

Mental Health Comorbidities of Post Traumatic Stress Disorder Among Sexually Abused Adolescents

Jonah, Austin Thankgod (Ph.D)

Department of Educational Psychology, Guidance and Counselling Faculty of Education, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt. Rivers State, Nigeria

Abstract: The study investigated mental health comorbidities of post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor Local Government Area of Rivers State. The study used the correlational research design. Three research questions as well as three corresponding null hypotheses guided the study. The population of the study comprised all 14,784 senior secondary school students (SSS 1, 2 and 3) in the 16 public secondary schools in Obio/Akpor LGA of Rivers State. A sample of 528 adolescents was drawn for the study using the purposive sampling technique. Four instruments were used to collect data for this study. They include; Post-traumatic stress disorder index (PTSDI), Anxiety Scale (AS), Beck's Depression Inventory (BDI) and Insomnia Inventory (II). The instruments were designed on a four point Likert scale of Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2, and Strongly Disagree (SD) =1. The Cronbach Alpha reliability was used to establish the internal consistency reliability coefficients of 0.77, 0.97 and 0.69 respectively. Responses to the research questions were answered with Pearson Product Moment Correlation, while the hypotheses were tested with independent sample t-test statistics. The findings of the study showed that social anxiety disorder, depression and insomnia relate significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor Local Government Area of Rivers State. Based on the findings of the study, it was recommended among others that, a trauma-focused cognitive behavioural therapy (TF-CBT) should be carried out on adolescents who are sexually abused victims to identify and correct any opposing thoughts or misrepresentations they have about the traumatic event.

Keywords: Social Anxiety Disorder, Depression, Insomnia, Post-Traumatic Stress Disorder (PTSD) and Sexual Abuse

I. INTRODUCTION

Sexual abuse, also referred to as molestation, is abusive sexual behaviour by one person or group of persons upon another (American Psychological Association, 2018). It is any action that pressures or coerces someone to do something sexually without the person's consent (Moscarello cited in Adnan, Sümeýra, Sait, Cem & Mustafa, 2015). It can also be referred to behaviour that affects a person's ability to control their sexual activity or the circumstances in which sexual activity occurs. Examples of sexual abuse include; unwanted kissing or touching, either directly or over the clothing of a person's intimate body parts, rape or attempted rape, refusing to use condoms or restricting someone's access to birth control during sex, sexual contact with someone very drunk, drugged, unconscious or otherwise unable to give a clear and informed yes or no to sexual activity and threatening or

pressuring someone into unwanted sexual activity (Bachmann, Moeller and Benett as cited in Roberto, 2012). Maniglio (2011) explained that sexual abuse is often perpetrated using force or taking advantage of another. He further stressed that when force is immediate, of short duration, or infrequent, it is called sexual assault.

There is a high prevalence of sexual abuse among adolescents around the world, and it is considered a pervasive public health problem that affects us all directly or indirectly. About 13-20% of girls and 3-4% of boys in the world are reported to be sexually abused during their life (Cook, Dickens and Thapa as cited in Adnan, ümeýra, Sait, Cem & Mustafa, 2015). Sexual abuse is a significant public health and social justice concern affecting the lives of millions of individuals in the United States (Zimmerman & Mercy, 2010). Manyike, Chinwa, Aniwada Odtola and Chinawa (2015) stressed that the prevalence of sexual abuse among adolescents in south-east Nigeria is 40% with male perpetrators. A meta-analysis of 217 publications from different countries published between 1980 and 2008 estimated the prevalence rate of sexual abuse before the age of 18 at 18% among females and 7.6% among males (Stoltenborgh, Van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011).

Victims of sexual abuse often exhibit elevated anxiety, depressive symptomatology, inappropriate sexual behaviour, nightmares, social withdrawal, sleep difficulties, anger, shame/guilt and school problems (Alter-Reid, Gibbs, Lachenmyer, Sigal and Massoth as cited in Neville, David, Bruce, Paul, Nicole, Stephanie & Thomas, 2003). Regier, Monge, Franklin, Wetherill, Teitelman, Jagannathan, (2017) identified the following as effects of sexual abuse; headaches, stomach-aches, chronic pelvic pain, self-blame, addiction and self-injury. Some psychological effects of sexual abuse may include depression, social anxiety disorder, post-traumatic stress disorder, self-esteem issues, sexual dysfunction, suicidal ideation, borderline personality disorder, and propensity to revictimization in adulthood (Kar, Arslan, Çekin, Akcan & Hilal, 2010).

The aftermath of traumatic events such as natural disasters, death of a loved one wars, and sexual abuse are often accompanied with psychological symptoms that persist in some people, long after the traumatic events are over, which aptly describes post-traumatic stress disorder. According to the Diagnostic Statistical Manual 5 (DSM IV), posttraumatic stress disorder (PTSD), is caused by a situation in which a

person experienced, witnessed, or was confronted with an event that involved actual or threatened death, or serious injury or threat to the physical and emotional integrity of self or others that provoked a response that involved intense fear, helplessness or horror (American Psychological Association as cited in Eriega, Isukwem & Kasakwe, 2014). Sexual abuse is a traumatic phenomenon that diminishes the victim's emotional, social and psychological personality. It has been linked to the development of post-traumatic stress disorder (PTSD), especially among adolescents. Adolescents who experience sexual abuse often meet the criteria of PTSD and other psychiatric disorders (Trasket, Noll & Putnam, 2011).

The symptoms of post-traumatic stress disorder (PTSD) among adolescents who have been sexually abused include recurrent dreams or recollections of the event, feelings that the traumatic event is recurring with intense psychological distress. These dreams, memories, or flashback episodes can lead the person to avoid thinking about the traumatic event which often results in diminished interest in social activities, feelings of detachment from others, suppressed emotional feelings and a sense that the future is bleak and empty. Some psychological symptoms of PTSD in sexually abused adolescents include difficulty in falling asleep, irritability, an outburst of anger, difficulty in concentrating and heightened reactions to sudden noise and movements (Filipas & Ullman, 2006; Walsh, Fortier, & DiLillo, 2010). Studies have argued that there are some mental health comorbidities of post-traumatic stress disorder (PTSD) among sexually abused adolescents. This study will therefore look at depression, social anxiety disorder and insomnia as comorbidities of post-traumatic stress disorder (PTSD) among sexually abused adolescents in Rivers State, Nigeria.

Social anxiety disorder also known as social phobia is an anxiety disorder that is characterized by intense fear and avoidance of social situations causing considerable distress and impaired ability to function normally (Ernest, 2003). Miller (2007) described social anxiety disorder as a chronic fear of one or more social situations in which one is afraid of being judged negatively by others and is shy in front of others. Maniglio (2013) observed that social anxiety disorder is common among adolescents who have been sexually abused. He further explained that the fear experienced during the sexual assault caused by a violation of the one's body integrity and even endangering of the person's life, usually results in avoidance of social situations and withdrawn interaction with others. Black and DeBlasie as cited in Roberto, (2012), maintained that victims of sexual abuse often show higher levels of anxiety symptoms or disorders especially posttraumatic stress disorder. In support of this Valente (2005) opined that adolescents who have been sexually abused are at increased risk for anxiety disorder associated with post-traumatic stress disorder.

Depression has been conceptualized as a mental state of mind producing severe mood swings, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration (WHO,

2012). Its impact affects the emotions, ways of thinking, behaviours, human physiology and social relationships (Dahle, Knivserg & Andreassen, 2011). Studies have suggested that depression is mental health comorbid of post-traumatic stress disorder (PTSD), among sexually abused adolescents (Maniglio, 2009; Walsh, Fortier, & DiLillo, 2010). For example, Zink, Klesges, Stevens and Decker (2009) stressed that depression is a specific risk factor for post-traumatic stress disorder (PTSD), among sexually abused adolescents. The association between depression and post-traumatic stress disorder concerning adolescents' sexual abuse is unavoidable as post-traumatic stress disorder produce symptoms such as diminished interest in social activities, feelings of detachment from others, mood swings and distressed emotional feelings (Fergusson, Boden, & Horwood, 2008). Adnan, ümeyra, Sait, Cem and Mustafa (2015) argued that depression is often associated with post-traumatic stress disorder (PTSD) in people who have been sexually abused.

There are also debates that insomnia may be linked to post-traumatic stress disorder (PTSD), among sexually abused adolescents. World Health Organization (1993) described insomnia as a chronic inability to obtain adequate sleep. Karacan and Williams as cited in Murali and George (2007) explained that insomnia is characterized by (1) sleep onset (difficulty in falling asleep), (2) frequent nocturnal awakening (interrupted sleep characterized by frequent awakenings) and (3) early morning awakening (waking up early in the morning and not being able to fall back asleep). They further stressed that sexually abused adolescents who experience post-traumatic stress disorder usually stay awake until late at night and depriving themselves time to sleep. Steine, Krystal, Nordhus, Bjorvatn, Harvey, Eid and Pallesen (2012) stressed that insomnia and other sleep disturbances are constantly associated with post-traumatic stress disorder among sexually abused adolescents. Leger, Partinen, Hirshkowitz, Chokroverty, Touchette and Hedner (2010) explained that sexual abuse involving multiple perpetrators is often associated with more severe insomnia symptoms and post-traumatic stress disorder (PTSD).

Similarly, Galovski as cited in Geneviève, Mylène and Andréanne Rousseau (2019), stressed that insomnia associated with and PTSD is severe with victims of sexual abuse compared to other traumatic events. They further explained that different characteristics such as the age at the time of the abuse, number of perpetrators, and frequency of abuse predict severity of insomnia among sexually abused adolescents. From the preceding therefore, the researcher is motivated to examine mental health comorbidities of post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

Aim and Objectives of the Study

The study examined mental health comorbidities of post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State, Nigeria. Specifically, the study sought to;

1. Determine the relationship between social anxiety disorder and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
2. Determine the relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
3. Determine the relationship between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

Research Questions

The following research questions guided the study;

1. To what extent does social anxiety disorder to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?
2. To what extent does depression to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?
3. To what extent does insomnia to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?

Hypotheses

The following hypotheses which were tested at 0.05 level of significance guided the study;

1. Social anxiety disorder does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
2. Depression does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
3. Insomnia does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

II. METHODOLOGY

The study used correlational research design. The population of the study comprised all 14,784 senior secondary school students (SSS 1, 2 and 3) in the 16 public secondary schools in Obio/Akpor LGA of Rivers State. A sample of 528 adolescents was drawn for the study using the purposive sampling technique. Four instruments were used to collect data for this study. They include; Post-traumatic stress disorder index (PTSDI), Anxiety Scale (AS), Beck's Depression Inventory (BDI) and Insomnia Inventory (II). The instruments were designed on a four-point Likert scale of Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2, and Strongly Disagree (SD) =1. The Cronbach Alpha reliability was used to establish the internal consistency reliability

coefficients of 0.77, 0.97 and 0.69 respectively. Responses to the research questions were answered with Pearson Product Moment Correlation, while the hypotheses were tested with independent sample t-test statistics.

III. RESULTS AND DISCUSSION

Research Question 1: To what extent does social anxiety disorder to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?

Table 1: Pearson product-moment correlation co-efficient of the relationship between social anxiety post-traumatic stress disorder (PTSD) among sexually abused adolescents

Variable	n	r	r ²	Remark
Social Anxiety Disorder	528	-0.32	10.24	Moderate negative relationship
Post-Traumatic Stress Disorder (PTSD)				

In table 1, it was indicated that the value of r was -0.32. This showed that there was a moderate negative relationship between social anxiety disorder and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor Local Government Area of Rivers State. Similarly, the value of r² of 10.24 means that 10.24% of post-traumatic stress disorder (PTSD) was predicted by social anxiety disorder, while the remaining percentage was determined by other factors. Summarily, a moderate negative relationship existed between social anxiety disorder and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor Local Government Area of Rivers State.

Hypothesis 1: Social anxiety disorder does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Table 2: t-test analysis on the relationship between social anxiety disorder and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Variable	n	df	t-cal.	t-crit.	Level of significance	Decision
Social Anxiety Disorder	528	526	7.79	1.96	0.05	H ₀ was rejected
Post-traumatic Stress Disorder (PTSD)						

In table 2, the calculated t-test value stood at 7.79, while the t-critical value stood at 1.96 using 526 degree of freedom at 0.05 level of significance. At 0.05 level of significance and 526 degrees of freedom, the calculated t-value of 7.79 is greater than the t-critical value of 1.96. Therefore, since the value of t-cal. of 7.79 is greater than the value of t-crit. of 1.96, the null hypothesis was rejected and the alternative hypothesis upheld indicating that there is a significant relationship between social anxiety disorder and post-

traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor Local Government Area of Rivers State.

Research Question Two: To what extent does depression to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?

Table 3: Pearson product-moment correlation co-efficient of the relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Variable	n	r	r ²	Remark
Depression	528	0.15	2.25	Very low positive relationship
Post-Traumatic Stress Disorder				

In table 3 the value of r is 0.15. This shows that there is a low positive relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. Similarly, the value of r² of 2.25 means that 2.25% of post-traumatic stress disorder (PTSD) was predicted by depression. Summarily, a very low positive relationship exist between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

Hypothesis 2: Depression does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Table 4: t-test analysis on the relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Variable	N	df	t-cal.	t-crit.	Level of significance	Decision
Depression	528	526	3.51	1.96	0.05	H ₀ was rejected
Post-Traumatic Stress Disorder (PTSD)						

Table 4 indicated that the calculated t-test value stood at 3.51, while the t-critical value stood at 1.96 using 526 degree of freedom at 0.05 level of significance. At 0.05 level of significance and 526 degree of freedom, the calculated t-value of 3.51 is greater than the t-critical value of 1.96. Therefore, since the value of t-cal. of 3.51 is greater than the value of t-crit. of 1.96, the null hypothesis was rejected and the alternative hypothesis upheld showing that there is a significant relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

Research Question 3: To what extent does insomnia to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State?

Table 5: Pearson product-moment correlation co-efficient of the relationship between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Variable	n	r	r ²	Remark
Insomnia	528	0.16	2.56	Very low positive relationship
Post-Traumatic Stress Disorder				

Table 5 showed that the value of r was 0.16. This indicated that there was a very low positive relationship between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. Furthermore, the value of r² of 2.56 indicated that 2.56% of post-traumatic stress disorder (PTSD) was predicted by insomnia. Summarily, a very low positive relationship existed between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

Hypothesis 3: Insomnia does not significantly relate to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Table 6: t-test analysis on the relationship between insomnia post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State

Variable	n	df	t-cal.	t-crit.	Level of significance	Decision
Insomnia	528	526	3.73	1.96	0.05	H ₀ was rejected
Post-Traumatic Stress Disorder						

Table 6 revealed that the calculated t-test value stood at 3.73, while the t-critical value stood at 1.96 with 526 degrees of freedom at 0.05 level of significance. At 0.05 level of significance and 526 degrees of freedom, the calculated t-value of 3.73 is greater than the t-critical value of 1.96, the null hypothesis was rejected and the alternative hypothesis upheld showing that there was a significant relationship between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

IV. SUMMARY OF THE FINDINGS

The results obtained after data analysis are summarized below;

1. Social anxiety disorder relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
2. Depression relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.
3. Insomnia relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State.

V. DISCUSSION OF THE FINDINGS

Social Anxiety Disorder and Post-Traumatic Stress Disorder (PTSD)

The result of this study showed that social anxiety disorder relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. Therefore, the null hypothesis of no significant relationship between social anxiety disorder and post-traumatic stress disorder (PTSD) among sexually abused adolescents was rejected. Hence it was concluded that social anxiety disorder relate significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. The finding of the current study is in agreement with earlier studies by Maniglio, (2013) who found out that social anxiety disorder is a common comorbid of post-traumatic stress disorder among adolescents who have been sexually abused. He further explained that the fear experienced during the sexual assault caused by a violation of the one's body integrity and even endangering of the person's life, usually results in avoidance of social situations and withdrawn interaction with others. Roberto (2012) found out that victims of sexual abuse often show higher levels of anxiety symptoms or disorders especially posttraumatic stress disorder. In support of this Valente (2005) also found out that adolescents who have been sexually abused are at increased risk for anxiety disorder associated with post-traumatic stress disorder.

Depression and Post-Traumatic Stress Disorder (PTSD)

The finding of this study revealed that depression relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. Therefore, the null hypothesis of no significant relationship between depression and post-traumatic stress disorder (PTSD) among sexually abused adolescents was rejected. Hence it was concluded that depression relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. The result of the present study agrees with the finding of previous studies by Zink, Klesges, Stevens and Decker (2009) who found out that depression is a specific risk factor for post-traumatic stress disorder (PTSD) among sexually abused adolescents. Fergusson, Boden and Horwood (2008) found out that there is a significant relationship between depression and post-traumatic stress disorder among sexually abused adolescents. They further maintained that the association between depression and post-traumatic stress disorder in relation to adolescents' sexual abuse is unavoidable as post-traumatic stress disorder produces symptoms such as diminished interest in social activities, feelings of detachment from others, mood swings and distressed emotional feelings. Adnan, ümeyra, Sait, Cem and Mustafa (2015) also found out that depression is often associated with post-traumatic stress disorder (PTSD) in people who have been sexually abused.

Insomnia and Post-Traumatic Stress Disorder (PTSD)

The finding of this study revealed that insomnia relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. Therefore, the null hypothesis of no significant relationship between insomnia and post-traumatic stress disorder (PTSD) among sexually abused adolescents was rejected. Hence it was concluded that insomnia relates significantly to post-traumatic stress disorder (PTSD) among sexually abused adolescents in Obio/Akpor LGA of Rivers State. The finding of the present study is in agreement with earlier studies by Steine, Krystal, Nordhus, Bjorvatn, Harvey, Eid and Pallesen (2012) found out that insomnia and other sleep disturbances are constantly associated with post-traumatic stress disorder among sexually abused adolescents. Similarly, Leger, Partinen, Hirshkowitz, Chokroverty, Touchette and Hedner (2010) found out that sexual abuse involving multiple perpetrators is often associated with more severe insomnia symptoms associated with post-traumatic stress disorder (PTSD). Galovski as cited in Geneviève, Mylène and Andréanne Rousseau (2019), also found out that insomnia associated with and PTSD is severe with victims of sexual abuse compared to other traumatic events.

VI. CONCLUSION

Sexual abuse refers to acts of molestation or abusive sexual behaviour which a person is pressured or coerced by another person to do anything sexually without the person's consent. It has been observed that there is a high prevalence of sexual abuse especially among adolescents, and has adverse social, emotional and psychological effects. One of such impacts of sexual abuse on adolescents in post-traumatic stress disorder (PTSD), which in turn has other related mental health comorbidities as examined in this study. Consequently, this study has shown that social anxiety disorder, depression and insomnia are comorbidities of post-traumatic stress disorder (PTSD) among adolescents in Obio/Akpor Local Government Area of Rivers State.

VII. RECOMMENDATIONS

Based on the findings of this study, the researcher recommended the following;

1. Counselling for sexually abused adolescents with post-traumatic stress disorder (PTSD) should be encouraged in schools with the aim of improving students' mental health and pro-social skills.
2. A trauma-focused cognitive behavioural therapy (TF-CBT) should be carried out on adolescents who are sexually abused victims to identify and correct any negative thoughts or misrepresentations they have about the traumatic event. This will also help them come to terms with the traumatic experience and gain control of their fears and distress by changing the way they think and act.
3. Stress-inoculation therapy (SIT) should be initiated to educate sexually abused adolescents on stressful

events and the adverse outcomes they may be vulnerable to when confronted with stress, and steps they can take to avoid those negative outcomes. This will thus enable them to manage and reduce anxieties that result from experiencing traumatic events.

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