ASSESSING PREVALENCE OF TRAUMA AND THE RISK OF POST-TRAUMATIC STRESS DISORDER AMONG YOUTHS WITHIN THE SCHOOL COMMUNITY

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ABSTRACT
This study estimates the cumulative occurrence of traumatic events and the risk of posttraumatic stress disorder (PTSD) using Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-V) criteria, in a high-risk sample of youth in urban city of Lagos, Nigeria. Participants were interviewed about history of trauma and PTSD in 2011 – 2012 when their mean age was 16.5 years (n = 1, 702). The study revealed that the lifetime occurrence of assaultive violence was 62.5% in males and 33.6% in females. Females had a higher risk of PTSD than males following assaultive violence (odds ratio = 4.0, 95%) confidence interval (2.0 – 8.3), but not following other traumas. The findings of this study of youth in urban city in Lagos reveal (i)A high proportion of males 62.5% had experience one or more events involving assaultive violence: 20.3% had been mugged/threatened with a weapon, and 24.2% had been shot/stabbed.(ii) The overall conditional risk of PTSD was 8.7%; the PTSD risk following assaultive violence was the highest (16.3%).(iii) Females' conditional risk of PTSD following exposure to assaultive violence was higher than that of males; females' risk of PTSD did not exceed that of males following other event categories. A comparison of the results from this heterogeneous sample of youth from urban city of Lagos with the results from study of suburban sample in which the same criteria and measures of trauma and PTSD were used suggested the possibility that males' risk for assaultive violence and females' risk for PTSD following exposure to assaultive violence might vary by characteristics of the environment especially social environment.

KEYWORDS: *Youths, Urban Trauma, Risk , PTSD*

INTRODUCTION

In the background of this study is the consistent finding that a majority of resident in Nigeria communities have experienced one or more traumatic events that meet the stressor criterion for posttraumatic stress disorder (PTSD), as defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM) of qualifying stressors in successive DSM editions and with variations in the methods used to elicit history of traumatic experiences. The Nigeria's oil delta has been a site of intense violence since oil exploration began in Nigeria in the 1950s. The Nine States that constitute the Niger Delta have been subjected to a barrage of conflicts, ranging from state violence, communal and ethnic conflicts. Youth militancy and constant attack on multinational oil companies, abductions and kidnapping (i. e. hostage taking), pipeline bombings and attack on flow stations were recurrent features of the Niger Delta region.

The seriousness of youth's exposure to violence in Niger Delta is acknowledged worldwide where violence is a pervasive form of trauma. The high rate of crime and violence in the country has had a profound impact on youth. It is the nation's young people particularly those from the large pool of unemployed youth, many of whom are University graduates frustrated with decades of extreme poverty, underdevelopment, and the lack of job opportunities, those from low socio-economic background, who are increasingly exposed to extreme acts of crime and violence, either as a witness or a victim. The rate of violence in Nigeria's Oil Delta has increased dramatically over four decades of oil exploration (Osita, 2003: Akeem,2008). Although the numbers have begun to show a decline in recent times compared with one in 2004, and last quarter of 2005. Nevertheless, the rates remain high, perhaps, than any other of Nigeria.

As a consequence of this exposure, young people are at increased risk of experiencing a myriad of disturbing psychological symptoms. Exposure of youth to crime and violence and individuals' reactions to it are complex and multifaceted. Although exposure to extreme acts of crime places youth at risk for a variety of adverse psychological consequences, distress symptoms of type associated with posttraumatic stress have emerged as focal point of recent research (Steven et al, 2010). The major symptoms associated with posttraumatic stress reactions include: re-experiencing the trauma such as nightmares, flashbacks, avoidance of stimuli associated with the trauma (e.g. thoughts, feelings, conversations, people, places, or things), and increased arousal (e. g. irritability, hyper-vigilance, easily startled, sleep and or concentration difficulties). These symptoms became a part of psychiatric nomenclature in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM – V) American Psychiatric Association, 2013), and more specifically, in the diagnostic category ,of "Posttraumatic Stress Disorder (PTSD)".Those conversant with happenings in Nigeria in the past three decades would agree that the country witnessed all sorts of violence (Agbu, 2003; Akeem, 2008).
This may not be unconnected to heterogeneity nature of the country that is constantly manipulated by its political elites in their race for control of the state resources.

The subjective experience of trauma and the subsequent expression of symptoms vary considerably in Spatial and temporal terms. A few example of trauma in the nation include, but not limited to, electoral malfeasance and electoral fraud and political assassinations, massive corruption in high and low places with selective judicial dispositions, reign of terror and suppression of opposition and thought process, HIV epidemic with death and morbidities, unemployment, Niger Delta war–execution and death, bomb explosion and imprisonments. Psychosocial trauma and physically induced trauma include the following: Childhood emotional and physically induced trauma include the following: Childhood emotional or sexual abuse, including prolonged or extreme neglect; hostage taking, illegal oil bunkering, environment degradation, internet pedophilia e. t. c.

Proximity to a violent event has also been said to relate to the severity of traumatic symptoms. Nigerians living in and around Niger Delta have witnessed high rate of violent than any other part. Townspeople and villagers have experienced unprecedented level of insecurity as armed groups fought around their homes and communities couple with state military apparatus fighting the youth militant. Therefore, exposure to violence had been hypothesized to trigger more adverse psychological response suggesting an additive effect on the distressed experienced.

The issue of rape in Nigeria is another traumatic event which has attracted the attention of not only human right activists, feminists from Non-governmental organization here in Nigeria, but also from international Non-governmental organizations. This is due to the fact that, there are so many incidence and cases of rape occurring on almost daily basis and actions are yet to be taken to normalize the situation. Rape is a form of Gender Base Violence (GBV) against women, according to the Beijin declaration and plat form for action, it defines violence against women as "any act of GBV that result in or is likely to result in, physical, sexual or psychological harm or suffering to women [and Girls], including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life. Among the forms of sexual violence against women, rape is the most prevalent and disturbing in Nigeria.

Boko Haram is another terrifying situation in Nigeria that is capable of creating stress disorder in the citizenry. Boko Haram made its presence known in 2004, in Yobe state. And by 2011,it made its presence known to the global community by bombing the United Nations headquarters in Abuja,especially in the last two years, it has willfully attacked hundreds of

buildings and killed many innocent Nigerians. Boko Haram is a criminal enterprise (with political, religious and ethnic agenda) Its activities have been very damaging both physically and psychologically. Because its theatre of operation is very wide no one can predict where it is going to strike next thus exposing individuals to traumatic events and all sorts of security challenges specifically for youths who are of school age considering the meaning of Boko Haram(book is not allowed).

Report of research findings presented estimates of exposure to traumatic events and posttraumatic stress disorder in a community sample assessed using the DSM-IV criteria (Breslau, Kessler and Chilcoat 1996). The sample was drawn from the Detroit primary metropolitan statistical area, a six country area containing more than 4 million people, 77% residing in suburban communities surrounding the city of Detroit. The results revealed an interesting sex difference in the occurrence of trauma and PTSD, with variation across classes of traumas (Breslau, Kesslee & Chilcoat 1996).

These researchers found that males' greater risk of experiencing traumatic events is true for assaultive violence, serious accidents, and witnessing violence, but not for disaster, sudden unexpected death of loved one, or learning about various traumas to a loved one. With respect to females' greater risk of developing PTSD, it was found that females had a greater risk of PTSD following assaultive violence, but not following other classes of trauma. The excess occurrence of rape and other sexual assault among females (relative to males) did not count for females' excess risk of PTSD associated with assaultive violence as a composite category (Breslau, Chilcoat & Kessler 1999),

Increasing evidence demonstrates that trauma, particularly repeated trauma and maltreatment, can have lifelong impact on multiple domains of functioning, including adaptive and interpersonal functioning, emotion regulation, cognition and memory, and neuroendocrine function (Teicher 2010). Children and adolescents who have experienced trauma can manifest severe disturbances in mood, behavior, attention, attachment, and impulse control(Mueser&Taub 2008, Feldman&Vengrober 2011, Becker&Kerig2011), which may mimic other psychiatric disorders, such as bipolar disorder and ADHD.

Adolescents with PTSD are at increased risk for major depression, aggression, and conduct disorder (Andersen &Teicher 2009, Trikett, Negriffs & Ji 2011). They manifest more frequent suicidal ideation and attempts even after controlling for depressive symptoms, gender, and treatment setting (Bujarski, Feldner &Lewis 2012). Youth exposed to violence or maltreatment perform less well academically and are more likely to drop out of school (Javanovi &, Ressler2010, Slade & Wissow, 2007) . Adolescents with a history of early trauma engage in more risk-taking behaviors, such as substance abuse (including binge drinking), multiple sex partners, and criminal involvement, and are at a greater risk for sexual assaults and relationship violence (Allwood, Dyl & Hunt, 2008; Shin, Edwards & Heeren.2009, Trickett, Noll &Putman 2011). Girls who have experienced trauma, particularly sexual abuse, are at increased risk for precocious puberty and STDs (Coohey, Renner & Hua, 2011). Teens (of both genders) with a history of childhood trauma are at a greater risk of teen pregnancy, and pregnancies in girls with trauma exposure have a greater risk of fetal death and premature birth (Cohen, Bukstein & Walter 2010).

Adolescents with PTSD present with prominent symptoms of nightmares, flashbacks, hyperarousal, avoidance of trauma reminders, and numbing. Irritability, anger outbursts, and poor concentration are also common in PTSD, although less specific to the disorder. Children and adolescents with PTSD may present to treatment complaining of sleep disturbances, which may be secondary to nightmares (with or without trauma-related content) or night terrors but may also manifest as nighttime enuresis or insomnia (Cicchetti,

Rogosch, Gunnar &Toth 2010). Other anxiety symptoms, such as panic attacks and somatic symptoms are often comorbid with PTSD as well. Adolescents with PTSD, particularly those with histories of long-term maltreatment or repeated trauma, may also present with prominent symptoms of dissociation, depersonalization (feeling of unreality or disconnection from the body), and emotional numbing (Allwood, Bell &Horan 2011). It is critical to assess for dissociation because this can impact treatment choice, as discussed later in the text. Dissociative symptoms are also predictive of psychosocial outcomes.

In the short term, dissociative symptoms during or soon after a trauma may be a harbinger of greater risk for persistent PTSD (Gordis, Feres & Olezeski 2010). In the longer term, dissociation and numbing in traumatized youth predict aggressive behavior, delinquency, and later harsh and neglectful parenting to the next generation (Wolmer, Hamiel & Laor, 2011). Depression is also frequently comorbid with PTSD after trauma. As irritability and sleep disturbance related to PTSD can mimic depression, it is important to screen for neuro-vegetative symptoms and anhedonia to assess fully for comorbid depression. Many traumatized adolescents develop depression in the absence of PTSD (Cohen, Manarino & Iyengar 2011). Depression is much more likely to be refractory to treatment in adolescents with trauma histories (Teicher 2010), particularly if treated only with depression-focused cognitive-behavioral therapy (as opposed to trauma-focused therapy (Becker & Kerig, 2011). Treatment-refractory depression should be a red flag for clinicians to assess for suicidality. However, it is important to note that adolescents with histories of trauma are at increased risk for suicide, even in the absence of depression.

Adolescents who have faced trauma experience more severe suicidal ideation, more suicide attempts, and more frequent self-injurious behaviors than their non -traumatized peers (Mueser & Taub, 2008). Youth with histories of sexual abuse and emotional neglect may be most at risk (Slade & Wissow, 2007). As suicide is one of the leading causes of death among adolescents and young adults, it is critical to screen for suicidality and self-harm in any adolescent with a history of trauma, even in the absence of depressive symptoms.

Multiple experiences of abuse compound the risk, and earlier abuse may have a particularly strong effect in girls (Feldman & Vengrober, 2011). Adolescents with PTSD are at elevated risk, with studies suggesting that up to 59% of youth with PTSD go on to develop substance use disorders (Andersen & Teicher, 2009). Evidence supports the self-medication hypothesis, namely, that youth use substances to find symptom relief (Cohen, Bukstein & Walter, 2010) . Trauma and PTSD can also follow onset of substance use, as risky behaviors associated with drug and alcohol use put youth at risk for assault and violence (Javanovic & Ressler, 2010). Youth with PTSD who use substances can be at even greater risk for re -traumatization, as their PTSD symptoms (such as hyper -arousal and dissociation) can impede their ability to perceive, react to, and cope with danger. Even in the absence of substance use, traumatic experiences and PTSD put youth at increased risk for involvement in violence, aggressive behavior, and delinquency.

Youth exposed to community violence manifest increased risk for both PTSD and aggressive/delinquent behaviors (Trickett, Noll &Putman, 2011), as do those with histories of abuse and maltreatment (Teicher, 2010, Trickett, Negriff & Ji 2011). Middle and high school students with histories of abuse, witnessed domestic violence, or parental substance abuse engage in more physical fighting, bullying, weapon carrying, and dating violence than their peers who have not experienced such adversity (Coohey, Renner &Hua, 2011). The etiology of this association between trauma and aggressive behavior is multifactorial. Youth with histories of trauma may be at an increased risk for reactive aggression owing to trauma's neurobiological effects, such as autonomic dysregulation and easy triggering of the fight or flight response dysregulation (Steiner, Saxena &Carrion, 2007 Allwood, Bell &Horan

2011). Learned behavior related to exposure to community or family violence may also play a role (Becker & Kerig, 2011). Furthermore, aggression may be secondary to PTSD symptoms, such as hyper-arousal, numbing, attention problems, or dissociation (Feldman & Vengrober 2011, Wolmer , Hamiel &Laor 2011). In studies of delinquent youth, greater severity of PTSD is associated with a higher degree of delinquent behaviors (Javanovic & Ressler 2010, Teicher 2010). Delinquent youth represent the far end of the spectrum of aggressive and antisocial behavior, but risk for these behaviors is increased in purely psychiatric populations with PTSD as well (Cohen, Bukstein & Walter, 2010, Coohey, Renner & Hua, 2011). In one study of adolescent psychiatric inpatients, conduct disorder was comorbid with PTSD in 37.5% of subjects and oppositional defiant disorder in 62.5% (Becker& Kerig, 2011).

This study however intends to focus on traumatic events and PTSD among the adolescents who had grown up in heterogeneous population of Lagos in Nigeria.

Objectives of the Study

1. The general objective of this study is to assess prevalent of trauma and posttraumatic stress disorder among the adolescents within the school community. Other objectives are;-
2. To assess prevalent of differences in the occurrence of trauma and PTSD based on gender.
3. To assess which traumatic event is most prevalent among adolescents within the school community.

Research Questions

The following research questions were raised as a guide to this study.

1. What is the pattern of the occurrence of prevalent of trauma and risk of PTSD among adolescents male and female within the school community .
2. Which traumatic event is most prevalent among adolescents within the school community.
3. What is the conditional probability of risk of PTSD across event types based on gender .

METHODS

Design

Descriptive research design was adopted for this study. This design is appropriate because the researcher collected data on existing situation. Moreover, the researcher was not able to manipulate any of the variables used in the study.

Sample

Participants were senior students in 25 secondary schools selected from public school system of heterogeneous population of Lagos in Nigeria. The 25 schools were located in five specified local government areas, with residents ranging from very poor to low middle class and varying numbers of Hausa, Igbo and Yoruba. Multistage random sampling method was used to select participants for this study. The Five schools were selected from each Local Government areas. The school counsellors/career masters in each school provided information on child's sex, birth date, address, ethnicity using the cumulative record folder. The sample of 1,702 was drawn using simple random sampling technique. Each participant was chosen randomly by chance in such a way that each participant has the same probability of being chosen during the sampling process. The participants were given numbers ranging from 0-300 and random numbers were generated from a table of numbers. Numbers outside 0-300 were ignored. Earlier Diagnostic and Statistical Manual of Mental Disorders fourth edition (DSM-IV)(1994) was used as screening device.

This sample consists of 752 males (44.2%) and 950 females (55.8%). Out of this sample 786 (46.2%) were Yoruba 604 (35.5%) were Igbo while 312 (18.3%) were Hausa.

Based on Local government of study the samples drawn from LG1 were 172 (22.8%) male and 206 (22.0%) females, LG 2 had 164 (21.8%) males and 202 (21.3%) females. The participants from LG 3 were 150 (19.9%) males and 186 (19.6%) females. LG 4 had 142 (18.8%) male and 180 (19%) females while LG 5 consist of 124 (16.5%) males and 176 (18.5%) females. 822 (48.2%) of the participants were Christians while 882 (51.8%) were Muslims.

Instrument

Assessment of Traumatic Events and Posttraumatic Stress Disorder

The PSTD module was embedded within the face-to-face interview. Three trained interviewers were engaged and the interview with the respondents focused on their life history, health, and behaviour of the young adult from first year of entry to the time of the assessment, with adapted life chart methods used to anchor important life events and to promote recall (Lyketsos, Nestadt, Cwi 1994).

The instrument adopted for data collection in this research was Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-V). It begins with a list of 18 events that operationalize the DSM-IV stressor criterion, the entire list of events except for combat experiences, which were unlikely to have been experienced by this young cohort. For each event in the list, respondents were asked if they had ever experienced an event of that type. An endorsement of an event type was followed by questions about the number of times it had occurred and the age of the respondents at each time. In cases of more than one traumatic event, a list of all the events reported by the respondent was read back by the interviewer, and the respondent was asked to identify the one event that was the "most stressful" (the worst) PTSD was evaluated for that event using the PTSD section of version 2.1 of the World Health Organization Composite International Diagnostic Interview (World Health Organization, 1997).

Procedure

Permission was obtained from the Local Inspectors of Education (LIES)of the local Government of the participating schools as well as the principals of the schools of study. .Necessary instructions were given to the participants on how to complete the instruments. The instruments were presented to the participants with the assistance of three Post graduate students of the department of Guidance & Counselling. These assistants had as their area of study 'Stress'' and related courses thus making it easy for them to be able to handle the instrument used for data collection effectively. Administration of the instrument took six weeks.

A rate distribution of each of the 18 traumas was generated in 500 computers. Sampling iterations drawn from the total pool of traumas reported by the sample, one per respondent with one or more trauma. The expected rate of an event type was estimated by the median value from all 500 iterations. The p value is the percentile of the observed rate that an event type was selected as the worst relative to the median rate from the Monte Carlo procedure.

Upon the respondents' reports of the lifetime history of events, the researcher estimated the rates of exposure by chronological age using life table methods. This is the "attack rate" of each age based on all respondents, including persons with prior exposures. A series of analyses was used to estimate the association between occurrence of categories of trauma and membership in subgroups of the population. A similar set of analyses estimated the conditional risk of DSM-V PTSD (lifetime) following exposure. Odds ratios for exposure and for PTSD following exposure by sex were estimated for the composite categories of events. In additional analyses the researcher estimated these associations and

conditional risks taking into account the sampling design which was based on clustering of students within schools.

Results

Table 1: Sample Characteristics Data from 1,702 Participants

Variables	Number	Parentage
Males	752	44.2%
Female	950	55.8%
Ethnicity		
Yoruba	786	46.2%
Igbo	604	35.5%
Hausa	312	18.3%
Religion		
Christian	822	48.2%
Muslim	882	51.8%
Local Governments Areas of Study	Males	Females
LG 1	172 (22.8%)	206 (22%)
LG 2	164 (21.8%)	202 (21.3%)
LG 3	150 (19.9%)	186 (19.6%)
LG 4	142 (18.8%)	180 (19%)
LG 5	124 (16.5%)	176 (18.5%)
Total	752	950

Table 2: Characteristics of Area of resident

Characteristics	LG 1, %	LG 2, %	LG 3, %	LG 4, %	LG 5, %
i) Ethnicity					
Yoruba	32.1%	24.7%	15.8%	10.5%	16.9%
Igbo	35.8%	22%	12.0%	15.3%	14.9%
Hausa	28.7%	19.3%	18.6%	12.4%	21%
ii) Households on public assistance	9.4%	12.3%	8.5%	5.6%	4.8%
iii) Households below poverty level	14.8%	45.2%	33.6%	9.2%	6.7%
iv) Households with children younger than 18 years old below poverty level	18.8%	56.3%	42.9%	11.2%	9.6%

Table 3: Cumulative exposure to DSM-IV Traumatic Events by Sex (odds ratios in footnote)

Traumatic events	Total (n = 1,702) n %	Male (n = 752) n %	Female (n = 950) n %)	Wald	P
Assaultive violence	**(798) 46.9**	**(470) 62.5**	**(320) 33.6**	**136.7**	**<0001**
Rape	(93) 5.5	(11) 1.5	(92) 9.7	38. 9	<0001
Held captive/tortured/ kidnapped	(33) 1.9	(21) 2.7	(17) 1.8	0.79	(.37)
Shoot/stabbed	(198) 11.6	(182) 24.2	(48) 5.1	109.3	<0001
Sexual assault other than rape	(110) 6.5	(22) 2.9	(96) 10.1	35.8	<0001
Mugged/threatened with weapon	(206) 12.1	(153) 20.3	(184) 19.4	224.0	<0001
Badly beaten	(617) 36.3	(108) 14.4	(60) 6.3	35.2	<0001
Other injury or shocking event	**(865) 51.0**	**(460) 61.2**	**(397) 41.7**	**60.6**	**<0001**
Serious car accident	(239) 14.0	(141) 18.8	(98) 10.3	21.0	<0001
Other serious accident	(115) 6.8	(79) 10.5	(33) 3.4	32.9	<0001
Natural disaster	(148) 8.7	(74) 9.8	(71) 7.5	3.7	.06
Life-threatening illness	(51) 3.0	(22) 2.9	(27) 2.8	0.0003	.99
Child's life threatening illness	(28) 1.6	(5) 0.66	(22) 2.3	9.6	.002
Witnessed killing/serious injury	(612) 36.0	(365) 48.5	(237) 24.9	95.9	<0001
Discovering a dead body	(130) 7.6	(69) 9.2	(58) 6.1	6.5	.01
Learning of traumas to close friend/relative	**(863) 50.7**	**(388) 51.2**	**472 (49.7)**	**0.29**	**<.(.55)**
Close friend/relative raped/sexually assaulted	(525) 30.8	(21) 28.2	(314) 33.0	5.1	.02
Close friend / relative attacked	(409) 24.0	(228) 30.3	(174) 18.3	30.5	<001
Close friend relative car accident	(360) 21.2	(171) 22.7	185 (19.5)	1.97	(.14)
Close friend / relative other accident	148 (8.7)	(72) 9.6	72 (7.5)	3.2	(.07)
Learning about unexpected death	**882 (51.8)**	**(407) 54.1**	**(468) 49.3**	**3.3**	**.06**
Any event	(1,403) 82.4	(652) 86.9	(742) 78.1	21.7	<0001

Note: - Composite categories in which event types are grouped are highlighted is bold. Male to Female odds ratios; Assaultive violence = 33 (95% confidence interval) (CI) (2.7 – 4.0) other injury or shocking event 2.2 (95% CI 1.8 – 2.6) learning of traumas to close friend/relative = 1.1 (95% CI 0.9 – 1.3); learning about unexpected death = 1.2 (95% C.I. 1.0 – 1.4) any event = 1.9 (95% CI 1.4 – 2.4).

Cumulative Exposure to DSM-IV Traumatic Events

In table 3, the vast majority of the sample (82.4%) had experienced one or more traumatic events up to the time of the research. The single most commonly experienced event type was learning about sudden unexpected death of a close friend/relative (57.8%). The category of assaultive violence was experienced by 46.9% of the sample, and the most common event type involving assaultive violence was badly beaten 36.3% of the sample.

Table 4: Distributed of Total Burden of Traumatic Events across Event Types n = 1,702

Categories of Traumatic Events	Total events N = 8,168 %	Male (n = 4,842)%	Female (n = 3326)%
Assaultive violence	**24.6**	**27.6**	**21.8**
Rape	1.8	0.5	3.9
Held captive/tortured/kidnapped	0.7	0.6	0.7
Shot/stabbed	3.2	5.7	1.6
Sexual assault of other than rape	3.5	0.3	4.2
Mugged/threatened with weapon	2.6	3.7	3.1
Badly beaten	12.8	16.8	7.3
Other injury or shocking event	**28.2**	**30.9**	**22.8**
Serious car accident	3.5	3.9	3.3
Other serious accident	2.3	2.1	1.1
Natural disaster	4.3	2.6	2.9
Life-threatening illness	0.9	0.7	1.1
Child's life – threatening illness	0.5	0.3	0.9
Witnessed killing/serious injury	14.8	16.5	10.8
Discovering a dead body	1.9	2.0	1.7
Learning of trauma to close friend/relative	**26.2**	**23.1**	**31.8**
Close friend / relative raped / sexually assaulted	9.7	6.9	13.9
Close friend / relative seriously attacked	7.6	7.8	7.2
Close friend / relative car accident	6.3	5.7	7.3
Close friend / relative other accident	2.6	2.7	2.4
Learning about unexpected death	**21.0**	**18.4**	**23.6**

Note: Composite categories in which event types are grouped are highlighted in bold. For distribution of four composite vent categories by sex 14923, df = 3, p < .0001

THE BURDEN OF EXPOSURE TO DSM-IV TRAUMATIC EVENTS

Out of those who experienced any traumatic event, 16.2% were exposed to single trauma, 12.2% were exposed to two, 11.7% to three and 59.7% to four or more.

The total number of DSM – IV traumatic events experienced in lifetime in this sample of young cohorts was 8,168 which yielded a mean of 4.8 per respondent. Mean number of traumas was considerably higher in males than females 6.4 vs 3.5, respectively ($t = 10.63$, $p < .0001$).

A higher proportion of males' burden traumas was in the two personally experienced composite categories, 58.5% versus 44.6% of females burden (see table 4) of all assaultive violence experienced by males 81.6% involved weapons (the combined figures of mugged, held up, threatened with a weapon, and shot/stabbed). The corresponding proportion in females was 43.2% rape and other sexual assault constituted 8.2% of all the traumatic events experienced by females and 1.2% of all male's events. The pattern of sex differences in the distribution of traumas was the same in Yoruba, Ibo and Hausa.

Table 5: Conditional Probability of Posttraumatic Stress Disorder (PTSD) Across Event Types by Sex (Odds ratios in footnote)

Categories of Traumatic event	Total (n) % PTSD	Male (n) PTSD %	Female (n) PSTD%	P*
Assaultive violence	**(312) 16.3**	**(159) 7.4**	**(153) 24.3**	**14.7 / 000**
Rape	**(38) 44.6**	**(1) 100.0**	**(37) 42.5**	**(.46)**
Held captive/tortured/kidnapped	(12) 19.6	(7) 0.0	(5) 51.3	(.13)
Shot/stabbed	(65) 9.7	(52) 8.9	(13) 10.1	(1.00)
Sexual assault other than rape	(40) 31.3	(8) 51.3	(32) 25.0	(.33)
Mugged/threatened with weapon	(125) 4.9	(77) 3.4	(48) 7.2	(.37)
Badly beaten	(32) 14.2	(14) 0.0	(18) 24.7	(.11)
Other injury or shocking event	**(291) 7.3**	**(154) 8.3**	**(137) 6.4**	**0.9 (.36)**
Serious car accident	(51) 11.2	(27) 7.9	(24) 12.5	(.66)
Other serious accident	(18) 6.3	(13) 7.9	(5) 0.0	(1.00)
Natural disaster	(19) 0.0	(7) 0.0	(12) 0.0	
Life-threatening illness	(14) 23.5	(8) 38.3	(6) 0.0	(.23)
Child's life threatening illness	(17) 4.1	(1) 0.0	(16) 4.9	(1.0)
Witnessed killing/serious injury	(152) 4.5	(90) 7.3	(62) 3.9	(.47)
Discovery a dead body	(20) 4.4	(8) 0.0	(12) 10.1	(1.00)
Learning of traumas to close friend/relative,	**(241) 3.3**	**(112) 2.9**	**(1330 3.4**	**0.02 (.89)**
Close friend/relative raped	(95) 3.4	(37) 5.8	(58) 2.3	(.56)
Close friend/ relative seriously attacked	(51) 1.7	(30) 3.3	(21) 0.0	(1.00)
Close friend/relative car accident	(75) 2.1	(38) 0.0	(37) 3.1	(.49)
Close friend/relative other accident	(24) 8.2	(7) 0.0	(17) 11.7	(1.00)
Learning about unexpected death	**(547) 9.2**	**(254) 9.4**	**(289) 8.4**	**0.03 (87)**
Any event	(1,391) 8.7	(679) 7.6	(712) 9.7	3.3 (.07)

Note: Composite categories in which event types are grouped are highlighted in bold. Female-to-male odds ratio: Assaultive violence 4.0 (95% confidence interval 2.0 – 8.3); other injury 0.6 (95% confidence interval 0.2 – 1.7); learning about others 1.1 (95% confidence interval 0.2 – 5.1); unexpected death 1.0 (95% confidence interval 0.5 – 1.7) any event 1.4 (95% confidence interval 1.0 – 2.1).

*P for individual event types Fisher's exact test.

Conditional Probability of Posttraumatic Stress Disorder Across event types

Out of the total sample of 1,702 youth, 124(7.3%) met criteria for DSM – IV PTSD in lifetime, 51 (6.4%) of makes and 73 (8.2%0 of females estimates of the conditional probability of PTSD (i.e. percentage of exposed persons who met PTSD criteria) see Table 5. The highest probability of PTSD was associated with assaultive violence 16.3% whereas the lowest probability was associated with learning about trauma to a loved one, 3.3%. The overall conditional probability of PTSD from any trauma was 8.7%.

There is one notable exception, the conditional risk of PTSD associated with the four composite categories did not vary between males and females (see table 5). The exception was assaultive violence, which was associated with a significantly higher PTSD risk in females than males, 24.3% versus 7.4% respectively (p <.0001).

Odds ratio based on clustered sampling design was 4.0 (95% CI 1.8 – 88) no significant tribal differences were detected, and the pattern of sex differences in the PTSD risk across event categories did not differ between the tribes (i.e. there were no tribal-by- sex interactions).

Discussion

The result obtained from the first research question indicates that exposure to one or more traumatic events was higher in males than females, 86.9% versus 78% (P < .0001). the overall excess of males' exposure reflected males' higher cumulative incidence of the two composite categories of personally experienced events, assaultive violence (odds ratio (OR)

= 3.3, 95% confidence interval [CI] 2.7 – 4.0 and other injury or shocking event (OR = 2.2, 95% CI 1.8 – 2.6) odds ratios based on the clustered design of the data were 3.3 (95% CI 2.8 – 3.9) and 2.2 (95% CI 1.8 – 2.6). Among event types grouped under assaultive violence, rape and other sexual assault were more common in females, whereas other events were more common in males. In addition Igbo males had a somewhat higher cumulative incidence of assaultive violence than Yoruba and Hausa males.

In this study, the specific event types involving assaultive violence that were experienced more frequently by males were shot or stabbed (24.2% versus 8.2%) and mugged, held up, or threatened with a weapon(20.3% versus 55.0%). In females, the cumulative occurrence of assaultive violence did not vary between the two studies; in each study, approximately one third of females experienced events in this category. Further, females' cumulative occurrence of rape and other sexual assault was similar in the two populations. This finding corroborates that of Breslau et al (1999)where these researchers found that males' greater risk of experiencing traumatic events is true for assaultive violence, serious accidents, and witnessing violence, but not for disaster, sudden unexpected death of loved one, or learning about various traumas to a loved one. With respect to females' greater risk of developing PTSD, it was found that females had a greater risk of PTSD following assaultive violence, but not following other classes of trauma. The excess occurrence of rape and other sexual assault among females (relative to males) did not count for females' excess risk of PTSD associated with assaultive violence as a composite category (Breslau, Chilcoat & Kessler 1999),

The study found a small tribal difference in exposure to assualtive violence in males and no difference in exposure to any trauma category in females. Furthermore, the marked sex differences in personally experienced traumatic events were nearly uniform between the three ethnic groups.

Overall, the conditional risk of DSM-V PTSD associated with the worst event in this study was lower than the risk associated with the worst event in the United State urban sample 8.7% versus 13.6%.

In both studies however, males were at higher risk of exposure to personally experienced trauma, primarily assaultive violence and females were at greater risk for PTSD following assaultive violence, although the extent of the sex gap in males exposure and in females PTSD response to assaultive violence differed. Despite the overall lower conditional risk of PTSD in this study, the same rank order was observed across event categories with respect to the risk for PTSD. This finding supports the results obtained by Breslau et al (1999) which found greater risk of developing PTSD in females. According to them females had greater risk of PTSD following assaultive violence, but not following other classes of trauma.

The results of both epidemiological studies underscore the generalization that only a small minority of community residents who have experienced traumatic events meet the DSM-V criteria for PTSD. Even among victims of assaultive violence – a trauma category associated with the highest PTSD risk – the vast majority do not develop PTSD. This consistent finding across epidemiological studies emphasizes the need for investigations of early factors that render some persons susceptible to the PTSD effects of trauma. Future studies will examine potential childhood antecedents of exposure to traumatic events and PTSD.

The major findings of this study of youth in urban city in Lagos are as follows:

a .A high proportion of males 62.5% had experience one or more events involving assaultive violence: 20.3% had been mugged/threatened with a weapon, and 24.2% had been shot/stabbed.

b. The overall conditional risk of PTSD was 8.7%; the PTSD risk following assaultive violence was the highest (16.3%).
c. Females' conditional risk of PTSD following exposure to assaultive violence was higher than that of males; females' risk of PTSD did not exceed that of males following other event categories.

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