

Awareness of Health and Safety Regulations amongst Selected Secondary School Students in Owerri North Local Government Area Imo State

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Abstract: The paper examines health and safety awareness amongst selected secondary schools students in Owerri North LGA Imo state. Student's health and safety is significant for effective teaching and learning process to be complete. The method of study was the cross sectional survey and questionnaire was the primary tool for data collection. Purposive sampling was used to select the secondary schools. About 12 schools were selected with a population of 5,718 students, and Taro Yamane formula was applied to get the sample size of 400. Findings revealed that about (51%) respondents strongly agreed that safety guide should be implemented in the schools. About (57%) respondents strongly agreed that there is need for understanding of health/safety rules due to potential hazard/risks faced by students. About (50%) respondents strongly agreed that all schools should implement health and safety as part of their academic curriculum. Statistical techniques used were Chi Square and (ANOVA). Results of the test showed; for hypothesis one; calculated value 204.758 greater than critical value 26.296, we reject the null hypothesis and uphold the alternate. Hypothesis two; F value calculated (9.726) greater than F critical value 2.87, we reject the null hypothesis and accept the alternate. Hypothesis three; calculated value 280.205 greater than critical value 26.275, therefore we reject the null hypothesis and uphold the alternate. This paper advocates that secondary school students in Imo State and Nigeria at large should be trained to understand National and International safety laws, regulations and conventions in order to fit into their future roles even while in schools to avert unnecessary risks/hazards. The study recommended that school administrator /stakeholders and government must imbibe and integrate health and safety into academic curriculum of schools and an aggressive campaign carried out in schools to get students aware of inherent dangers of working in an unsafe environment.

Keywords: Awareness, Health, Safety, Regulation, School.

1. Introduction

Human health is contingent upon our relationship with the environment. It is the desire of all human-beings to be in good health which however is elusive as a result of our inability to completely guard our actions or inactions. Humans possess unlimited power to dominate his environment and exploit the natural resources (Abam, 2001). Health and safety are closely related in terms of the desire for self-preservation. Safety can be viewed as a state of being safe from danger or accident, injury, serious physical harm or some other forms of injury (Clarke, 2003). It is a state which human-beings would strive to maintain at all costs and this evokes the applicability of certain rules and precautions in the public, home and industrial environments (Anijah-Obi, 2001). Health implies the general physical conditions of the body especially in terms of presence or absence of illness or impairment. Creating safety awareness is a critical but challenging task, because most organizations involve in potentially harmful activities. According to Clarke (2003), Safety awareness is defined as the core assumptions and beliefs which member of an organizational hold concerning safety issues. This is expressed through the beliefs, values and behavioral norms of its managers, supervisors and workforce and is evident in company's safety policy, rules and procedures. The essence of this definition is the sharing of common beliefs and values that safety is a priority. Effective safety can only be achieved when there is a proper management of the interaction between technological systems and the people. Safety awareness can be discerned from behavioral norms that demonstrates a commitment to safety. Stressing the importance of Health and Safety awareness among students, Haupt (2010) stated that it is a vehicle that drives National Health and Safety culture. According to Lingard and Rowlinson (2005) and Hughes and Ferrett (2010) inadequate Health and Safety awareness impacts negatively on students skills, knowledge and Health and Safety competencies. Furthermore, Smallwood (2004), opined that Occupational Health and Safety (OHS) education is not only beneficial to the employers, but it also leads to a positive attitudinal orientation of the students who are the future professionals and managers in various industries. Furthermore, (Luria, 2011) states that Health and Safety education and training is a pre-requisite for an appropriate level of awareness, relative to Health and Safety, which in turn is a pre-requisite for the development of an optimum Health and Safety culture. Inadequate safety

education has been identified as one of the causes of failure of Health and Safety rules in various projects (Nishgaki, 1994). In Nigeria, the level of awareness of Health and Safety rules by secondary school students has not been adequately achieved. Adebowale, (2010) affirmed that it is necessary to develop a safety-first mindset among students long before they get into the workplace in order to be adequately prepared for their future Health and Safety roles. More so, Odusote, (2011) stated that education and training creates awareness and engender behavioural change amongst workers. The author maintained that a preventative Health and Safety culture should be one that incorporates Health and Safety into the educational system of future professionals and managers. Thus, secondary school students in Nigeria should be trained to understand National and International laws, regulations and conventions of Health and Safety in order to fit into their future roles. Despite the importance of Health and Safety education and training, if it is not inculcated into the curriculum of secondary schools in Nigeria, there will be little or no impact on them as they join the industries (Amadiogu, 2011). It is against this background that this study seeks to examine Health and Safety awareness in selected secondary schools in Owerri North Local Government Area of Imo State.

2. Statement of the Problem

Safety plays an important role in schools and colleges. For instance public services, schools and colleges are adapting to a period of considerable change as well as continuing to meet existing challenges. There are new structures and accountabilities, additional parental/public/political concern, alongside worries about excessive risk aversion. There is a new understanding of the benefits of risk-taking as part of young people's development. Health and Safety education and integrating risk within the curriculum is very apt. More so, educational institutions and schools have a primary duty to safeguard the students, pupils and staff as well as all people in their care; at the same time they are to create adequate risk awareness, for the sake of healthy living. In Nigeria, secondary school students for instance those in the Sciences and Arts are consistently been exposed to hazards and risk in their laboratories. One of the goals of secondary education as stipulated in National Policy on Education in item "C" is to provide trained manpower in the applied science, technology and commerce at sub-professional grades. The activities of science students in pursuance of this goal exposes them constantly to health hazard particularly during their practical which usually involved use of chemicals substances. Student's practical in biology, chemistry or physics would require that they make use of some substances which can be detrimental to their health. For instance, Abam (2001) showed that lead and copper in water can cause many health problems some of which are interference with red blood cells chemistry; delays in normal physical and mental development in young children, hearing and learning abilities of children, stroke, kidney diseases cancer, vomiting, nausea, stomach cramps and diarrhea and anemia among others. Currently, our students are still using these materials in the laboratory for their practical and do not apply any safety and health measures. The list is endless about the dangers exposed by these students in schools and the enormous hazards and risks they faced in the course of achieving their educational advancement with little or no safety precautions. It is against this back drop that this study examines the health and safety awareness of selected secondary school students in Owerri North local government Imo State Nigeria.

3. Aim and Objectives of Study

The aim of this was to examine the Health and Safety awareness amongst selected secondary school students in Owerri North Local Government Area of Imo State. Its objectives were to:

- (i) determine the level of Health and Safety Awareness of secondary school students in the study area
- (ii) assess whether students Health and Safety awareness vary with gender
- (iii) ascertain if students level of Health and Safety awareness vary with the school location
- (iv) determine if students take some precautionary measures to mitigate health and safety hazards in their schools.

4. Research Hypotheses

Ho: There is no statistically significant difference between health and safety awareness and gender of Students

Ho: There is no statistically significant difference between health and safety awareness of secondary schools in urban areas than those in the rural areas

Ho: There is no statistically significant difference in health and safety preparedness for schools in urban areas than school rural areas in the study area.

5. Concept of Safety

Safety can be expressed as point at which risks associated with a particular job are managed in a reasonable manner (Brueggman, 2001). Safety policy is a strategy and commitment together with the

arrangements put in place to create awareness among workers on the associated hazards to their work and the role of individual/person will play at work in ensuring healthy working conditions. Alli (2008) defined Occupational Health as the science that take into consideration the possibility of hazards from the workplace and its anticipation impact on workers' health and general well-being. In the same vein, the author opined that safety focuses on curbing accidents at work and its negative effect on workers in all manners. Over the decades, construction firms have made several efforts toward improving its safety performance. Meanwhile, focus has been diverted from monitoring safety performance to proactive measures of improving safety practices. Hughes (2010) stressed that a paradigm shift in thinking, values addition and change of believes will boost healthy and sustainable society. Neale (2013); Kolawole (2014) opined that adequate training of students on occupational safety and health via cognitive education will be a good channel in helping the stakeholders to improve safety practices. Furthermore the author added that the industry can boost professionals' interests in active safety management and implementation of safety awareness programs, this need to be developed and implemented on site for construction workers. A nationwide survey conducted by Boustras, Hadjimanolis, Economides, Yiannaki and Nicolaides (2015) on management of health and safety in Cyprus showed that safety at work in a small scale firm needs improvement on training, risk assessment, and safety policy formulation. Awwad, El Souki, and Jabbour (2016) examined construction safety practices and challenges in a Middle Eastern developing country, found availability of construction labour safety law but lacks necessary awareness, absence of monitoring and inadequate support from all the participants concerned with implementations of safety practices on sites. Abdullah and Wern (2011) stated that the role of academia in creating necessary awareness, knowledge, skills and values in construction students during their training is vital in developing safety culture. In view of this, Akinwale and Olusanya (2016) stated that high level of awareness on the importance of occupational health and safety, training on how to identify and manage risk among contractors and workers will optimize site safety. Education and training might not be enough to solve all problems regarding construction health and safety, but it could be good tools to building safety consciousness among the students right from the school. Recently, the increase in social and public education has helped in fighting disease outbreak like HIV AIDS, Ebola, Polio, sickle cell etc. in the developing countries. However, improper handling of safety education as part of the students training when in school will forfeit the objectives of the industry contributions to national development, as Stephen, Hernanadez, Roman, Graham & Scholz (2008) emphasized that the construction programmes remained a core of any nations economy development. Ismail, Doostdar and Harun (2011) evaluated factors influencing the implementation of safety management system for construction sites. The result from the survey found personal awareness and communication as the most influencing management factor.

In understanding and defining operational health and safety competency on construction site using worker opinion, Dingsdag, Biggs and Sheahan (2007) assessed the feelings, skills, behaviors and knowledge of construction participants that contribute to safety culture. The findings of the study established that workers have four most influential positions to be safe on construction site this includes: workers opinion on safety culture promotion via training and education, a strong knowledge of safety rules and regulations, good communication and interpersonal skills, behaviour and actions that will enforce and monitor safety.

6. Concept of Awareness

Awareness can be defined as having knowledge, understanding or familiarity with the subject or knowing about situation or fact. It is consciousness about something; opposed to inertness. It manifests in all forms of perceptions and knowing; which is object-specific. A research concluded that employers and employees have different perception of awareness. It is an amorphous term with no clear-cut definition in the practice. For the purpose of this research it is the knowledge about Health and Safety activities in schools and rules thereof. The researcher has used true/false/don't know scale and analyzed data on the background of education, family income and race. According to Sudman and Bradburn (2001) suggest that framing a knowledge question in terms of rating scale (soft format) instead of asking direct questions reduces the risk of getting false answer. This is an indirect way but it reduces the number of question and indicates the effort level necessary to achieve higher awareness. The knowledge about Health and Safety is workplace specific (different in paint and weld shop). Also being its active nature employee should keep abreast and alert through the mechanism of communication to remember and use it when needed. Ten principles of the Du Pont Corporation, a world leader in the field of Health and safety at work includes:

- (i) Safety awareness does not come naturally management must teach, motivate and sustain employees safety knowledge to eliminate injuries.
- (ii) Management is directly responsible for preventing injuries and illness.
- (iii) It is good business to prevent illness and injuries as it involve high direct and indirect costs.

The key to achieving a high level of awareness in Occupational Health and Safety (OHS) is effective communication. Internal and external resources can be involved for circulation of information at all levels (Baig, Ahmed, and Narhari, 2012). OHS performance parameters should include, but not be limited to: implementation of OHS policy, risk control measures, lessons learnt from past events, awareness, training, communication, inspection and record keeping. Time spent on improving organizations Health and Safety could provide financial return in terms of reduced accidents and medical expenditure, reduced stress and greater productivity, reduction in likelihood of paying legal costs and compensations.

Internal Labor Organization (ILO) stressed the importance of developing a communication strategy to raise awareness and inform public about upcoming revisions and its possible impact (ILO, 2012). Health promotion, education and training strategies are necessary for Government Prosecutors and their staff (NHS, 2005). HSE training helps to develop Health and Safety culture, managing better H&S at workplace, imparting skills and knowledge needed for people to do their job in safe and healthy way (HSE Publications, 2011).

7. Health and Safety Education in Secondary Schools

There is a general shortage of designated courses titled occupational health and safety in the curricula of both the National Universities Commission (NUC) and National Board for Technical Education (NBTE). Though the NUC and NBTE made minimum requirement for the curricula in the tertiary institution, the development of this curricula differ both in content and program from one institution to the other. As a result, the safety training and knowledge received by these future professionals differ. Therefore it is important to ensure that safety education given to intending professionals is adequate in all ramifications. According to Che Hassan, Basha, Wan Hanafi (2007), and Shamsuddin, Ani, Ismail, Ibrahim (2015), workers knowledge and understanding of safety practices at work setting remained vital in promoting safety among them on construction site. This can be achieved by standardized students training using case studies approach in teaching and learning occupational safety in secondary schools, because this will involve student’s participation in Safety practices and any lesson learnt will greatly impact their understanding. Recent trend in construction activities would require safety education and practices to be a specialized program rather than topic within another construction courses. This will adequately prepare future professionals on the needs for safety on/off sites. Learning opportunity can be harnessed starting from students’ mid-term holidays to the eight (8) weeks Student Work Experience Programme (SWEP) designed for students of tertiary institutions in construction and engineering programs at various universities because this training is domiciled in each of the tertiary institutions. It can be designed to include practical demonstrations on occupational health and safety education.

8. Method of Study

The cross sectional survey method was used; it involves observational study that analyzes data from a population or representative subset at a specific time in life. A cross sectional study involves looking at people who differ on a key characteristic at one specific point in time, data is collected at the same time from people who are similar in other characteristics but different in a key factor such as age, income, educational levels or geographical location (Kendra, 2018).The population for this study consists of secondary school students in the sixteen (16) Government owned secondary schools in Owerri North Local Government Area of Imo State. The data sourced from the Ministry of Education Owerri. The survey utilized questionnaire. The questionnaire was divided into two sections A for demographic information and B to interrogate the objectives questions formulated for the study. The secondary sources were from text books and published learned journals.

8.1 Sample size and sampling techniques:

The inclusive criteria technique was used, which offered opportunity to select students from senior secondary alone who understands the subject matter. The second criterion adopted was the schools that have both male and female students were drawn as the sample. The research adopted a purposive sampling technique for drawing the schools with male and female students. The schools are shown in table 1.

Table 1: List of selected Senior Secondary Schools in the Study Area

S/N	School	SS 1		SS 2		SS 3		Total		SSS
		M	F	M	F	M	F	M	F	
1	Agbala Comprehensive Sec Sch	65	85	100	102	100	120	265	307	572
2	Commercial Secondary School Emekuku	67	36	55	40	71	39	193	115	308
3	Comprehensive Secondary School Amakohia	218	104	233	102	120	73	571	279	850
4	Comprehensive Secondary School Emekuku	71	52	50	44	78	36	199	132	331
5	Comprehensive Secondary School Orji	141	102	142	99	119	79	402	280	682

6	Development Secondary Sch Mbaoma Emii	22	40	28	28	16	16	84	84	168
7	Egbu Commercial Comprehensive Sec Sch	93	119	125	124	125	121	343	364	707
8	Emii Secondary Technical School	44	32	34	37	70	80	148	149	297
9	John F Kennedy Intl Sec Sch Obibiezena	31	35	41	51	49	55	121	141	262
11	Obube Comprehensive Sec Sch Egbelu	45	55	56	90	75	114	176	259	435
12	Uratta Secondary School	55	45	59	52	56	51	170	148	318
	Total	1007	838	1041	933	982	899	3048	2670	5718

Source: Imo State Ministry of Education 2019.

To determine the sample size for this study, the Taro Yamane formula as presented was used.

The formula is $n = \frac{N}{1+N(e)^2}$ Where,

n = Sample size

N = Study population

e = Allowable error

1 = Constant

If N = 5718

$$n = \frac{5718}{1+5718(0.05)^2}$$

$$n = \frac{5718}{1+5718 \times 0.0025}$$

$$n = \frac{5718}{1+14.295}$$

$$n = 400$$

Table .2 Sample Size for Senior Secondary School in the Study Area

S/N	School	Population	Sample
1	Agbala Comprehensive Secondary School	572	40
2	Commercial Secondary School, Emekuku	308	22
3	Comprehensive Secondary School Amakohia	850	59
4	Comprehensive Secondary School Emekuku	331	23
5	Comprehensive Secondary School Orji	682	48
6	Development Secondary School Mbaoma Emii	168	12
7	Egbu Commercial Comprehensive Secondary School	707	50
8	Emii Secondary Technical School	297	21
9	John F Kennedy Intl Secondary school Obibiezena	262	18
10	Naze Secondary school Egbelu	788	55
11	Obube Comprehensive Secondary School Egbelu	435	30
12	Uratta Secondary School	318	22
	TOTAL	5718	400

8.2 Method of Data Analysis

The data collected was presented by means of frequency, table, percentage, while the analysis was done using inferential statistics such as chi square and analysis of variance ANOVA. The chi-square model for two tailed is given below. Also a likert scale as weighted in the design of the questionnaire was used; Strongly Agree SA (5points), Agree A(4points),Disagree D(3points),Strongly disagree AD(2points) and undecided UD(1point).

Weighted Average: This shall be calculated by multiplying the frequency of each point in the scale with its quantifier for all points and dividing by the total number of respondents. **Criterion Mean:** Is derived by adding

all quantifiers in the scale together and dividing by five .For example $\frac{5+4+3+2+1}{5} = 3.0$

9. Results

9.1: Socio-economic characteristics of respondents

The major components of the socio-demographic information collected from the field work were as follows, Age, gender, and class level.

Table 3: Age distribution of respondents

Response	Frequency	Percentage %
13-14	106	27
15-16	135	34
17-18	93	24
19 and above	59	15
Total	393	100

Table 3, the data revealed that out of the 393 respondents there were different age brackets. 106(27%) of the age bracket were between (13-14years), 135(34%) of the respondents fell within the age bracket of (15-16 years), 93(24%) of them were within the age bracket of (17-18 years), while 59 (15%) of the respondents were within the age bracket of (19 years) and above.

Table 4: Gender Distribution of Respondents

Response	Frequency	Percentage %
Male	186	47
Female	207	53
Total	393	100

The information in table 4 indicates the gender composition of the respondents. The analysis revealed that about 186 (47%) of the participants were males, while 207 (53%) of them were females.

Table 5: Class Level of respondents

Response	Frequency	Percentage %
SS1	156	39
SS2	133	34
SS3	104	27
Total	393	100

The information in table 5 indicates the class level of respondents. It was revealed that 156 (39%) of the participants were in SS1, another 133 (34%) of them were in SS2, while 104 (27%) were in SS3 respectively.

Table 6: Statement interrogating Health and Safety Awareness amongst Selected Secondary School

S/N	Items	SA(5)	A(4)	SD(3)	D(2)	U(1)
Status of health and safety awareness of senior secondary school students						
1	Everyone is aware of health and safety rules in my school	75 (375) 19%	97 (388) 25%	135 (405) 34%	63 (126) 16%	23 (23) 6%
2	Safety guideline should be implemented in the school	203 (1015) 51%	91 (364) 23%	65 (195) 17%	27 (54) 7%	7 (7) 2%
3	There is need to understand school rules and regulations concerning safety	191(955) 48%	102 (408) 26%	57 (171) 15%	29 (58) 7%	14 (14) 4%
4	Recognition of potential risks and making safe choices is important	223 (1115) 57%	89 (356) 23%	47 (141) 12%	25(50) 6%	9(9) 2%
5	There is need for understanding of safety rules due to potential hazard	201(1005) 51%	105(420) 27%	53 (159) 13%	19 (38) 5%	15(15) 4%
		SA (5)	A(4)	SD (3)	D (2)	U (1)
Investigates if students health and safety awareness vary with gender						
6	Recognition of potential risks and making safe choices for both gender is important	186 (930) 47%	97 (388) 25%	60 (180) 15%	36 (72) 9%	14(14) 4%
7	There is need for understanding of safety practices to save the students from potential hazard	203 (1015) 52%	83 (332) 21%	72 (216) 18%	27 (54) 7%	8(8) 2%
8	Male students deals with unhelpful health pressure better than the female students	76 (380) 19%	57 (228) 15%	135 (405) 34%	107 (214) 27%	18 (18) 5%
9	Both male and female students are aware of health and safety regulations	165 (825) 42%	101 (404) 26%	97 (291) 25%	17 (34) 4%	13 (13) 3%
10	Bullying is an example of the lack of physical and emotional safety both gender experience.	85 (425) 22%	71 (284) 18%	191 (573) 49%	37 (74) 9%	9 (9) 2%
		SA (5)	A(4)	SD (3)	D(2)	U (1)
Ascertain if students level of health and safety awareness vary with the school location						
11	Some schools implement and comply with safety guidelines than others	169 (845) 43%	104 (416) 26%	77 (231) 20%	33 (66) 8%	10 (10) 3%
12	Some schools are ignorance of health and safety guidelines	210 (1050) 53%	81 (324) 21%	56 (168) 14%	28 (56) 7%	18 (18) 5%
13	Students are aware of health and safety guidelines in all schools	97 (485) 25%	65 (260) 17%	163 (489) 40%	42 (84) 11%	26 (26) 7%

14	We have well trained health and safety official amongst our teachers	83 (415) 21%	62 (248) 16%	133 (399) 34%	77 (154) 19%	38(38) 10%
15	All schools should implement health and safety as part of their academic curriculum	197 (985) 50%	99 (396) 25%	55 (165) 13%	37 (54) 9%	5 (5) 1%
What is the status of preventive measure students have taken to avoid potential hazard						
16	School management have introduced classroom safety as a preventive measure against potential hazard to the students	83 (415) 21%	59 (288) 15%	145 (435) 37%	77 (154) 20%	29 (29) 7%
17	There are regular repairs of all unsafe areas within the school to prevent potential hazards	75 (375) 19%	57 (228) 15%	149 (447) 38%	92 (184) 23%	20 (20) 5%
18	There is constant development to improve healthy lifestyles within the school environment	53 (265) 13%	123 (492) 31%	197 (591) 51%	17 (34) 4%	3(3) 1%
19	There is creation of safety communication at all level of the school system	84 (420) 21%	77 (308) 20%	127 (381) 32%	94 (188) 24%	11 (11) 3%
20	Everyone ensures they play roles in promoting safety within the school environment	141 (705) 36%	88 (352) 23%	76 (228) 19%	63 (126) 16%	25(25) 6%

Source: Fieldwork, (2019)

Objective one: Table 6: Above, shows that 75 (19%) respondent strongly agreed that everyone is aware of health and safety the school, 97 (25%) respondents agreed, 135 (34%) respondents strongly disagreed, 63(16%) disagreed, 23 (6%) respondents were undecided. Furthermore, 203 (51%) strongly agreed that safety guide should be implemented in the school, 91(23%) agreed, 65 (17%) respondents strongly disagreed, 27(7%) respondent disagreed, while 7 (2%) respondent were undecided that there is need to understand school rules and regulations concerning safety. Also 191(48%) strongly agreed, 102(26%) strongly agreed, while 57(15%) strongly disagreed, 29(7%) respondents agreed that there is need to understand school rules and regulations concerning safety, while 14(4%) respondents were undecided on recognition of potential risks and making safe choices is important. More so, 223(57%) respondents strongly agreed, 89 (23%) respondents agreed, 47 (12%) respondents strongly disagreed, 25(6%) disagreed, while 9 (2%) respondents were undecided that there is need for understanding of safety rules due to potential hazard. Also 201(51%) respondents strongly agreed, 105(27%) agreed, 53(13%) respondents strongly disagreed, 19 (5%) respondents disagreed, while 15(4%) respondents were undecided.

Objective two: Assessment of whether safety awareness varies amongst genders. The question posed was; recognition of potential risk and making safe choices as important safety rule. About 186(47%) strongly agreed, 97(25%) respondents agreed, 60(15%)respondents strongly disagreed, 36(9%) respondents disagreed, 14 (4%) respondents were undecided that there is need for understanding of safety practices to save the students from potential hazard. In the same vein 203 (52%) respondents strongly agreed, 83(21%) respondents agreed, 72(18%) respondents strongly disagreed, 27(7%) respondent disagreed, 8(2%) respondents were undecided that male students deals with unhelpful health pressure better than the female students. More so, 76(19%) respondents strongly agreed, 57(15%) respondents agreed, 135(34%) respondents strongly disagreed, 107(27%) respondents disagreed, 18(5%) respondents were undecided that both male and female students are aware of health and safety regulations. Also, 165(42%) respondents strongly agreed, 101(26%) agreed, 97(25%) respondents strongly disagreed, 17(4%) disagreed, 13(3%) were undecided that bullying is an example of the lack of physical and emotional safety both genders experience. About 85(22%) strongly agreed, 71(18%)

respondents agreed, 191(49%) respondents strongly disagreed, 37(9%) respondents which represents (9%) of the population disagreed, 9(2%) respondents were undecided.

Objective three: States that student’s safety awareness varies with school location. Questionnaire items goes thus; Some schools implement and comply with safety guidelines than others, 169(43%) respondents strongly agreed, 104(26%) respondents agreed, 77(20%) strongly disagreed, 33(8%) disagreed with this view, while 10 (3%) respondents were undecided that Some schools are ignorance of health and safety guidelines. Also about 210(53%) respondents strongly agreed, 81(21%) agreed with this view, 56 (14%) respondents strongly disagreed, 28(7%) respondents disagreed, while 18(5%) respondents were undecided. Students are aware of health and safety guidelines in all schools, 97(25%) respondents strongly agreed, 65(17%) respondents agreed, 163 (40%) strongly disagreed, 43(11%) respondents disagreed, while 26(75) respondent were undecided that we have well trained health and safety official amongst our teachers. Also about 83(21%) respondents strongly agreed, 62(16%) respondents agreed, 133(34%) respondents strongly disagreed, 77(19%) respondents disagreed, while 38 (10%) respondents were undecided that all schools should implement health and safety as part of their academic curriculum. About 197(50%) respondents strongly agreed, 99(25%) respondents which agreed, 55(13%) strongly disagreed, 37(9%) respondents disagreed, 5(1%) respondent were undecided.

Objective four: States whether students take some precautionary measures to prevent hazards. the questionnaire item state thus; school management have introduced classroom safety as a preventive measure against potential hazard to the students, 83(21%) respondents strongly agreed, 59(15%) agreed, 145(37%) strongly disagreed, 77 (20%) respondents disagreed, while 29(7%) respondents were undecided that there are regular repairs of all unsafe areas within the school to prevent potential hazards, 75(19%) respondents strongly agreed, 57(15%) respondents agreed, 149(38%) strongly disagreed, 92(23%) respondents disagreed, while 20(5%) respondents were undecided that there is constant development to improve healthy lifestyles within the school environment. Furthermore, 53(13%) respondents strongly agreed, 123(31%) agreed, 197 (51%) respondents strongly disagreed, 17(4%) respondents disagreed, while 3(1%) were undecided that there is creation of safety communication at all level of the school system. Also, 84(21%) respondents strongly agreed, 77(20%) respondents agreed, 127(32%) strongly disagreed, 94(24%) respondents disagreed, while 11(3%) respondents were undecided, that everyone ensures they play roles in promoting safety within the school environment. More so, 141(36%) strongly agreed, 88(23%) respondents agreed, 76 (19%) respondent strongly disagreed, 63(16%) respondents disagreed, while 25(6%) respondents were undecided.

9.2: Hypothesis Testing

Chi square analysis of status of health safety awareness amongst secondary school students in the study area.

Hypothesis one : H₀: There is no statistically significant difference between health and safety awareness and gender of secondary school students

H₁: There is

$$X^2 = \sum_{i=1}^n \sum_{j=1}^k \frac{(o_{ij} - e_{ij})^2}{e_{ij}}$$

$X^2_{calculated} = 204.758$. Degree of freedom = (n – 1) (K – 1) = (5-1) (5-1) = 4 X 4 = 16. Df = 16

Decision: At the 95% probability level and 14 degree of freedom our critical value is 26.296, since the calculated chi square value of 204.758 is greater than the critical value of 26.276, there we reject the null hypothesis and uphold the alternate. Decision rule; there is a statistically significant difference between health and safety awareness by gender of the secondary school students because not everyone is aware of health and safety regulations governing the schools.

9.2.1: Hypothesis two

Table 7. Showing ANOVA Analysis

Source of variation	Sum of squares	Degrees of freedom	Mean sum of square	F
Between column samples	51793.2	4	12948.3	9.72
Within column error	26,624.8	20	1331.24	
Total	78,418	24		

$$ANOVA \text{ Equation} = \sum X^2 - \left(\frac{\sum X^2}{N} \right)^2$$

Decision: The test statistics gives a value of 9.726 while from a 95% table of the F distribution the critical value of 4 and 20 degrees of freedom was 2.87; $F_{0.05} = 2.87$. We reject the null hypothesis and uphold the alternate since the calculated F value of 9.726 in the ANOVA table 7, above is greater than the critical F statistics at the 95% confidence level. Decision rule; that there is a statistically significant difference between health and safety awareness in secondary school urban area than those in the rural area.

9.2.2: Hypothesis three:

H₀: There is no statistically significant difference in health and safety preparedness for urban secondary schools than the rural secondary schools in the study area **H₁:** There is $\chi^2_{\text{calculated}} = 280.205$. Degree of freedom (df) = (n-1) (k-1) = (5-1) (5-1) = 4 x 4 = 16 (df) = 16. Decision rule; At the 95% probability level and 16 degrees of freedom our critical value was 26.275, since the calculated chi square value of 280.205 is greater than our critical value, therefore we reject the null hypothesis and uphold the alternate. Conclusion is that there is a statistically significant difference in health and safety preparedness in rural and urban schools in the study area because knowledge of health and safety seems to be poor among secondary schools students in the rural areas than the urban.

10. Summary and Discussion

This study advocated health and safety awareness amongst selected secondary school students in Owerri North Local Government Area of Imo State. The major thrust of the research was to establish a link between the status of students health and safety awareness amongst the schools. (51%) respondents strongly agreed that safety guide should be implemented in the school. (57%) respondents strongly agreed that there is need for understanding of safety rules due to potential hazard. (53%) respondents strongly agreed, Students are aware of health and safety guidelines in all schools. (36%) strongly agreed that everyone ensures they play roles in promoting safety within the school environment. Hypothesis one tested showed that at the 95% probability level and 14 degree of freedom our critical value is 26.296, since the calculated chi square value of 204.758 is greater than the critical value of 26.276, there we reject the null hypothesis and uphold the alternate. Decision rule; there is a statistically significant difference between health and safety awareness by gender of the secondary school students because not everyone is aware of health and safety regulations governing the schools. Hypothesis two using ANOVA, the test statistics gives a value of 9.726 while from a 95% table of the F distribution the critical value of 4 and 20 degrees of freedom was 2.87; $F_{0.05} = 2.87$. We reject the null hypothesis and uphold the alternate since the calculated F value of 9.726 in the ANOVA table 7, above is greater than the critical F statistics at the 95% confidence level. Decision rule; that there is a statistically significant difference between health and safety awareness in secondary school urban area than those in the rural area. Hypothesis three also showed that at the 95% probability level and 16 degrees of freedom our critical value was 26.275, since the calculated chi square value of 280.205 is greater than our critical value, therefore we reject the null hypothesis and uphold the alternate. Conclusion is that there is a statistically significant difference in health and safety preparedness in rural and urban schools in the study area because knowledge of health and safety seems to be poor among secondary schools students in the rural areas than the urban.

11. Conclusion

The research examined the health and safety awareness amongst selected secondary schools students in Owerri North Local Government. The analysis showed that more than 50% of the respondents strongly agreed that the students are not aware about health and safety issues and this have severe negative impact on their well-being. The study elicited some factors that contribute to lack of awareness of health and safety regulations in the schools, such as; inadequate safety education as identified by Nishgaki, (1994) in his study and corroborated by Adebowale, (2010), they opine that, it was necessary to develop a 'safety first mindset' among students before they get into the work place or institution in order to be adequately prepared for their future Health and Safety hazards and risks. Adebowale (2010) maintained that a preventative Health and Safety culture should be one that incorporates Health and Safety into the educational system of future professionals and managers in the society. This paper advocates that secondary school students in Imo State and in Nigeria at large should be trained to understand National and International safety laws, regulations and conventions in order to fit into their future roles even while in schools to avert unnecessary risks/hazards and with the present global pandemic in 2020 (COVIS-19), it has becomes very necessary for the government to integrated Health and Safety regulations into into the school's curriculum.

12. Recommendations

The recommendations are suggested as follows; Government and stakeholders in education sector should integrate health and safety into educational curriculum so that students will have adequate knowledge and development of positive attitude towards safety. Safety constitutes one of the essential human needs, and schools should integrate health and safety into their policy framework. Secondary schools should have tools that promote safe working environment, preparedness and proper planning for safety. Administrators of schools and government institutions/ organizations must establish priorities for dealing with Health and safety these issues in their daily work and activities.

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