the Bayelsa State College of Health Technology from January – December, 2013

The occurrence of the diseases assessed for the year 2012 was the same for the year 2013, although there were variations in the number of cases presented for each disease condition. The occurrences of cases of malaria, mental stress as well as peptic ulcer disease in the year 2013 were however reduced when compared with the number of cases in the year 2012. Malaria and mental stress also manifested a seasonal predominance within our study area in 2013. This difference in distribution was statistically significant. This is shown in Table 2.

Prevalent Disease Conditions Presented at the College Clinic for the Years 2012 and 2013

Altogether, 1350 cases presented at the BYCOTECH clinic in 2012 with the incidence of malaria 921 (68.22%) and mental stress 151 (11.19) ranking top of the list followed by peptic ulcer disease 79 (5.84%). In 2013, the same disease conditions were prevalent in which 1298 cases presented; with malaria 906 (69.80%) and mental stress 136 (10.48%) still ranking highest and also followed by peptic ulcer disease 78 (6.01%). This is shown in Table 3.

the highest cases of this condition over the year in both 2012 and 2013, occurred in the months (January and July) when examinations were to be conducted for the students at the end of each semester; although, the cases presented mostly in January which is the month in which 1st semester examinations are written. This may probably have been due to examination stress and tension exhibited by the students who have just been introduced into a new session and who desire to make a good impression in their first semester results. It has been previously reported that the psychological distress usually manifested in students is best pictured as a means of coping with stress and thus adapting to the situation bringing about the stress. Predisposing factors to mental stress among students of tertiary institutions as stated by previous studies included alcohol/drug abuse, insufficient sleep, smoking as well as improper dietary habits. (Okunbor, Agwubike and Emelike, 2010; Forbes-Mewett and Sawyer, 2011; Akinture and Adegboyega, 2012; Al-Naggar and Al-Naggar, 2012; Wang, Xing and Wu, 2013). Other cases of disease conditions that presented at the clinic and computed by our study included peptic ulcer diseases, skin infections, cases of abnormal vaginal discharge, appendicitis, diabetes, helminthic infections, road traffic accidents, insomnia as well as sexually transmitted infections. Consideration of most of these disease conditions from 2012 revealed a decline in the occurrence of the disease

Table 3. Prevalent Disease Conditions Presented at the College Clinic for the Years 2012 and 2013

Disease conditions	2012		2013	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Malaria	923	68.27	906	69.80
Mental Stress	151	11.17	136	10.48
Peptic Ulcer Disease	79	5.84	78	6.01
Skin infection	50	3.70	47	3.62
Vaginal Discharge	32	2.37	19	1.46
Cases of Road Traffic Accidents	31	2.29	27	2.08
Sexually Transmitted Infections	25	1.85	14	1.08
Helminthes	21	1.55	22	1.69
Appendicitis	21	1.55	29	2.23
Diabetes	10	0.74	13	1.01
Insomnia	9	0.67	7	0.54
TOTAL	1352	100	1298	100

DISCUSSION

Malaria, a primary cause of disease burden and a major cause of mortality in developing countries of the world, being a prevalent disease condition in our study is worthy of note; seeing that our study area lies within the tropics which have the best combination of sufficient amounts of rain, temperature and humidity for the growth and survival of the plasmodium vector: the anopheline mosquito, thus the endemic nature of the disease condition. Our study revealed a steady increase of cases of malaria from the month of April in 2012 and 2013, which peaked in the month of August, dropped in the month of September, peaked again in October before gradually declining. This pattern is indeed in consonance with the rainy season experienced in Nigeria which begins in the month of April up till October. The dry season (November – March) in our area of study was matched with an initial gradual decline (November – December), then a drastic decline (January – February) in the number of cases of malaria presenting at the College clinic. (Agbolade, Akintola, Agu, Raufu and Johnson, 2008; Oresanya, Hoshen and Sofola, 2008; Thomson, 2010; Nigeria Malaria Fact Sheet, 2011; Akinbobola and Omotosho, 2013; Onwuebele, 2014). Another prevalent condition, though to a lesser extent was mental stress. It was especially seen that

conditions by the year 2013 except from cases of diabetes, appendicitis and helminthic infections. For the safeguarding of our future labour force that are today's students, these present-day learners should come to a realization that their health depends largely on the value they put on ensuring that they are physically and mentally fit which inadvertently leads to the fulfillment of academic excellence. Focus should however be brought on prompt diagnosis of disease conditions affecting students and most importantly prevention of the occurrence of these diseases which has a capacity of improving the welfare of students and thus foster national development. (Adegun, Adegboyega and Peter-Ajayi, 2013).

Conclusion

Malaria and mental stress were disease conditions prevalent among students of the Bayelsa State College of Health Technology from January 2012 to December 2013 with an interesting seasonal relationship for malaria and a relationship with semester examinations for mental stress. Other disease conditions were also present but to far much lesser degree when compared to the occurrence of malaria. It is recommended that the use of Insecticide-Treated Nets by students of the Bayelsa State College of Health Technology be

encouraged, proper and effective environmental sanitation of the College environs for clearing out breeding grounds that may be used by the anopheline mosquito which transmits the malaria parasite is necessary, students should also be educated by sensitizing them on the need to maintain healthy lifestyles as well as abstain from all risky dietary, academic and health behaviours and in so doing maintain healthy lives.

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