

AN EVALUATION OF UNIVERSITY STUDENTS' AWARENESS OF ENVIRONMENTAL HEALTH RISKS AND THEIR ATTITUDES TOWARDS THE RISKS

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ABSTRACT

The goal of the study was to determine the students' general awareness of the environmental health risks and their attitudes towards the risks. The study population comprised five thousand two hundred and twenty students from different disciplines as well as from different levels of study programmes namely: Certificate, diploma, bachelors and postgraduate. A sample of 192 students was obtained using stratified random sampling. Data were analyzed descriptively by use of the statistical package of social scientists (SPSS) and excel Microsoft software 2007 version. Fifty one percent of the students were able categorize the health risks. Chi square statistical tool was used in the analysis. The results show a highly significant difference between the correct and incorrect responses. Fifty one percent of the students indicated the health risks were prevalent. Over fifty percent were aware of the existence of these risks. It was concluded that students were exposed to environmental health risks while at the university and that their behavioural activities contributed to their vulnerability to these health risks. The study recommended that the university invest resources in creating a conducive study environment by adopting appropriate intervention measures such as: utilization of aspects of ergonometic, the science of designing the tasks, equipment and learning/living place to fit the user/student; postage of safety rules and regulations in the instruction venues like the laboratories and workshops; adopting better waste disposal procedures and the provision of adequate sanitary facilities.

*Keywords:* Environmental Health Risks, Perception, Awareness, Attitudes.

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1. INTRODUCTION

Health problems emanating from the environment have become a major cause of concern all over the world. This is because the health of a population depends upon good quality of air, water, soil, food and many other lifestyle factors that emanate from the environment. Consequently, the ability to establish measures that can eliminate or reduce

these environmentally related health risks is the responsibility of every individual in the world. There are indications that people's understanding of environmental issues determines how they utilize environmental resources, which affects the quality of the environment with a direct impact on their health.

The World Health Organization (2004) describes Environmental Health as those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment. The environment in which people live has a huge influence on their health. For example safe water supply, food that is nutritionally sufficient and the interruption of the faecal-oral chain of disease transmission is essential in reducing the incidence of gastrointestinal diseases (Annalee, et al., 2001). In addition, reduction in overcrowding and overall improvement in housing and working environment play a big role in mitigating against health risks. A clean environment is therefore a very important requirement for the well-being of humankind.

Environmentally related health risks have been identified using different criteria by different authorities. According to Annale et al.(2001), the following form categories of the health risks: Stress/diet/ lifestyles which give rise to cardiovascular diseases, strokes, cancerous mental illnesses, injuries; Pathogenic organisms such as viruses, bacteria protozoa, fungi and other infectious agents; Toxic chemicals which comprise hazardous chemicals in the environment. Arms (1994) identify four groups of environmental health risks namely; biology, for example viruses, bacteria, protozoa and other pathogenic organisms; chemical, for example toxic metals, air pollutants, solvents and pesticides; physical, like radiations, temperature, and noise; mechanisms such as accidents in the motor vehicle, sports and workplace. While focusing on students, the Centre for Disease Control and prevention (CDC, 2004) identified six such categories of health risk behaviour in students. These include: Behaviour that result in unintentional or intentional injuries; tobacco use; sexual behaviour that result in HIV and AIDS, sexually transmitted diseases, and unintended pregnancy; dietary patterns that contribute to diseases and insufficient physical exercise. Risky behaviour is described as *voluntary or involuntary actions that threaten the self-esteem harm health and increase the likelihood of illness, injury, and premature death* (Linda et al., 1996). Involuntary actions exists as a result of interactions between human actions and environmental factors way beyond direct human control while voluntary actions are those directly brought about by human activities (ibid). The categories of environmental health risks as identified by Annale (2001) seemed to encompass hence were considered appropriate for this study.

## 1.1 STATEMENT OF THE PROBLEM

Since the world conference on Environmental Education held in Tblisi in 1977, a lot of effort has been expended in creating environmental awareness amongst the general global population, Kenya included. Environmental education is now an important field of knowledge in the curriculum at all levels in education institutions. Kenya like other countries is a signatory to a number of treaties and protocols that address issues regarding the environment. Therefore all sectors of the Kenyan economy periodically update on the state of the environment and are expected to contribute towards protecting and improving

the quality of their local environments (NEMA2007; EMCA, 1999). One area of concern in this endeavour is that of safeguarding environmental quality as well as human health for purposes of sustainable development. In spite of the enormous environmental awareness campaigns, Kenyans continue degrading the environment, thus increasing environmental health risks (KIPPRA, 2006). For example in many learning institutions, it is not uncommon to see graffiti, garbage, derelict, students engaged in drug and substance abuse, alcoholism, sedentary lifestyles consumption of unsuitable diets, promiscuity amongst others. Students continue to put their own health and that of other people at risk and this could be attributed to inherent perceptions or to sheer ignorance (Toili 2001) or probably due to the fact that issues concerning the environment do not receive due attention in these institutions which impacts negatively on the students' perceptions.

## 1.2 STUDY AREA

This study was conducted at Masinde Muliro University of Science and Technology, (MMUST). MMUST is located in Kakamega town, Kakamega district, in the Western province of Kenya. The university is located about one kilometer from the town center along Webuye - Kakamega road. The university was initially founded as a constituent college of Moi University in October 2002. In December 2006, MMUST attained its charter through an ACT of parliament (MMUST ACT 2006). Facilities in place at the time of the study included one tuition block, three main hostels for students' accommodation, a catering unit and temporary structures serving as offices for the administrative staff. A science complex and an ultra-modern library were under construction. The teaching staff and student population stood at about 250 and 5220 respectively. The momentous growth of the student population had posed serious challenges which occasioned unique challenges in the context of the study

## 2. MATERIALS AND METHODS

A descriptive survey design was used. This design was preferred because it for pertinent aspects of a situation to be studied while utilizing the students as a group. Best, et al., (2003), recommends such design pointing out that it enables one to capture all pertinent aspects of a situation while employing a group as a unit of the study and investigation. This design sought to obtain information that described existing phenomenon by asking individuals about their perceptions, attitudes, behaviour or values. Isaac et al., (1990) observes that surveys are widely used technique in education and behavioural sciences for the collection of data ranging from physical counts and frequencies to attitudes and opinions. He further adds that a survey generally describes 'what exists, in what amount and in what context.' The design was appropriate as it determined the status of the population with respect to the interpretation of the variables in the study.

In this study, a sample size of one hundred and ninety two (192) was obtained stratified random sampling from the target population of five thousand, five hundred and twenty (5220) students pursuing studies in MMUST.

A piloted structured questionnaire was used to solicit information from the subjects.. All items on the questionnaire addressed aspects focusing on the objectives of the study. Further information was sourced through direct observation of features in the university

## 2.1 BACKGROUND INFORMATION OF THE RESPONDENTS

A total of one hundred and ninety two (192) respondents took part in the study. This comprised 77% of the total (250) questionnaires sent out. Figure 1 shows the details related to the background of the respondents regarding their age, gender, faculty, academic program and year of study. Fifty eight percent of students were aged between 21-24 years and most of them (77%) were drawn from the faculty of education and social sciences. In terms of gender, the distribution was almost evenly balanced, with males being 53% and females 47% of the total population. Most of the students (76%) were enrolled in bachelor degree programmes as opposed to certificate, diploma and postgraduate programmes (24%). The postgraduate programmes had the smallest enrollment (1%). Most students were admitted in the university programmes at bachelors' level.

## 3. RESULTS

### 3.1 STUDENTS' AWARENESS OF ENVIRONMENTAL HEALTH RISKS

An awareness of the environmental health risks is a prerequisite to adopting preventative measures aimed at sustaining people's health. To achieve this, students were asked to identify categories to which, in their opinion, the cited health risks belong, indicate their perceptions on prevalence rates of the health risks and identify the possible transmission media or activities of given the health risks within the university. The environmental health risks were categorized as stress/ diet/ lifestyle related; those caused by pathogenic organisms, including viruses, bacteria, protozoa, fungi and infectious agents and those that result from exposure to toxic chemicals which include hazardous chemicals in the environment and self-administered medications/chemicals/drugs.

### 3.2 STUDENTS' AWARENESS OF ENVIRONMENTAL HEALTH RISKS RELATED TO SPECIFIC CATEGORIES

#### (a) STRESS/ DIET/ LIFESTYLE

The respondents were asked to classify given the health risks according to stress/diet/lifestyle categories. Health risks related to stress, diet and lifestyle have become common among both the youth. These include headaches, accidental falls, obesity, insomnia, psychiatric disorders, diabetes, hearing problems, abortions, active/passive smoking, alcohol intake and multiple sex partners. These are examples of health risks that are likely to lead to deeper health problems such as cardiovascular diseases, strokes, cancers, mental illness and multiple injuries.

Eight three (83%) of the students are aware that headaches are associated with stress, while less than half of them are able to relate accidental falls, lack of sleep, psychiatric disorders and hearing problems to stress. Similarly, over 10% are aware that obesity is associated with diet while 11% relate diabetes to diet. With regard to lifestyle, over 60% of the students were able to relate abortions, smoking, alcohol intake and multiple sex partners to lifestyle. An average of 48% of respondents categorized the given health risks into the stress/diet/lifestyle related health risks while 52% were not able to correctly categorize the given health risks. Overall, 52% of students were unable to categorize the health risks while 48% categorized them correctly. A chi-square analysis testing on the students' responses to environmental health risks related to stress, diet and lifestyle showed a highly significant difference between the correct and incorrect given response ( $X^2 = 147.9$ ,  $P < 0.001$ )

#### (b) PATHOGENIC ORGANISMS

The students were asked to categorize the environmental health risks associated with pathogenic organisms. The result shows that many students (46%) are not aware of health risks associated with pathogens, with the exception of malaria and coughs and colds. Overall, 54% categorized the given health risks as pathogenic while 46% were not able to categorize them. This is explained by the fact that the students related these risks more to the transmission media of the pathogens rather than the pathogens themselves. For example, they may have related typhoid to contaminated water as opposed to the causative bacteria, diarrhoea to contaminated food amongst others. A chi-square analysis testing the students' responses to environmental health risks related to pathogens showed a highly significant difference between the correct and incorrect given responses ( $X^2=34.6$ ,  $P < 0,001$ ).

#### (c) TOXIC CHEMICALS

The analysis shows that less than 50% of the students are unable to relate the cited health risks such as asthma breathing problems and dental cavities to toxic chemicals in the environment. Again, they seem to relate the risks more to the agents of transmission than to the toxic chemicals themselves. For example they may have related dental cavities to sweet foodstuffs they consumed, asthma and breathing problems to air instead of toxic chemicals. It is important to note that a majority (78%) of the students is aware that drug abuse and self-administered medications contribute to the toxic chemicals they are exposed. A chi-square analysis testing the students, responses to environmental health risks related to toxic chemicals showed a highly significant difference between the correct and incorrect given response  $X^2=30.8$ ,  $P < 0.001$ ). Students' responses on the prevalence of these in the university were as summarized in and Table 1.

Table 1: Perceptions on Prevalence Rates of Environmental Health Risks associated to Stress/ Diet /Lifestyle

Health Risk	Responses (N = 192)		
	Prevalent	Didn't know	Rare
Headaches	158 (83%)	18 (9%)	16 (8%)
Accidental falls	42 (22%)	44 (23%)	106 (55%)
Obesity	22 (10%)	47 (25%)	126 (65%)
Lack of sleep	66 (34%)	77 (40%)	49 (26%)
Psychiatric	94 (49%)	51 (27%)	47 (24%)
Hearing disorders	24 (13%)	89 (46%)	79 (41%)
Diabetes	21 (11%)	95 (50%)	76 (39%)
Abortions	122 (63%)	53 (28%)	17 (9%)
Active/passive Smoking	150(78%)	20 (10%)	22 (12%)
Alcohol intake	168 (87%)	13 (7%)	11 (6%)
Multiple Sex Partners	159 (83%)	27 (14%)	6 (3%)
Average	93(48%)	49(26%)	50(26%)

An average of 48% of the respondents perceived that the health risks associated with stress/ diet/lifestyle were prevalent. However, 26% perceived that such risks were rare and 26% did not know if such risks existed. Whereas it may not be easy to recognize the existence of these problems due to issues of confidentiality for example the number of sexual partners, drug use, abortions, amongst others, the responses reflected the students' level of perception of the existence of the cited health risks within the university.

#### (d) HEALTH RISKS ASSOCIATED TO PATHOGENIC

In terms of the prevalence of environmental health risks associated with pathogens, students' responses were as outlined in Table 2.

It was evident that there was a high prevalence of health risks related to pathogens as identified by 54% by the respondents. These included coughs and colds, malaria and typhoid. However, it is important to note a fairly high prevalence of HIV and AIDS and Sexually Transmitted Diseases (44%) and skin problems (48%). Forty nine percent indicated they were not aware and 20% said they were rare.

Table 2: Perceptions on the Prevalence Rates of Environmental Health Risks Related to Pathogenic Organisms

Health Risk	Responses (N = 192)		
	Prevalent	Didn't know	Rare
Coughs and Colds	163 (85%)	10(5%)	19 (11%)
Diarrhea	53 (28%)	75 (39%)	64 (33%)
Malaria	162 (85%)	16 (8%)	14 (7%)
Skin Problems	92 (48%)	51 (27%)	49(25%)
Eye Infections	71 (37%)	57 (30%)	64 (33%)
Typhoid	102(53%)	43 (22%)	47 (25%)
HIV/AIDS & STD's	85 (44%)	88 (46%)	19 (10%)
Average	104(54%)	49(26%)	39(20%)

(e) ENVIRONMENTAL HEALTH RISKS ASSOCIATED TO TOXIC CHEMICALS

The results of the students' perceptions on prevalence rates of the health risks associated to toxic chemicals in the university are as summarized in Table 3.

Table 3: Perceptions on Prevalence Rates of Environmental Health Risks associated to Toxic Chemicals

Health Risk	Responses (N = 192)		
	Prevalent	Didn't know	Rare
Breathing Problems	49 (26%)	79(41%)	64 (33%)
Asthma	64 (33%)	60 (31%)	68 (35%)
Self-Administered Medications	150 (78%)	28 (15%)	14(7%)
Dental Cavities	88(45%)	62 (32%)	44 (23%)
Drug Abuse	150(78%)	23 (12%)	19 (10%)
Average	100(52%)	50(26%)	38(22%)

The analysis shows a high prevalence of self-administered medications (78%) and drug abuse (78%) in the university and a fairly low prevalence (45%) of dental cavities, asthma (33%) and breathing problems (26%). Whereas these risks may not be immediately associated with toxicity, the fact that the university fraternity is affected should be a cause for concern. Similarly, the fact that 46% of the respondents were either unaware of or thought that these were rare risks indicates the necessity to increase their awareness about these risks.

(f) TRANSMISSION MEDIA/ACTIVITIES OF HEALTH RISKS

The study also sought to assess the students' general understanding of the possible transmission media of environmental health risks. The ability to match the transmission media/activity with a health risk was a further indicator of the respondents' awareness about the risks.

Students were asked to identify transmission media for stress, diet and lifestyle related health risks. Their responses were as indicated in Figure 1.

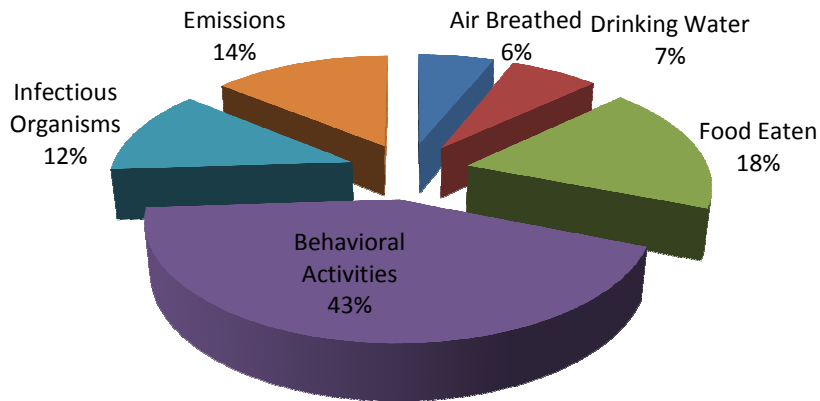


Figure 1: Transmission Media/Activities of Health Risks associated with Stress/Diet/Lifestyle

An average of 43% of the respondents felt that behavioural activities lead to stress/diet/lifestyle related health risks including headaches (33%), lack of sleep (48%), psychiatric disorders (42%), abortions (62%), smoking and alcohol intake (64%). In addition, fairly high proportions of the students perceived that the type of food eaten was the reason behind obesity (62%) and diabetes (30%). On the other hand, a small proportion of students perceive the following to be associated with the transmission of stress/diet /lifestyle related health risks: air breathed (6%), water taken (14%), emissions (26%) and the infectious organisms (22%).

With regard to the possible transmission media/activities of pathogen related health risks, the students gave responses as indicated in Figure 2.



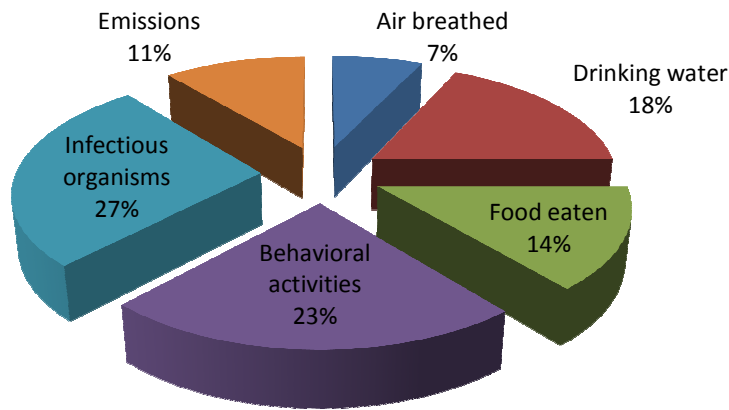


Figure 2: Transmission Media/Activities of Health Risks associated with Pathogen

From Figure 5, the students stated various factors of transmission of the health risks as associated with pathogens. Air breathed contributed to 7%, drinking water 18%, food eaten 14% behavioural activities 23%, emissions 11% and 27% from direct infection from actual pathogens. However, some interesting responses were observed with regard to HIV/AIDS. Whereas an average 60% related it to behavioural activities, a few (13%) thought that it was caused by infectious organisms. This indicates the positive impact on students of the campaign against behavioural activities that aided in the spread of the disease. To a large extent, it is the behavioural activities that predispose students to the causative agents of health risk such as HIV and STDs. The responses on the possible mode of transmission and activities relating to the toxic chemicals causing the associated health risks were as summarized in Figure 3.

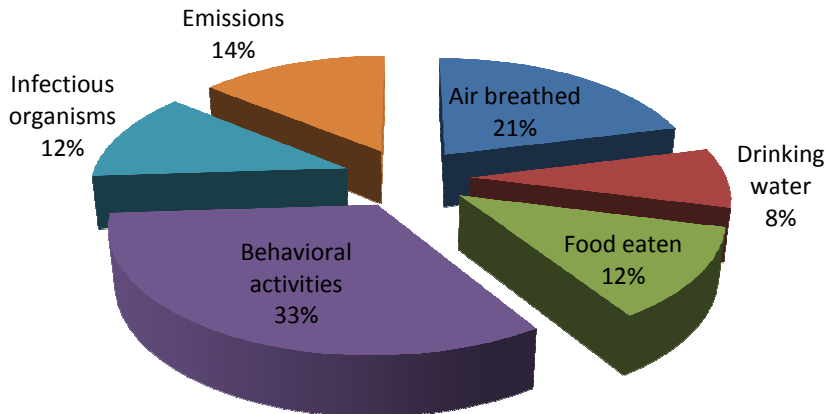


Figure 3: Transmission Media/Activities of Health Risks associated to Toxic Chemicals

The respondents indicated that behavioural activities and atmospheric air exposed them to the high (33%) health risks associated with toxic chemicals. This is probably as a result of their indulgence in drugs and the use of self-administered over the counter medications.

However it is noteworthy that the respondents indicated that direct exposure to chemical substances, the food eaten, emissions in the air and drinking water also led to health risks as indicated by the findings. From the results, it was evident that air, food, infectious organisms, behavioural activities and emissions invariably exposed the respondents to chemical risks.

(g) CONSOLIDATED FINDINGS ON AWARENESS OF ENVIRONMENTAL HEALTH RISKS

The following show final findings of the students' ability to; categorize (Figure 4), to indicate the prevalence rates (Figure 5) and to identify transmission media/activities of the environmental health risks (Figure 6).

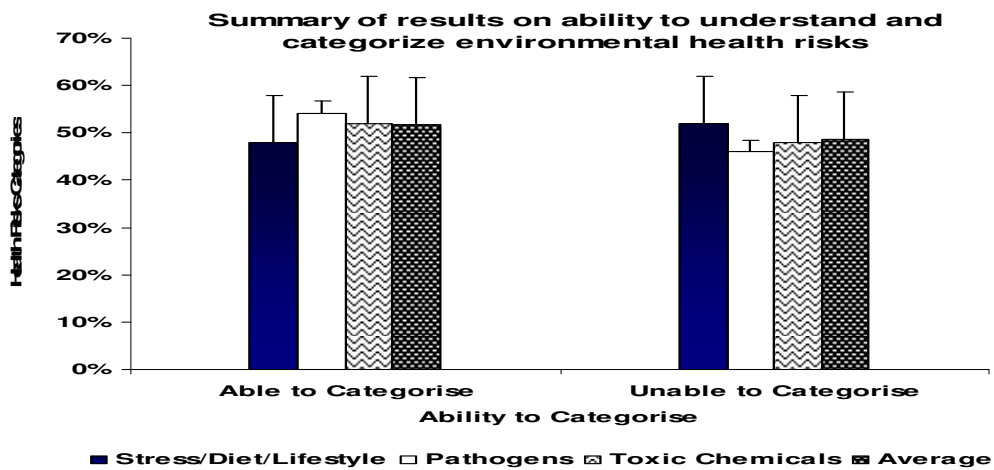


Figure 4: Consolidated results on ability to Categorize

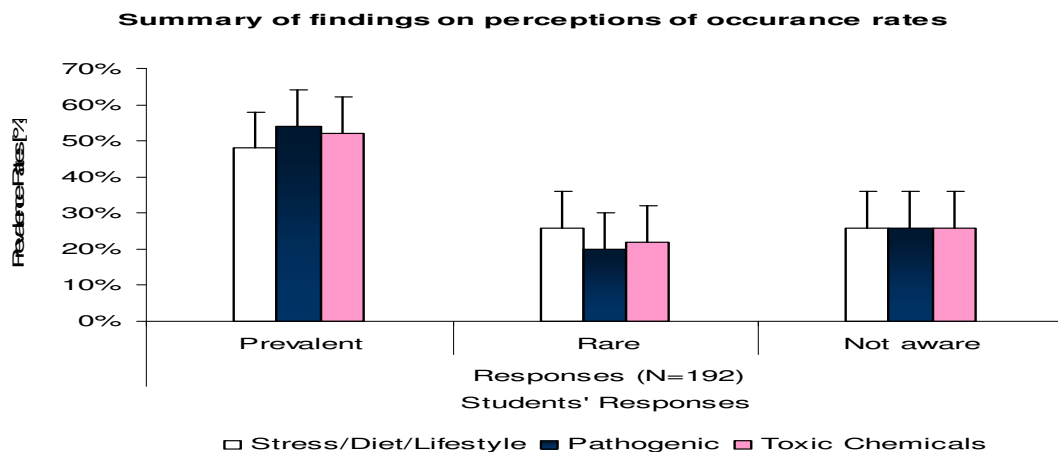


Figure 5: Consolidated results on Prevalence Rates

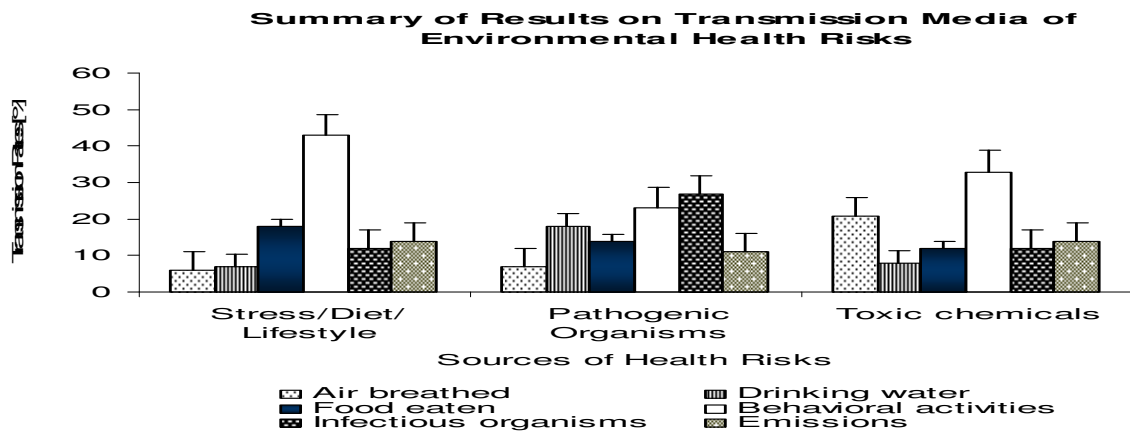


Figure 6: Consolidated results on Transmission Media Risks

Attitudes towards the environment are a prerequisite to environmental participation and action. It was therefore necessary to examine students' attitudes towards environmental health risks as one way of understanding their deliberate efforts in reducing or preventing the risks in their environments. The students' responses to the Likert scale on a wide range of issues related to the three categories of health risks (stress, diet, and lifestyle; pathogens, and toxic chemicals) are summarized in Table 4.

Table 4: Students' Attitudes towards Environmental Health Risks

Health Risk Issue	Responses (N= 192)		
	Agree	Undecided	Disagree
<b>Lifestyle Related Issues</b>			
Students in the MMUST do not regard themselves as being seriously at risk of STD's and HIV infection	127 (66%)	27 (14%)	38 (20%)
Most students in MMUST are sexually active and frequently change partners	159 (83%)	24 (12%)	9 (5%)
Condom use is not common amongst MMUST students	66 (34%)	57 (30%)	69 (36%)
Abstinence and regular condom use are most effective approach of curbing spread of HIV/AIDS and STD	148 (77%)	22 (12%)	22 (11%)
Pornography is a serious environmental health risk and should be banned	103 (54%)	35 (18%)	54 (28%)
People have very little control over environmental health risk that affect them	110 (58%)	39 (20%)	43 (22%)
Safety measures such as firefighting equipment, safety rules and regulations (in labs, workshops etc), street lighting have been adequately catered for in the university.	71 (37%)	37 (19%)	84 (44%)
Average	112 (58%)	34 (18%)	46 (24%)
<b>Diet Related Issues</b>			
Many students skip meals in MMUST due to financial and other reasons, which is detrimental to their health	129 (67%)	36 (19%)	27 (14%)
Eating junk/ food like chips, juices preserved with food additives in common occurrence in MMUST	147 (77%)	25 (13%)	20 (10%)
Most female students diet to maintain slim figures.	112 (58%)	40 (21%)	40 (21%)

Average	129 (67%)	34 (18%)	29 (15%)
Pathogens related issues			
Mosquitoes and other vectors like rodents, are a common occurrence in the university	120 (63%)	34 (18%)	38 (19%)
The sanitary facilities/ services are adequately provided in MMUST	10 (5%)	38 (20%)	144(75%)
Waste disposal (sewage, plastic paper bags, household litter etc.) is a properly managed activity in the university and may not pose a threat to spread of pathogens	71 (37%)	25 (13%)	96 (50%)
Average	96 (50%)	29 (15%)	67 (35%)
Toxic Chemicals related issues			
Emissions (noise and radiations) from implements like computers, cell phones, music systems, TV's, machines in workshops pose serious health risks.	122 (63%)	32 (17%)	38 (20%)
Most students who abuse drugs risk their health and that of the colleagues	176 (92%)	8 (4%)	8 (4%)
A number of female students use the 'Morning after' pill and other contraceptives to prevent pregnancy	144 (75%)	38 (20%)	10 (5%)
Smoking should be allowed in enclosed areas within the University as stipulated in the tobacco Bill.	125 (65%)	16 (8%)	51 (27%)
Average	141 (74%)	24 (12%)	27 (14%)

Overall results in table 1.0 show that most of the students were in agreement with the cited issues: With respect to lifestyle related issues, an average of 66%, did not consider themselves as being at risk of STD and HIV infections; 83% agreed that they were sexually active and frequently changed partners; 77% agreed that abstinence and condom use were most effective methods of curbing sexually transmitted diseases and 54% agreed that pornography was a serious emerging environmental health risk. However, it is worth noting that in spite of their being in agreement with most of the lifestyle related issues above, over half (58%) of the respondents indicated that they had resigned to fate and had very little control over the environmental health risk.

From the perspective of diet related issues, an average of 67% of the respondents agreed that most students in the university skipped meals due to various reasons which was detrimental to their health; 77% relied on junk food and 55% female students indulged in compulsive dieting to maintain slim figures at the expense of their health. Regarding Pathogenic organisms, 62% respondents expressed concern that the university precincts were laden with vectors that harbour pathogens such as mosquitoes and rodents like rats while 50% expressed concern that, waste disposal procedures were not in place. Furthermore, 75% students expressed concern that the sanitary facilities and services were grossly inadequate. With respect to toxic chemicals, 92% of the respondents felt that drug abuse was common phenomena and those who indulged in the vice were endangering their health. Cases of female students using the 'Morning after' contraceptive pill were considered as being significantly higher (75%). A proportion of the respondents (58%) said that they had very little control over the environmental health risks that

afflicted them. For example whereas the respondents agreed that drug abuse was detrimental to their health, that they were sexually active, that some did not use condoms in their sexual encounters; watched pornographic films and abused drugs amongst others, they did not regard themselves as being seriously at risk of the consequences of their actions. Students seem to have resigned to fate as far as control of their behaviour is concerned; this probably may be attributed to influence from peers or sheer lack of requisite knowledge, skills and attitudes.

#### 4. DISCUSSION

The findings indicate that most students were aware and had average knowledge of environmental health risks as manifested by their ability to categorize the listed health risks, indicate the prevalence rates of the risks and relate the transmission media to the health risks. The results show that; 51.7% of the respondents were able to categorize the cited health risks; 48.6% were not able. With regard to their perceptions on prevalence rates, 52% perceived the health risks to be prevalent, 22% observed that they were rare and 26% were not able to tell the prevalence rates of the health risks. With respect to the transmission media/activities, the comparison shows that behavioural activities contributed to the high level of health risks (33%). Direct infection from infectious organisms contributed the second highest of 17% and the food they eat comes third with 14% as transmission media.

Specific behavioural activities cited by the respondents comprised indulgence in casual sex with multiple partners, drug and substance abuse, procurement of abortions and use of self-administered drugs amongst others. These behavioural activities directly exposed them to infectious pathogens (such as those that cause HIV and STD's), psychiatric disorders, obesity, and insomnia. Direct exposure to infectious organisms came about as a result of the use of contaminated food, untreated water and the presence of disease vectors such as rodents and mosquitoes and the inadequate sanitary facilities compounded the problem. In view of these findings, the university should adopt appropriate interventions such as; clear the breeding sites of these vectors ensure that the food provided by the catering unit is balanced, nutritious and served under hygienic conditions.

The catering staff should undertake a routine medical check up to prevent potential cases of food poisoning or contamination. A direct effect on the quality and quantity of the diets is the 'pay as you eat' cost sharing policy, where students are expected to buy their food at cost depending on their financial ability. The findings show that most students (67%) skip meals due to financial reasons and are likely to choose diets that do not provide for their nutritional needs. This may result in nutritional disorders such as gout, hypertension, anaemia, asthma, diabetes and obesity (Harold, (1983). Consequently, the university should consider providing affordable yet nutritious balanced meals. This can be achieved through investing in cheaper methods of producing food from the university farm as opposed to procuring the same at a very exorbitant price which has a direct impact on the selling price, which is way beyond affordability by students.

Overall responses with respect to categories show that stress; diet and lifestyles category contributed to the highest health risks (50 %), in the university. Toxic chemicals contributed to the second highest (34 %) and pathogenic organisms contributed to the least 16 %).

The findings of this study point to the fact that the environmental quality at the university is not conducive for students to undertake their studies. It should be noted that existing environmental conditions have been found to be important in maintaining peace and harmony in educational institutions. These findings complement the findings of a study by the Ministry of Education in 2008 (Ministry of Education, 2008) which concluded that student unrests were majorly attributable to students' indulgence in alcohol, drug and substance abuse and the deplorable conditions in their schools such as poor diets and congestion in their dormitories and a very stress.

Stress was attributed to pressure put to them to fulfill curriculum requirements which do not provide for other curricular requirements. When youth is educated through other curricular activities such as those that occur in clubs and societies, seminars and workshops, field days amongst others, they are empowered to critically assess situations. This is in line with the findings of a survey done by Nacada, (2006), that recommended that the youth need to be equipped with life skills that will enable them to adopt a positive behaviour and attitude to deal with the demands and challenges in the institutions. Amongst the life skills cited by Nacada are: skills of understanding oneself; skills of making effective and sound decisions and skills to be able to critically analyse and evaluate ideas and choices. Educating the youth and disseminating information on our educational institutions is therefore a critical intervention procedure.

The responses of students on matters concerning attitudes point to the fact that there may be other factors influencing such the responses. For example, Torsido (1996) observes that attitudes are influenced by factors such as individual experience, level of knowledge and understanding of the matter at hand and the values upheld by the parties. He further indicates that the manner in which a risk is presented affects how it is assessed. Losses strike humanity more than gains, so people are more willing to gamble to avoid losses than to achieve gains. Such factors may have influenced the responses.

## 5. CONCLUSIONS

The study concluded that students are exposed to environmental health risks while at the university, they have average knowledge and understanding of the environmental health risk that exist in the university and that they are largely responsible for their vulnerability towards these risks. It further concluded that there were other health risk emanating from factors way beyond the students' control and the university was to take responsibility.

## 6. RECOMMENDATIONS

The university should integrate their curriculum environmental education concepts that directly address this. Integrative environmental education programmes are thus essential as they provide the environmental education necessary to instill the desirable knowledge, skills, values and attitudes. This will in turn broaden students' understanding relevant concepts as environmental education will enable them to critically assess the consequences of their actions

as they go about various activities..Such empowered youth will articulate problems intelligently and in a scholarly manner thus contributing to the principles of sustainable development.

The creation of a safe physical environment which entailed; the installation of firefighting equipment and street lighting, clearance of breeding grounds for disease vectors such as mosquitoes, rodents, adoption of better waste disposal procedures and provision of adequate sanitary facilities .

The university should demonstrate real commitment to the principle and practice of environmental protection. They should adopt the institutional policies that are the models of good practice serving as an example. For example special days should be committed to environmental practices such as cleaning exercises, tree planting days and public addresses from environmental experts. This will empower students with environmental knowledge so that they can actively play their role in environmental action and inculcate a culture that will make the university attain its objectives of training holistic scholars in a tranquil environment.

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