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Demographic Differences In the Epidemiology of Traumatic Incidents Among Secondary School Students In Port Harcourt Metropolis

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ABSTRACT
The study investigated the Demographic Differences in the Epidemiology of Traumatic Incidents among secondary school students in Port Harcourt Metropolis. Three research questions and three corresponding null hypotheses were raised and tested at 0.05 level of significance. The ex-post-facto research design was used. The population of the study comprised all the 4,600 students in the 5 selected schools in Port Harcourt Metropolis. The sample size of 270 students who experienced traumatic incidents were used. The Harvard/Uppsala Trauma Questionnaire (HUTQ) was used for data collection. It is a standardized instrument with validation value of 0.98. The original Cronbach alpha reliability of the instrument was given as 0.93 while the test–retest for stability was .71. Means and standard deviations were used to answer the three research questions while the t-test statistics was used to test the corresponding three null hypotheses at P≤ .05 level of significance. Findings revealed that there is no significant differences in traumatic incidents experienced among students with regard to gender, age and geographical location of school they all experience same incidences. It was recommended among others that there should be guidance and counselling units in the schools where they don't exist to enable counsellors to effectively manage the psychological problems of students.
Keywords: Demographic Differences, Epidemiology, Incidents, Students, Traumatic.

INTRODUCTION

A traumatic incident is an event that overwhelms a person's ability to cope. It can be a shock to our psychological wellbeing. Such traumatic incidences can be sudden unexpected, incomprehensible, shocking and personally upsetting experiences. Such traumatic events can cause physical, emotional, spiritual or psychological harm, the person experiencing the distressing event may feel threatened, anxious or frightened as a result of it. Trauma could be acute, chronic or complex. Trauma has a much unexpected nature; hence no one can totally prepare for it due to the fact that each individual responds differently to emotional upset, it is impossible to predict trauma after effects.

Everyone experiences stressful events from time to time, whether they are children, adolescents or adults. Such events can affect them both emotionally and physically. The way adults will react to stress is quite

different from the way children and young people will react to similar situations. What is considered as normal stress of life could just be the inner sense of worry, tension or being burdened about certain problems of life. Some other times, it could be as a result of one's work, relationships, financial, political or social issues (Cookey, 2014). These normal stressors are capable of producing anxiety, depression, ulcers, headaches or other forms of psychosomatic problems. Stress from these mentioned experiences could cause uneasiness in the individual but the effects are usually short-lived.

However, there are other situations where the stress experienced could be as a result of mild catastrophic events such as witnessing a physical abuse, sexual abuse, violence in the home or in the community, car or domestic accidents, natural disasters (such as flood, fire, hurricane, earthquakes, volcanic eruptions), air crash, to mention but a few. Sometimes, the stress could even be due to a diagnosis having to do with a life-threatening illness. A child or young person that experiences any of such catastrophic events may develop on-going difficulties that may be regarded as traumatic incidences.

The situation that had existed in the Niger Delta in recent times was such that has resulted directly or indirectly to traumatic experiences suffered by both children and adults alike. In the words of Saliu, Luqman and Abdullahi (2007), "no region of the country best exhibits the deplorable nature of Nigeria's human security than the Niger Delta". Reporting further on the same subject, Kinanee and Kpai (2008) have identified some of the security challenges in the area to include hostage taking/kidnapping, street violence, armed robbery, gangsterism and other violent crimes like school shooting. According to them, one psychological consequence of such events is Post Traumatic Stress. These traumatic incidences decrease motivation for study because of the psychological and other effects it has on students. People who witness or experience horrible events such as school shootings, combat, rape, torture, accidents or natural disasters or other things in which their physical safety and life or the safety and life of others- are in danger of a traumatic stress, whether they are in school or not. Anyone who has experienced these things has experienced a shock and, even if all ultimately escape danger, the people who lived through the event may feel like life "just isn't the same anymore" (APA, 2011).

The APA (2011) further adds that a child/adolescent who exhibits continual and aggressive emotional outbursts, serious problems at school, pre-occupation with the traumatic event, continued an extreme withdrawal, and other signs of intense anxiety or emotional difficulties should be taken for professional assistance. A qualified mental health professional such as a psychologist or school counselor can help such children and their parents understand and deal with thoughts, feelings and behaviors that result from trauma.

There seems to be very few studies that have been carried out by mental health practitioners (counselors, psychologists, psychiatrists and social workers) with regard to Traumatic incidents among students in the school system in the Niger Delta region of Nigeria. Considering the traumatic events that have occurred in the region in recent times, and the apparent dearth of materials on the subject, the researchers has deemed it necessary to investigate the demographic differences in the epidemiology of traumatic incidents among secondary school students in Rivers State. The study will, among other things, investigate whether the traumatic incidences experienced are related to the gender, age and geographical location of the secondary school students

Statement of the Problem

Traumatic incidents produce long-term psychological problems that hampers students' academic progress. Such traumas are also more likely to include elements of anger and hostility, flashbacks or reliving the traumatic event for minutes or even days, upsetting dreams about the incident, memory problems, trouble concentrating, avoiding activities one once enjoyed, to mention a few. Such experiences have health, social, educational and vocational implications.

In the light of the numerous traumatic events reported in Rivers State in particular and Niger Delta in general recently, it has become necessary to give a thought to the phenomenon of traumatic incidences among secondary school students. A recent study of UNICEF (2010) indicated how in some communities in Rivers and other Niger Delta states, schools were closed down due to militant activities, while teachers and students alike were exposed to gun shots which led to the maiming and death of some of them.

Furthermore, it was reported that some school compounds became training grounds for militant groups or camping grounds for the Joint Task Force (a security outfit set up by the government of Nigeria). Recent

literatures on the subject (Medicine Net, 2008, Giardino, Harris & Giardino, 2009) have shown the grave nature of that kind of situation on school children. For instance, such children exposed to psychological trauma would definitely have problems with school work. Apart from obvious poor performance as a result of poor concentration and impaired thinking ability as well as emotional problems, some gradually find it difficult even going to school. The implication of this situation on the future of the economic, political and educational development of the area can better be imagined than discussed. Sometimes, parents may not understand why such children act the way they do, in and out of the classroom situation. The need to understand this phenomenon and its management strategies especially among school children therefore becomes a welcome development, considering the research area.

Considering the horrible effect all those events could have on the school system, the researchers are motivated to investigate the Demographic Differences in the Epidemiology of Traumatic Incidents among Secondary School Students in Rivers State. Therefore, the Statement of Problem is: What is the extent of Demographic Differences of gender, age and geographical location in the Traumatic Incidents among Secondary School Students in Port Harcourt Metropolis?

Purpose of the Study

The purpose of this study is to examine Demographic Differences (gender, age and geographical location) in the Epidemiology of Traumatic Incidents among secondary school students in Port Harcourt Metropolis.

Research Questions

The following research questions have been raised to guide this study:

1. To what extent does the experience of traumatic incidents differ on the basis of gender among secondary school students in Port Harcourt Metropolis?
2. To what extent does the experience of traumatic incidents differ on the basis of geographical location among secondary school students in Port Harcourt Metropolis?
3. To what extent does the experience of traumatic incidents differ on the basis of age among secondary school students in Port Harcourt Metropolis?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance to guide the study.

1. There is no significant difference between male and female students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.
2. There is no significant difference between urban and rural students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.
3. There is no significant difference between 10-14 years and above 15 years students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.

LITERATURE REVIEW

This work was anchored on the Learning Theory of Post-Traumatic Stress (PTS) because of its relationship to the entire work. In this theory, fear is acquired through classical conditioning, in which a neural stimulus (CS) is paired with an aversive stimulus (UCS), so that the CS comes to elicit a conditioned fear response (CR).

The learning theory of Mowrer's two-factor theory (1960) has been the most influential in the explanation of the pathological anxiety seen in PTS. In this theory, fear is acquired through classical conditioning, in which a neural stimulus (CS) is paired with an aversive stimulus (UCS), so that the CS comes to elicit a conditioned fear response (CR). Several theorists invoked this theory to explain the symptoms of PTSD (e.g. Foa, Skeketee & Rothbaum, 1989; Keane, Fairbank, Caddell, Zimering & Bender, 1985; Kilpatrick et al., 1985 all in Cookey, 2014), such that previously neural stimuli that were present during the trauma come to elicit anxiety themselves.

Bufka and Barlow (2005) also indicated that veterans exposed to a high level of combat were nine times more likely to have PTS than military personnel who did not serve in the war zone. Most persons who experience traumatic stress in civilian life do not develop PTS. The percentage of traumatized persons who develop PTS depends partly on the type of stress. For instance, about 15 percent of persons who experience the sudden death of a loved one develop PTS, and about 20 percent of victims of violent

assault experience PTS (Passer & Ronald, 2004). It is also reported that civilian war victims may be seen even more vulnerable than solders' while traumas caused by human actions such as war, rape and torture, tend to precipitate more severe PTS reactions that do natural disasters such as hurricanes or earthquakes (Lahey, 2004).

Christiansen and Elklit (2008) reported that depression, negative affectivity/neuroticism, and younger age have sometimes been reported to be related to PTSD in female more than in males.

Reacting to this, Zeidner (2006) submitted that higher degree of negative affectivity in females may result in more reactive emotional and somatic responses in females compared to males.

METHODOLOGY

This study is an ex-post-facto design. It investigated the Demographic Differences of Traumatic Incidents among secondary school students in Port Harcourt Metropolis. The Researchers used the ex-post-facto research because this type of research is similar to experimental study in the sense that it also seeks to establish cause-effect relationships but differs from it in that the researcher usually has no control over the variables of interest and therefore cannot manipulate them.

The population for this study comprised of five (5) selected secondary schools from Port Harcourt Metropolis that were regarded as hotbeds of militancy in the area. They include the following:

1. Baptist High School, Borikiri Port Harcourt (Boys School) with a population of about 600 students.
2. Federal Government College, Rumuokoro- Port Harcourt (mixed school) with a population of about 1,400 students.
3. Holy Rosary Secondary School (Girls School) with a population of 800 students.
4. Community Secondary School Rumuekini with a population of 600 students
5. Community Secondary School Ogbogoro with a population of 1,200 students

The total population for the study is 4,600 students. The source is from the various schools, where the researcher administered the research instrument.

The sample size for this study is 270. The Non-Stratified Random Sampling Technique was used to arrive at this number using 20% of the population. The total number of students is 4600, of this number, 2000 are male students while 2600 are female students. The 20% of 2000 gave 400 male students while the 20% of 2600 female students gave 520 female students which gave the sample size of 750. Again, the researcher also used the non-stratified random sampling to select 150 students from each school, irrespective of the students' population in each school. For instance, only students having traumatic experience were used for the study. Therefore, out of an initial sample size of 750 only 270 students showed evidence of traumatic incidents and were drawn into the study. This figure constitutes 36% and were all used as the actual sample size in this study.

The instrument used for data gathering was the "Harvard/ Uppsala Trauma Questionnaire" (HUTQ). The HUTQ is a cross-cultural child-orientated trauma instrument, though slightly modified for use with adolescents. The instrument which has two sections, is a collaborative effort of researchers from Harvard University in the United States and Uppsala University in Sweden, and is used to measure traumatic events and post traumatic symptomatology. Section 1 shows the Personal information of the respondent; while Section 2 (consisting of 30 traumatic events) records if the respondents have experienced, witnessed or heard about terrifying events. Every reported event is registered as one score. When the event is reported three times or more during one year, or has duration of more than a year, a maximal 3 score is given. The sum of the total scores will compose the total trauma scores. Thus the HUTQ is used to assess experiences of specific traumatic events that are purported as having the potential to elicit Post Traumatic Symptoms.

The HUTQ is a standardized instrument. The Cronbach coefficient alpha reported for the traumatic incidents was 0.98. For the purpose of this study, the instrument was given to experts in the area of measurement and evaluation in the three Universities in Port Harcourt. To get this done, the topic, aims and objectives and the hypotheses were attached to the instruments given to the validations. Their corrections, comments, suggestions and recommendations were incorporated into the final draft of the instruments, this ensured face and content validity of the instrument.

The test-retest statistical method was used to establish the stability of the two research instruments. Twenty students who were not part of the sample were however administered the HUTQ for a pilot study to determine the possibility of local usage. After a period of two weeks, the same students were administered the instrument again. Their first and second scores on the two instruments were correlated using Pearson Product Moment Correlation (PPMC) statistics to get a reliability coefficient of 0.71 for HUTQ. The instruments have good psychometric reports and were considered good enough for the study. The researchers visited the schools to distribute 270 copies of the questionnaires. In each of the schools visited, the researchers explained the purpose of the research and how to fill the instrument to the respondents before administering the questionnaires. The instrument was directly administered to the respondents with the assistance of the class teacher. The strata were formed based on the location being the Rural and Urban. Three schools were selected in the Urban while two schools were selected in the Rural. The researcher also obtained permission from the school heads to gain access to the staff and students.

The researcher used the descriptive statistics of Means and Standard Deviations to answer the three research questions. The independent t-test statistic was used to test the null hypotheses involving dichotomous variables of gender, age, geographical location.

RESULTS

For purpose of clarity each research question was reported along with the corresponding null hypotheses.

Research Question 1: *To what extent does the experience of traumatic incidents differ on the basis of gender among secondary school students in Port Harcourt Metropolis?*

In order to answer research question 1 and test its corresponding null hypothesis 1, the mean, standard deviation and independent t-test statistics were employed. The results obtained from the analysis are presented in table 1

Table 1: T-test analysis of the gender differences in the experience of traumatic incidents among secondary school students

Gender	N	Mean	SD	df	t-cal	Sig	MD	95% C I Lower Bound	Upper Bound	Decision
Male	89	34.191	10.539	268	.198	.843	.252	-2.235	3.407	P≥.05
Female	181	33.939	9.465							

N = 270, MD = Mean difference, P≥ .05 level of significance, CI= confidence interval.

As shown in table 1 the descriptive output of traumatic incidents based on gender variable include: Male, n = 89, Mean = 34.191, SD = 10. 539 and female, n = 181, Mean = 33.939, SD = 9.465, the mean difference, MD = .252. This provides answer to the research question 1 and shows that there is a difference between male and female students in their experience of traumatic incidence in Port Harcourt Metropolis. The mean difference is .252 in favour of female students and shows that female students have higher traumatic incidents more than their male counterpart.

Hypothesis 1: There is no significant difference between male and female students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.

In order to test the hypothesis 1, the descriptive statistical outputs of means of the two independent groups and their standard deviations as shown on table1 were subjected to t-test analysis. The computed t-test value, .198, df = 268, P≥.05 level of significance. Therefore, the null hypothesis 1 which states that there is no significant difference between male and female students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis was retained. The mean difference MD = .252 in favour of female students, was not significant at the 95% confidence interval. The conclusion was drawn

that the male and female students involved in this study experienced similar traumatic incidents in Port Harcourt Metropolis.

Research Question 2: *To what extent does the experience of traumatic incidents differ on the basis of geographical location among secondary school students in Port Harcourt Metropolis?*

In order to answer research question 2 and test its corresponding null hypothesis 2, the mean, standard deviation and independent t-test statistics were computed. The results obtained from the analysis are presented in table 2

Table 2: T-test analysis of the geographical location differences in the experience of traumatic incidents among secondary school students

Location	**N**	**Mean**	**SD**	**df**	**t-cal**	**Sig**	**MD**	**95% C I**		**Decision**
								Lower Bound	**Upper Bound**	
Urban	134	34.254	11.126	268	.384	.701	.460	-1. 896	2.815	P≥.05
Rural	136	33.794	8.355							

N = 270, MD = Mean difference, P≥.05 level of significance, CI = Confidence interval.

As shown in table 2, the descriptive output of traumatic incidents based on geographical location include: urban, n = 134, Mean = 34.1254, SD = 11.126 and Rural, n = 136, Mean = 33.794, SD = 8.355, the mean difference, MD = .460. This provides answer to the research question 3 and shows that there is a difference between urban and rural students in their experience of traumatic incidence in Port Harcourt Metropolis. The mean difference is .460 in favour of rural students and shows that rural students have higher traumatic incidents more than their urban counterparts.

Hypothesis 2: There is no significant difference between urban and rural students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.

In order to test hypothesis 2, the descriptive statistical output of means of the two independent groups and their standard deviations as shown on table 2 were subjected to t-test analysis. The computed t-test value, .384, df = 268, P≥.05 level of significance. Therefore, the hypothesis which states that there is no significant difference between urban and rural students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis was retained. The mean difference MD = .460 in favour of rural students, was not significant at the 95% confidence interval. The conclusion was drawn that the rural and urban students involved in this study experienced similar traumatic incidents in Port Harcourt Metropolis.

Research Question 3: *To what extent does the experience of traumatic incidents differ on the basis of age among secondary school students in Port Harcourt Metropolis?*

In order to answer research question 3 and test its corresponding null hypothesis 3, the mean, standard deviation and independent t-test statistics were employed. The results obtained from the analysis are presented in table 3

Table 3: T-test analysis of the age differences in the experience of traumatic incidents among secondary school students

Age	N	Mean	SD	df	t-cal	Sig	MD	95% C I Lower Bound	Upper Bound	Decision
10-14 yrs	60	33.66	8.077	268	.198	.751	-.457	-3.290	2.376	
15 above yrs	210	34.124	10.270							P>.05

N = 270, MD = Mean difference, P>.05 level of significance, CI= Confidence interval.

Table 3, the descriptive output of traumatic incidents based on age variable include: 10-14 years, n = 60, Mean = 33.667, SD = 8. 077 and 15 years above, n = 210, Mean = 34.124, SD = 10.270, the Mean difference, MD = -.457. This provides answer to the research question 3 and shows that there is a difference between 10-14yrs and 15 years above students in their experience of traumatic incidence in Port Harcourt Metropolis. The mean difference is -.457 in favour of 10-14yrs students and shows that 10-14years students have higher traumatic incidents more than their 15years above counterparts.

Hypothesis 3: There is no significant difference between 10-14years and 15 years above students in their experience of traumatic incidents in the secondary schools in Port Harcourt Metropolis.

In order to test the hypothesis 3, the descriptive statistical outputs of means of the two independent groups and their standard deviations as shown in table 3 were subjected to independent t-test analysis. The computed t-test value, .751, df = 268, P>.05 level of significance. Therefore, the null hypothesis which states that there is no significant difference between 10-14years and 15 years above students in their experience of traumatic incidence in the secondary schools in Port Harcourt Metropolis was retained. The mean difference, MD = -.457 in favour of 15yrs above students, was found not significant at the 95% confidence interval. The conclusion was drawn that the 10-14 years and 15years students involved in this study have no significant differences in their traumatic incidents' experiences in Port Harcourt Metropolis.

DISCUSSION OF FINDINGS

Gender Differences in Traumatic Incidents among Secondary School Students

The first finding of the study revealed that there was no significant gender difference in the experience of traumatic incidence among students. However, the females have a higher mean difference indicating more evidence of traumatic incidents. The results of the analysis of traumatic incidents revealed that there is no significant difference in their traumatic experiences. The finding agrees with Christiansen and Elklit (2008) when they reported that depression, negative affectivity/neuroticism, and younger age have sometimes been reported to be related to PTSD in female more than in males.

Reacting to this, Zeidner (2006) submitted that higher degree of negative affectivity in females may result in more reactive emotional and somatic responses in females compared to males. The two citations given earlier showed that female students are more vulnerable to traumatic stress disorder than their male counterparts.

Geographical Location Differences in the Experience of Traumatic Incidents among Secondary School Students

The second findings on geographical location differences revealed a non-significant experience of traumatic incidents between the urban and rural students involved in this study. The finding revealed that students from rural areas had higher mean scores than those in urban areas which shows that the students from rural areas are more prone to the effect of trauma. Hence, they need therapeutic intervention but the difference was not significant when the mean differences were further subjected to t-test analysis.

This result was expected because the researchers felt that irrespective of the students' location, they should experience equal post-traumatic stress. However, this finding agrees with Bufka and Barlow (2005) who reported that veterans exposed to a high level of combat were nine times more likely to have PTS than military personnel who did not serve in the war zone. The disagreement between the findings resulted from different variables used.

Age Differences in the Experience of Traumatic Incidents among Secondary School Students

The third finding on age differential revealed that there was no significant difference in traumatic incidents among students. The finding revealed that the students with the ages of 10-14 years had a higher mean score than their counterpart who are within the ages of 15 years above although, the difference is not significant when subjected to t-test analysis. The findings of this study agree with National Child Traumatic Stress Network (N.D) which was able to establish the fact that traumatic experiences, long after they are over, continue to take priority in the thoughts, emotions and behaviours of children, adolescents and adults. This fact is made clear when they further stressed that age, development maturity, and experience in contrast to the finding of this study, Zhu, Situ, Zhang, Fang, Jing, Wang, Yang and Huang (2011) reported from their study that age 9 less than 12 years old), gender (female) having family member injury and death, witnessing injury and death, and deprivation were the main risk factors that affected the children and adolescent's mental health.

CONCLUSIONS

The under listed constitute the conclusion derived from the findings in this study. For instance, the conclusions were drawn that:

1. The male and female students involved in this study experienced similar traumatic incidents in Port Harcourt Metropolis.
2. The rural and urban students involved in this study have no significant differences in traumatic incidents experienced in Port Harcourt Metropolis.
3. The 10-14 years and 15years students involved in this study have no significant differences in their traumatic incidents' experiences in Port Harcourt Metropolis.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. There should be counselling intervention in handling the traumatic incidents experienced in the secondary schools. Therefore, every secondary school where there is no guidance and counselling unit should be provided with one.
2. Uniform therapeutic attention for promoting preventive and curative measures of trauma should be provided in the secondary schools in Rivers State.
3. There should be effort at reducing incidents of trauma and hence reduce Post Traumatic Stress among secondary school students. Therefore, Government in their power and wisdom should endeavour to bring about peace and tranquility in the state by combating social vices that could be traumatizing.

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