Moderating Effects of Resilience, Self-Esteem and Social Support on Adolescents' Reactions to Violence

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Abstract

This study examined the relation between exposure to violence and posttraumatic stress disorder (PTSD) of adolescents and the moderator effects of resilience, self-esteem and social support. Measures of exposure to violence, resilience, self-esteem, social support and PTSD symptoms were administered on 280 secondary school adolescents randomly selected from Kwara state, Nigeria. Data were analysed using hierarchical multiple regression. Exposure to violence was positively related to PTSD. The relationship between exposure to violence and PTSD was moderated by resilience, self-esteem and social support such that the relationship was weaker for adolescents having higher levels of the moderators. The implications of the findings in terms of providing counselling interventions for the adolescents exposed to violence were discussed.

Keywords: Exposure to violence, Resilience, Posttraumatic stress disorder, Self-esteem, Social support, Adolescents

INTRODUCTION

The negative consequences of children and adolescents' exposure to violence-physical abuse, sexual abuse, emotional abuse and witnessing domestic violence- are well documented (Zahradnik, Stewart, O'Connor, Stevens, Ungar & Wekerle, 2010). Many studies have shown that children exposed to violence are at risk for various negative outcomes from childhood to middle –adulthood (Zahradnik et al, 2010). Examples of such negative outcomes associated with exposure to violence include school dropout (Kaplow & Widom, 2007), violence perpetration (Fang & Corso, 2008), Posttraumatic stress disorder (PTSD, Kaplow & Widom, 2007); alcohol-related problems (Thornberry, Ireland & Smith, 2001); and illict drug use (Widom, Marmorstein & White, 2006); depression anxiety and conduct disorder (Turner, Finkelhor & Ormrod, 2006). While considerable research has addressed the impact of specific types of victimization and violence, few studies have considered the combined effects of different forms of victimization and violence. Focusing on only one or a few forms of violence or victimization that children experience may substantially underestimate the magnitude of victimization and violence exposure (Finkelhor, Ormrod, Turner & Hamby, 2005; Turner et al., 2006) and fail to adequately capture the impact of victimization and violence on children and adolescents' mental health.

Although child maltreatment and exposure to violence are significant public health problems affecting children, youth and families, research on violence perpetrated against children in Nigeria has been sparse, disjointed and confined to certain types of violence. For example, in Nigeria, research has been conducted on such topic as students' cult activities (Oni, 2009); school bullying (Jegede, 2008), students deviant behaviours (Jegede, Ememe &Gami, 2009), child labour, sexual abuse, (Oladeji, 2003), adolescent pregnancy (Ugoji, 2009) and corporal punishment. Official reports to child welfare, police and hospitals significantly underestimate the extent of the problems as many incidences of child maltreatment and exposure to violence go unreported because of failure to detect and recognize them. Until recently, cases of child maltreatment, child sexual abuse, and parental violence against children were considered as private matter, taken care of within the immediate family (Ugoji, 2009). In light of the high rates of youth exposure to crime and violence and its psychological sequelae, it is important to investigate the relationship between children and adolescents' exposure to violence and posttraumatic stress disorder (PTSD) and the moderating roles of resilience, self-esteem and social support on the relationship. Findings from such investigation will enable counselling psychologists to develop appropriate intervention strategies for dealing with PTSD of increasing number adolescents exposed to violence. The purpose of this study was to investigate the relationship between exposure to violence and PTSD among

adolescents in Nigeria. This study was also designed to examine the moderator roles of resilience, self-esteem and social support in the relationship.

Exposure to violence and PTSD

Children and adolescents' exposure to violence refers to exposure to physical abuse, sexual abuse, emotional abuse and witnessing domestic violence (Walsh, MacMillan, Trocme, Jamieson & Boyle, 2008; Zahradnik et al.; 2010). Numerous past studies have documented associations between exposure to violence and posttraumatic stress disorder symptoms including reexperiencing the trauma (e.g. nightmares and flaskbacks), avoidance of stimuli associated with the trauma, and increased arousal (Berman, Silverman & Kurtines, 2000; Kaplow & Widom, 2007; Turner, Finkelhor & Ormrod, 2006; Zahradnik et al.; 2010). While the mental health effects of the individual types of violence/ victimization are now well-documented less attention has been paid to children's exposure to multiple forms of violence and the impact of such exposure. Considering only one or a few types of violence or victimization is likely to underestimate the full impact of violence or victimization experienced by children and adolescents. It is this gap in previous studies that makes this study warranted.

Direct and moderator effects of resilience, self-esteem and social support

The ability to thrive in the presence of adversity is referred to as resilience (Masten & Powell, 2003). Early conceptualizations of resilience emphasized individual factors (Kaplan, 1999) while contemporary definitions of resilience consider both aspects of the individual and the individuals environment (Lerner & Benson, 2003; Ungar, 2001). This is because healthy outcomes in youth depend on a combination of available resources within both the individual and the community (Luthar, Cicchetti & Becker, 2000; Zahradnik et al., 2010). It is expected that communities should be able to negotiate for the resources required by its members (e.g. education, economic security, cultural traditions and housing) while individuals should be able to navigate their way to the resources (Ungar, 2008). Thus, some researchers now explain resilience as a dual process of navigation and negotiation (Luthar, 2003; Ungar, 2005; Zahradnik et al., 2010) rather than as a fixed attribute of individuals alone. Zahradnik et al., (2010) found significant negative relationship between exposure to violence and PTSD symptoms. The higher the adolescents' resilience the lower their PTSD symptoms. So far, few studies have reported that the positive relationship between exposure to violence (measured as emotional, physical and sexual abuse and witnessing domestic violence) and the re-experiencing of symptom cluster of PTSD was moderated by resilience (Ahmed, 2007; Haglund, Cooper, Southwick & Charney,2007; Zahradnik et al., 2010). Therefore, it is expected that resilience will predict mental health and moderate the relationship between children and adolescents' exposure to violence and mental health (PTSD) symptoms.

Self-esteem is the extent that persons believe they are capable, significant, successful and worthy. Global self-esteem is an overall feeling of self-worth (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). A general sense of personal worth coupled with a coherent sense of identity appears to be critical for the youths' mental health. The complex personal, social and familial adjustments required in asserting one's identity, depends on individual's self-esteem and help individuals to get over PTSD. Children and adolescents who had been exposed to violence often experience intensified self- doubt and vulnerability in addition to greater depression and anxiety reactions (Garnets, Herek &Levy, 1990; Hershberger & D'Augelli, 1995). Hershberger and D'Augelli (1995) found that self-esteem was negatively correlated with mental health variables (measure of psychiatric symptoms; suicidal ideation and suicide attempts) among victimized youths. Similarly, low self- esteem was reported to be related to high mental health difficulties (Bradley, Schwartz & Kaslow, 2005). Therefore, it is expected that self-esteem will predict mental health and moderate the relation between children and adolescents' exposure to violence and mental health (PTSD symptoms).

Social support is the extent to which individuals feel that provisions of social relationships are available to them. The social relationships may be in the form of provision of emotional, informational or tangible support from significant others, family members and friends (Allen, 2003). Social support is essential for maintaining physical and psychological health. Many studies have shown that social support was negatively related to posttraumatic stress disorder symptoms among victimized or maltreated youths (Bradley, Schwartz & Kaslow, 2005; Brewin, Andrews & Valentine, 2000; Hershberger & D'Augelli, 1995; Ozer, Best, Lipsey & Weiss, 2003; Pine & Cohen, 2002; Wu, Chen, Weng & Wu, 2009). A number of studies have shown that social support mediates or moderates the relation between children and adolescents' exposure to violence, victimization or maltreatment and PTSD symptoms (Bradley, Schwartz & Kaslow,2005; Ozbay, Johnson, Dimoulas, Morgan, Charney & Southwick, 2007; Wu, Chen, Weng & Wu, 2009). For instance, Ozbay et al., (2007) found that rich social networks may reduce the rate at which individuals engage in risky behaviours, prevent negative appraisals and

increase treatment adherence and likelihood of recovery. It is therefore, expected that social support will be related to PTSD symptoms and moderate the relationship between exposure to violence and PTSD symptoms.

Hypotheses

Based on the reviewed literature the following hypotheses were tested:

H_1.There will be significant relationship between exposure to violence and PTSD symptoms.

H_2.There will be significant relationship between resilience and PTSD symptoms.

H_3.There will be significant relationship between self-esteem and PTSD symptoms.

H_4There will be significant relationship between social support and PTSD symptoms.

H_5.Resilience will moderate the relationship between exposure to violence and PTSD symptoms such that for adolescents having higher resilience, the relationship between exposure to violence and PTSD will be weaker than for adolescents having lower resilience.

H_6.Self-esteem will moderate the relationship between exposure to violence and PTSD symptoms such that for adolescents having higher self-esteem, the relationship between exposure to violence and PTSD will be weaker than for adolescents having lower resilience.

H_7.Social support will moderate the relationship between exposure to violence and PTSD symptoms such that for adolescents having higher social support, the relationship between exposure to violence and PTSD will be weaker than for adolescents having lower social support.

METHOD

Research Design

Descriptive survey research design was adopted to examine the relationship between the independent variables and the dependent variable.

Participants

Participants for this study were 280 senior secondary 2 students (male=150 (53.57%), female=130(46.43%) randomly selected from five coeducational secondary school in Ilorin, Kwara State, Nigeria. The mean of the sample was 15.50 years (S.D=2.73) with age range 12-19 years.

Measures

Exposure to Violence-Physical, sexual and emotional abuse/ exposure to domestic violence- was measured with the Childhood Experience of Violence Questionnaires (CEVQ; Childhood Experience of Violence Questionnaire, CEVQ; Walsh et al., 2008), an 18-item self –report measure of childhood exposure to violence for use with children/ youth 12-18 years that collects information about whether abuse has been experienced and if so, about the severity, onset, and duration of abuse experienced. CEVQ shows strong content, construct and criterion validity as well as good test-reset reliability (Wash et al., 2008). Sample items for each type of abuse include: "How many times has an adult kicked, hit, or punched you to hurt you?" sexual abuse: "Did any one ever threaten to have sex with you when you did not want them to?"; and emotional abuse/ exposure to domestic violence: " How many times has any one of your parents (or step-parents or guardians) said hurtful or mean things to you?" Answers are given by circling the appropriate response on a 5-point Likert scale, ranging from 0(not at all), 1(one to two times), 2(three to five times), 4(six to ten times), 5(ten or more times). For the analyses in this study, all items were summed for a total exposure to violence score (Cronbach's alpha=0.90) with possible range of 0 to 72.

Social support-Social support was measured by means of the multidimensional scale of perceived social support (MSPSS; Zimet, Dahlem, Zimet & Parley, 1988). MSPSS is a 12-item self-report inventory used to assess perceived availability of social support from friends, family members and significant others. MSPSS adopted a 7-point Likert scale, ranging from 1=very strongly disagree, to 7=very strongly agree. The MSPSS has good internal test-retest reliability as well as adequate construct validity with different samples (Zimet, Powell, Parley, Werkman & Berkoff, 1990). The Cronbach's alpha coefficient in the present study ranged from .86 to .90.

Socio-demographic factors. Socio-demographic factors information including the participants' ages (in years), gender (male=1, female=0), family structure C coded into 3 groups (a) child living with two biological or adoptive parents (3), (b) child living with one biological parent and a stepparent or unmarried partner (2) and (c) child living with a single parent (1). Socio-demographic factors also included Socio- Economic Status (SES) which was measured by means of Socio-Economic Status Scales (SES, Salami, 2000). SES asked for

information on the educational qualifications and occupational status of the participants' parents (mother and father or guardians). The parents' educational qualification (14 points) and occupational status (10 points) were summarized to indicate the participant's socio-economic status.

The highest score obtained when the parents' education was combined with their occupational status score was 24 while the least was 4. On the basis of the scores, the respondents were classified into lower socio-economic status (1-8), middle socio-economic status (9-16), and higher socio-economic status (17-24). The test-retest reliability of the SES scale was 0.73 with an interval of three weeks. The internal consistency Cronbach's alpha was 0.83. The instrument was validated by correlating the scores on the SES scale with scores of SES by 1paye (1977). The correlation coefficient obtained between the two scores on the two SES scales was 0.64.

Self-Esteem- Self-Esteem was measured by the Rosenberg Self-Esteem Inventory (Rosenberg, 1965, 1979). This is a 10-item measure of self-esteem answered on a 4-point Likert scale with response options ranging from strongly agree (1) to strongly disagree (4). The Rosenberg Self-Esteem Inventory was scored from 1 to 4 for each item, for a possible range of 10 to 40. High self-esteem is reflected by higher score. Its reliability and validity have been well documented (Goldsmith, 1986). In the present study, the Cronbach's alpha for self-esteem was .87.

Resilience. Resilience was measured with the Child and Youth Resilience Measure (CYRM; Ungar et al., 2008)-a 28-item measure that has been used with children/ youth from ages 12-23 years. Examples of sample items from both individual and contextual domains are as follows: "Do you strive to finish what you start?" (Individual), and "Do you know how to behave in different social situation?" (Contextual). A five point Likert-type scale is used for scoring, with response options ranging from 1 (not at all), 2 (a little), 3 (somewhat), 4 (Quite a bit), to 5 (a lot). In this study, the internal consistency for the full measure was excellent (28 items: Cronbach's alpha=0.89).

Posttraumatic Stress Disorder-Posttraumatic stress symptoms were measured with the Child Posttraumatic Stress Symptom scale (CPSS, Foa et al. 2001). The CPSS is a 17-items self-report measure designed to tap each of the three DSM-IV PTSD symptom dimensions- reexperiencing, avoidance/ numbing, and hyperarousal- in children/youth from age 8-18 years. Examples of items for each symptom cluster include, reexperiencing: "having bad dreams or nightmares", avoidance/ numbing: "trying to avoid activities, people or places that remind you of the traumatic event"; and hyperarousal: "having trouble falling or staying asleep". Answers are recorded on a 4-point Likert type scale, ranging from 0 (not at all), 1 (once a week or less), 2 (two to four times a week), to 3 (five or more times a week).

The CPSS has good internal consistency as well as high convergent validity (sensitivity and specificity) with other measures of PTSD in children and adolescents (Foa et al., 2001). For this study, the internal consistency for the total measure (17 items) was high (Cronbach's alpha=0.85).

Procedure

Four research assistant explained and administered the questionnaire to the participants in their schools. The participants completed the questionnaires and returned them. Of the 300 questionnaires distributed 280 were properly filled and were used for data analysis giving a response rate of 93.33%.

Data Analysis

Pearson's Product Moment correlations were used to assess the relationships between all the variables in the model including the demographic variables, exposure to violence, resilience, self-esteem, social support and PTSD symptoms. A series of hierarchical multiple regression analyses were conducted to test the hypotheses regarding resilience, self-esteem and social support as moderators of the relations between exposure to violence and PTSD. Following the recommendations of Aiken and West (1991), the interactions between exposure to violence and each moderator variable in predicting PTSD symptoms were tested.

RESULTS

Table 1 summarizes the Pearson's correlations between PTSD symptoms and other measures in the study. The results indicate that significant correlations were obtained between PTSD and each of Exposure to Violence (r=.30, p<.50), Resilience (r=-.24, p<.05), Self-Esteem (r=-.28, p<.50), and social support (r=-.29, p<.05). This shows that Hypotheses, 1, 2, 3 and 4 are accepted. Correlations among the predictors vary from .14 to .25. None of the socio-demographic variables correlated significantly with PTSD symptoms.

Insert Table 1 here

A four-step hierarchical regression was performed whereby posttraumatic stress disorder (PTSD) symptoms was regressed on socio-demographic factors (step 1), Exposure to violence (step 2), resilience, self-esteem and social support (step 3), and interaction terms (step 4). The results on Table 2, show that the socio-demographic factors (gender, age, family structure and socio-economic factors) accounted for 18% of variance in PTSD. Exposure to violence accounted for 24% of the total variance in PTSD (ΔR^2=.06, $F_{(1,235)}$=12.26, p<.05). The higher the exposure to violence, the higher the PTSD symptoms of the adolescents. This confirms hypothesis 1.

Insert Table 2 Here

The results on Table 2 further reveal that all the moderator variables significantly and separately contributed to the prediction of PTSD in step 3 (ΔR^2=.07, $F_{(4,232)}$=14.80, P<.05). Resilience (β=-.20, p<.05), Self-esteem (β=-.19, p<.05), Social support (β=-.23, p<.05) made separate significant contributions to the prediction of PTSD. These results further show that Hypotheses 2, 3, and 4 are confirmed or accepted as the entire moderator variables separately and significantly predicted PTSD.

Entering all the six interaction terms as a block in step 4 accounted for a significant increment of explained variance in PTSD (ΔR^2=.04, ($F_{(3,229)}$=11.73,p<.05) Interaction terms EVx Resilience; EVx Self-esteem, and EVx Social- support made independent and significant contributions to PTSD. Therefore, Hypotheses 5, 6, and 7 are accepted. These results indicate that the relationship between exposure to violence and PTSD is influenced by the levels of resilience, self-esteem and social support. The exposure to violence-PTSD link becomes weaker for the adolescents having higher resilience; self-esteem and social support (see Figures 1, 2 and 3).

Insert Figure 1, 2 and 3 Here

DISCUSSION

This study investigated the relationship between exposure to violence and PTSD and the moderator roles of resilience, self-esteem and social support in the relationship. Results from this study show that exposure to violence was positively related to PTSD. These results are consistent with other studies that report significant relationship between exposure to violence and PTSD (Berman et al., 2000; Kaplow & Widom, 2007; Oswald, Fegert & Goldbeck, 2010; Turner et al., 2006; Zahradnik et al., 2010). These results could be due to the fact that exposure to violence-physical abuse, sexual abuse, emotional abuse and witnessing domestic violence-aggravates PTSD symptoms in the victims.

The results that resilience was significantly related with PTSD supports the findings of previous researchers who found that resilience was negatively related to PTSD. That is, the higher the adolescents' resilience the lower their PTSD symptoms (Jaffee, Capsi, Moffitt, Polo-Tomas & Taylor, 2007; Zahradnik et al., 2010). The results from this study also indicate that resilience moderates the relationship between exposure to violence and PTSD such that adolescents having higher resilience reported lower PTSD despite their earlier exposure to violence. This is in support of the work of previous researchers who found resilience to be a moderator of the relationship between exposure to violence and PTSD (Ahmed, Haglund, Cooper, Southwick & Charney, 2007; Zahradnik et al., 2010).

The reason for these results could be that when individuals have high resilience that is, the ability to maintain a state of normal equilibrium in the face of unfavourable circumstance (exposure to violence) their PTSD becomes lowered. Resilience thus serves as a buffer against the deleterious effects of exposure to violence, maltreatment, abuse or victimization. Individuals having resilience see adversity as temporary and limited in scope and as such they develop positive outlook to life.

According to the results of this study, self-esteem was significantly and negatively related to PTSD. This result corroborates the findings of previous researchers who report similar results (Bradley, Schwartz & Kaslow, 2005; Hershberger & D'Augelli, 1995). That self-esteem moderates the relationship between exposure to violence and PTSD is attributable to the fact that people having higher self-esteem have self confidence and positive outlook to life which helped them to see the lighter side of difficult situations. They were also able to view their problems as temporary, limited in scope and surmountable. All these helped them to develop positive emotions which decreased their autonomic activity and symptoms of stress (PTSD).

Social support was found to be negatively related to PTSD in this study. This is in agreement with previous researchers' findings which show that social support was negatively related to posttraumatic stress disorder (PTSD) (Bradley, Schwartz & Kaslow, 2005; Brewin, Andrews & Valentine, 2000; Hersberger & D'Augelli, 1995; Ozbay, et al., 2007; Ozer et al. 2003; Pine & Cohen, 2002; Wu et al., 2009). In this study, social support was found to moderate the relationship between exposure to violence and PTSD. An explanation for these findings is that social support reduced risk- taking behaviour, encouraged active coping, decreased loneliness,

increased feelings of self-worth and resilience and helped a person put problems into perspective (Haglund et al., 2007). Social support prevents negative appraisals and increases treatment adherence. Lack of social support are associated with increased morbidity and mortality in many psychiatric/medical illnesses. Social support serves as buffer or protective means of dealing with PTSD by using active coping mechanisms when dealing with stressful life situations.

Implications of findings for counselling practice.

Results from this study have implications for counselling practice especially interventions for the increasing number of children and adolescents who are exposed to violence (physical abuse, sexual abuse, emotional abuse/ exposure to domestic violence) and are at risk for posttraumatic stress disorder. Because exposure to violence, resilience, self-esteem and social support were found to be significantly related to PTSD in this study, it is suggested that Cognitive-Behaviour Therapy (CBT) could be used by counselling psychologists to enhance the resilience, self-esteem and social networks of the adolescents who had been exposed to violence. CBT could also be focused on mood instability, difficulty in trusting others and interpersonal problems being suffered by the adolescents who had experienced trauma as a result of exposure to violence.

Also a child-centered supportive therapy that demonstrates an empathic approach to healing could be used with adolescents suffering from trauma resulting from exposure to violence. An environment that consists of empathy, unconditional positive regard and acceptance are key elements in the child-centered supportive therapy. Parents should be counselled to provide necessary social support required by the adolescents in building their resilience, self-esteem, positive outlook to life and use of active coping styles in facing life situations. Above all, a three-level prevention approach consisting of actions to prevent exposure to violence from ever happening, activities focused on early identification and intervention to reduce the risk of adverse outcomes and responding after the adverse event to reduce the damage is recommended for preventing children and adolescents' exposure to violence.

There are a number of limitations of this study that should be considered when interpreting results obtained from this study. First, is that the findings are correlational and there is no ability to assert causality. Future researchers could conduct a longitudinal study so as to be in a position to make cause-and-effect conclusions. Second, self-report measures were used in collecting data from the respondents and no observational data nor parents' reports were obtained which may be influential to children's post violence functioning. Future researchers could obtain environmental assessment of the adolescents and in particular the parents' views on their children's exposure to violence and PTSD. Despite these limitations it can be concluded that this study has demonstrated that exposure to violence was significantly related to PTSD and that resilience, self-esteem and social support were moderators of the relationship between exposure to violence and PTSD among adolescents.

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Table 1. Means, Standard Deviations and Correlation Matrix of all variables in the study

Variables	1	2	3	4	5	6	7	8	9
1.Age	1.00								
2.Gender[a]	.04	1.00							
3FS[b]	.01	.02	1.00						
4.SES[C]	.09	.08	.06	1.00					
5.Resilience	.04	.08	.12	.13	1.00				
6.Self-Esteem	.05	.06	.13	.09	.17	1.00			
7.SS	.02	.04	.19*	.11	.23*	.19*	1.00		
8.EV	.07	.11	.06	.16	.18	-.25*	.14	1.00	
9.PTSD	.08	.13	.15	.18	-.24*	-.28*	-.29*	.30*	1.00
Mean	15.50	-	-	16.52	102.52	28.20	35.80	15.60	13.45
S.D	2.73	-	-	3.60	5.30	4.20	3.46	7.50	6.40

NOTE: N=280, S.D= Standard Deviation, SES= Socio-Economic Status, SS=Social Support, FS=Family Structure, EV=Exposure to Violence, PTSD=Posttraumatic Stress Disorder, a coded as follows: Male=1, Female=0, b coded as follows: Child living with two biological or adoptive parents=3, Child living with one biological parent and a stepparent or unmarried partner=2, and child living with a single parent=1;C coded as follows: Lower Socio economic status(9-16)=1, middle socio-economic status (9-16)=2, higher socio- economic status (17-24)=3 *p<.05

Table 2. Hierarchical multiple regression analysis for the moderating effects of Resilience, self-esteem and social support on the relationship between Exposure to Violence and Posttraumatic stress Disorder

Variables	R	R	ΔR²	F	df	β	t
Step I	.42	.18	-	1.75	4,236		
Social Demographic factors							
Gender						.06	.79
Age						.10	1.22
Family Structure						.15	1.30
SES							
Step 2	.48	.24	.06	12.26*	1,235		
EV						.30	3.42*
Resilience						-.20	-2.15*
Self-Esteem						-.19	-2.34*
Social Support						-.23	-2.70*
Step 4	.59	.35	.04	11.73*	3,229		
Interaction terms							
EV x Resilience						.25	2.75*
EV x Self- Esteem						.20	2.31*
EV x Social Support						.26	3.12*

Note: SES=Socio-economic Status, EV=Exposure to Violence, *p<.05.
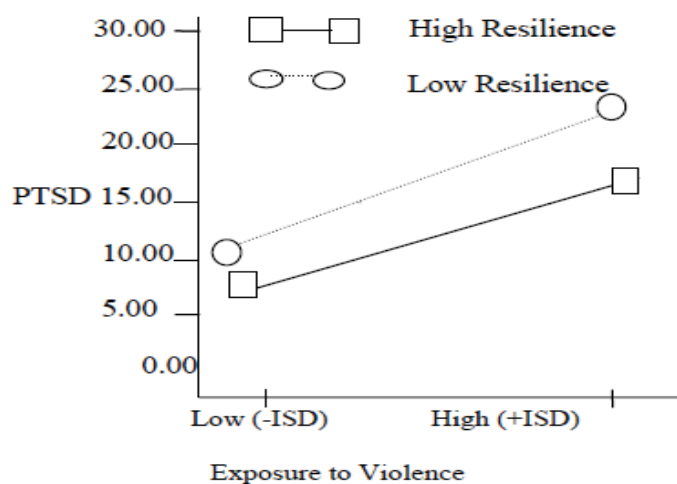

Figure 1. Moderator effects of Resilience on relation between Exposure to Violence and PTSD
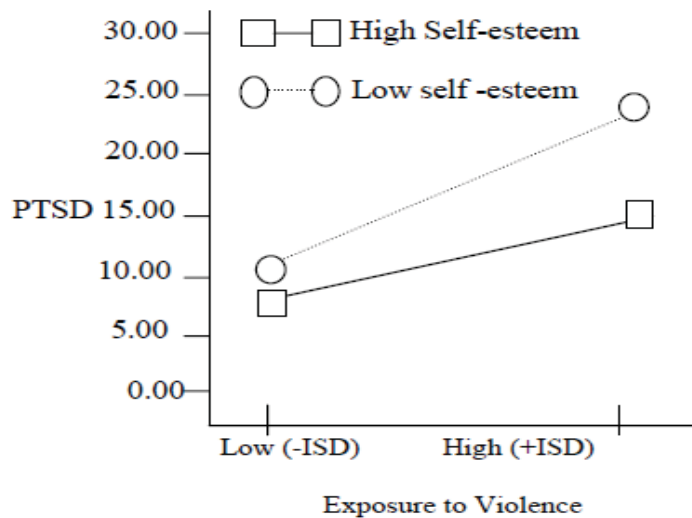
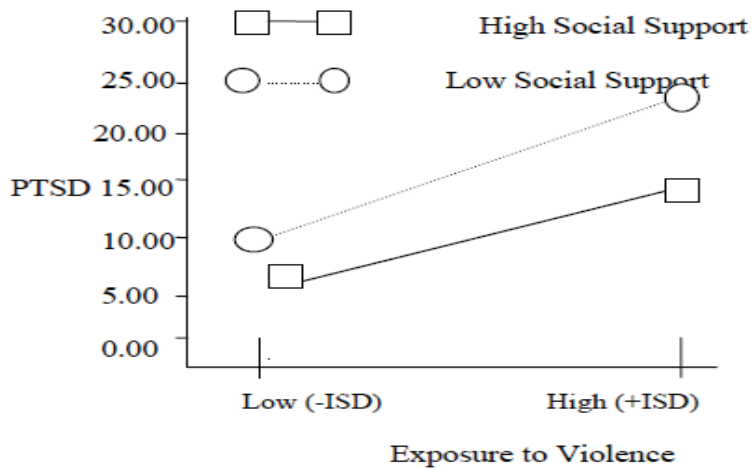Figure 2. Moderator effects of Self-esteem on relation Exposure Violence and PTSD

Figure 3. Moderator effects of social support on relation between Exposure to violence and PTSD