

GENDER DIFFERENCES IN ADOLESCENTS EXPERIENCING VICARIOUS TRAUMA

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ABSTRACT

Objective: The present study explored gender differences in adolescents experiencing vicarious trauma due to indirect exposure to violence. Vicarious trauma manifests in moderate symptoms of PTSD and it was assumed that girls will be experiencing more symptoms than boys.

Research Design: Comparative study

Place and duration of Study: Karachi

Sample and Method: A purposive sample of 1074 students with ages 14-17 years was selected from government and private schools in a metropolitan city. The Events Exposure Questionnaire, designed by the researcher obtained relevant information; and the Impact of Events Scale-Revised (Weiss & Marmar, 1997) was administered with modifications to time frame.

Results: Statistical analysis was performed with SPSS v20. Percentages, independent samples t-test and Cohen's *d* was obtained. A higher percentage of girls than boys reported moderate symptoms of vicarious trauma. Furthermore, significant scores were found for girls on the intrusion subscale and total score of the IES-R; 19% of the effect is explained by Cohen's *d*.

Conclusion: The hypothesis is supported and a strong cultural trend of gender differences is confirmed.

Keywords: Vicarious trauma, indirect exposure, violence, gender differences

INTRODUCTION

Adolescents are the most vulnerable segments of society. In countries and communities where violence is chronic, persistent and ongoing, often acquiring war-like dimensions and living conditions, they are exposed to traumatic events which can have long-term implications for their future development (Cummings,

Goeke-Morey, Schermerhom, Merrilees, & Cairns, 2009). When the adults around are swamped with physical danger, the sense of insecurity and threat trickles down. Exposure to a violence caused with the intent to physically harm others shatters one's belief about a safe world and is more difficult to reconcile with (Vernberg & Varela, 2001). Studies have found that living in a perpetual state of fear and under constant threat, when the daily routine, which is essential for normalcy of life becomes dangerous in itself, wreaks negative influence on the development of adolescents and children (Dubow, Huesmann, & Boxer, 2009) despite their apparent coping (Cohen & Eid, 2007). Repeated exposure to violence can also lead to what appears to be a functional adaptation to the violence but which is actually a pathological effort.

Ongoing violence in the country has indirectly exposed adolescents to violence. When human beings inflict pain on each other, assumptions about a safe world are shattered. Consequently, being surrounded by threats to life and loved ones, adolescents are likely to develop negative, dysfunctional thinking, troubled behavior and emotional responses. Adolescents aged between years 14-17 are at crucial stages of socio-emotive and cognitive development stages. They face great risk of developing symptoms of distress and a range of psychological problems with the most extreme being PTSD. The possibility is high that moderate levels of the core symptoms of PTSD are present in Pakistani adolescents, particularly girls due to vicarious trauma which is often due to low intensity indirect exposure. It may develop because one has an association with someone or something that threatens the sense of safety. Trauma prevalence may be rooted in physical, emotional, verbal, or sexual abuse; and adolescents may develop PTSD as a vicarious repercussion of hearing or witnessing news and information about a traumatic event. Thus traumatization may be the causation of a long-term internal struggle with external and internal results (Goldsmith, Barlow, & Freyd, 2004). To date no exploratory or investigative study has been conducted on this age group to assess the impact of indirect exposure to violence as a source of vicarious trauma in the country. Adolescents undergoing such experiences can be at risk for a number of psychiatric disorders, such as panic disorder, substance abuse, and may become perpetrators of violence themselves (Anderson, 2005; Davis & Siegel, 2000; Khalily, 2011). While prolonged and repeated traumatization has been commonly found to be associated with childhood PTSD, where trauma is not endured over prolonged time frames, its effect is lessened (Goldsmith, Barlow, & Freyd, 2004).

Studies conducted at the Punjab University's Department of Psychology between the years 2005-2011 have investigated issues like perceived stress, coping strategies, anxiety, and gender differences along with the television exposure of terrorism, among victims of bombings. These studies have been conducted mostly on adult population. Generally, trauma and high anxiety was found, and females were found to be more affected by the incidents than males. School children for acute stress disorder following a bomb blast at a next door governmental agency building were assessed (Kanwal, 2008). It was found that majority children showed stress symptoms and girls showed more subjective experience of horror and helplessness. In a number of studies cited by Niaz (2004), during the 1990s there was a greater percentage of women aged 20-45 than men who sought psychiatric help, among which depression and anxiety were the common problems. This percentage was found to be more than double in the northern areas of Pakistan. It was found (Khaliily, Foley, Hussain, & Bano, 2011) that young people in the age group of 11-22 years in Swat, Khyber Pakhtunkhawa province of Pakistan were experiencing 16 out of 17 symptoms of PTSD as per the criteria mentioned in DSM-IV.

The presence of core symptoms, re-experiencing (69.6%), avoidance and numbing symptom (58.6%) and hyperarousal (55.8%) as a result of exposure to extreme traumatic stressors was seen in a place where greatest levels of violence and insurgency occurred. In another study, conducted on the traumatic conditions in northern Pakistan and Swat (Khaliily, Foley, Hussain, & Bano, 2011), conclude that the trauma inflicted at large is hitherto unprecedented and therefore inevitable. According to them, the violent situations are problems of complex and high magnitude. They need multidimensional strategies to tackle issues scientifically and effectively. Communal trauma they conclude, can be undone by community level strategies and interventions. They also argued that comprehensive information and communication strategy is now required to deal with Pakistani situation (Aimal, 2010).

Exposure to violence challenges the well-being of children and youth. It was found that over 68% of children experience a traumatic event by the age of 16 years. Further evidence also suggests that many integrate the traumatic event into experience, and do not develop any problem; with only about 13.4.2% children going on to develop PTSD after exposure to any traumatic event (Copeland, Keeler, Angold, & Costello, 2007). However, when it comes to establishing prevalence of prevalence rates of PTSD in children and adolescents the rates have not been extensively examined approximately 3-15% of girls and

1-6% of boys that have experienced a trauma could be diagnosed with (Anderson, 2005). Girls may show higher rates than boys (Cook-Cottone, 2004). Due to differences in definitions, trauma and level of exposure, there is a known wide range in estimates of prevalence rates. For instance, an earlier study which reported female gender as the greatest predictor of trauma symptoms found that they were experiencing greater levels of violence through exposure at home, witnessing or being a victim of sexual abuse/assault (Singer, Anglin, Song, & Lunghofer, 1995).

The population of Pakistan is young and dependent. According to the 1998 population census, 43.4 % population was under the age of 15, and 53% was between 15 - 64 years age (Pakistan Economic Survey, 2010-2011). In a place where medical care is frequently more sought for children than for women, and more for sons than daughters (Qadir Khan, Medhin & Prince, 2011) the cultural patterns and life styles of the people are vastly different from the west. Although trauma manifestation is universally the same, understanding cultural context in terms of healing, treatment, interventions, counseling and medical care is what necessitates research and intervention strategies (Wilson, 2007). With a dearth of opportunities for entertainment and physical exercise particularly for girls, the energies and anxieties of the adolescents are turning inward. Girls are confined to the home environment due to religious and cultural restraints imposed upon them. The present research seeks to bring home the importance of female mental health awareness, early screening and intervention at the educational institutions.

The present study was exploratory in nature and carried out to investigate the differences between male and female adolescents in experiencing vicarious trauma. The hypothesis formed was that girls exposed to indirect trauma experience more PTSD symptoms as compared to boys.

METHOD

Research Design

The present research was based upon the post-positivist research paradigm. This paradigm assumes that several theories influence the research in addition to the one which is being tested and the methods used for data collection and analyses are quantitative. The research was exploratory in nature as it sought to gather information about the type of traumatic events adolescents were exposed to by using self-report forms and cross-sectional survey technique.

Participants

A purposive sample was drawn from government and private schools of Karachi. There were a total of 1074 adolescents, between the ages of 14-17 years. The mean age of the participants is 14.95 with a standard deviation of 0.29. Only adolescents who had indirect exposure to a traumatic event were included in analysis. Table 1 gives the gender and age-wise distribution of the sample.

Table 1
Demographic Characteristics of Sample (N=1074)

Demographic Variable	N	Percentage
Gender		
Girls	476	44
Boys	598	56
Age in Years		
14	416	39
15	349	33
16	231	22
17	78	7

Measures

Events Exposure Questionnaire (EEQ)

The Events Exposure Questionnaire (EEQ) was developed by the researcher. It sought basic demographic information such as age and gender of student; parents' education, socio-economic status and occupation. The EEQ comprised of nine items which sought information about exposure to direct or indirect traumatic event.

Impact of Events Scale-Revised (IES-R)

Impact of Event Scale-Revised (IES-R) is a five point likert-type scale designed and validated using a specific time frame of the past seven days (Weiss & Marmar, 1997). Permission to administer the scale was obtained from the author. The scale is not a diagnostic tool. It is a self-report measure to tap symptoms of PTSD through three subscales, Intrusion, Hyperarousal and Avoidance. Mean scores of respondents were divided into three groups: low,

moderate and high. Moderate scores were then statistically analyzed for significance.

Procedure

The researcher approached the principals of the schools and explained the link between the prevailing traumatic events and their vicarious effect. After gaining permission, the researcher and appointed teacher visited each classroom where a standard set of instructions were given. The students were also asked for their consent, confidentiality was emphasized and questionnaire was then administered. Maximum time to administer was 20 minutes. After which students were debriefed and thanked for their participation.

Operational Definitions

Vicarious trauma. Being subject to explicit knowledge of a distressing or tragic event as a consequence of which moderate symptoms of PTSD have developed.

Indirect exposure. Exposure to violence through having someone known get kidnapped or become victim of a bomb blast, knowledge about disasters, terrorist attacks, events due to law and order disturbances through the victim or through any other source such as media.

RESULTS

The data was treated statistically by SPSS version 20.0. Percentages, independent sample *t*-test and Cohen's *d* were calculated to analyze results.

Table 2
Gender-wise Prevalence of Vicarious Trauma Symptoms in Adolescents

	Girls		Boys	
	F	%	F	%
Low	181	38	254	43
Moderate	260	55	315	53
High	35	7	29	5
Total	476	100	598	100

Table 2 presents results for both genders. It indicates that the highest percentage of symptoms is found in the moderate range. In the low range are 38% girls and

43% boys. Least sample is in the highest range, where 7% girls and 5% boys scored.

Table 3
Independent *t*-test for differences between Girls and Boys Experiencing Vicarious Trauma Symptoms

Variables	Girls (<i>n</i> = 476)		Boys (<i>n</i> = 598)		<i>t</i> (1074)	<i>p</i>	95% CI		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Intrusion	1.53	.81	1.38	.78	2.97	.003	.49	.24	.19
Avoidance	1.67	.78	1.28	.77	1.63	.102	.01	.17	.10
Hyperarousal	1.28	.82	1.21	.72	1.47	.142	-.02	.16	.09
IES-R									
Total Score	1.49	.66	1.39	.63	2.44	.015	.01	.17	.16

Results of independent samples *t*-test in table 3 indicate a significant difference in the scores for girls ($M=1.53$, $SD=.81$) and boys ($M=1.38$ $SD=.78$), $t(2.97)$, $p = .003$ on intrusion subscale as well as for girls ($M=1.49$, $SD=.66$) and boys ($M=1.39$, $SD=.63$), $t(2.44)$, $p = .015$ total score on IES-R. This suggests a significant effect for gender with girls receiving higher intrusion subscale scores and IES-R total scores than boys (equal variances assumed). The girls ($M = 1.67$, $SD=.78$) and boys ($M=1.28$, $SD=.77$) in avoidance subscale group demonstrated insignificant difference $t(1.63)$, $p = .102$. The girls ($M=1.28$, $SD=.82$) and boys ($M=1.21$, $SD=.72$) in Hyperarousal subscale group demonstrated insignificant difference $t(1.47)$, $p = .142$. This suggests insignificant effect for gender on avoidance and hyperarousal subscale scores (equal variances assumed).

Cohen's *d* was also computed to comprehend the effect size of significant group differences. Cohen's *d* indicates 19% of effect of Intrusion subscale score and 16% effect of IES-R total scale score on the outcome. Even less effect for Avoidance and Hyperarousal subscales is found, that is 10% and 9% respectively.

DISCUSSION

Any research in gender implicitly implies that there are meaningful differences between the sexes (Singer, Anglin, Song, & Lunghofer, 1995). As the

results of the present research show, girls are found to be experiencing vicarious trauma symptoms. These findings open numerous avenues for exploration and interpretation. The present study was exploratory and sought investigation into an area not studied before.

The hypothesis purported gender differences with regard to symptoms of vicarious trauma, that is, girls would experience more symptoms than boys. A higher percentage of girls reported moderate symptoms of PTSD on the IES-R (table 2). Independent-samples t-test was conducted to make the comparisons and significant scores were found for girls on the intrusion subscale and total score obtained on the IES-R (table 3). The hypothesis is supported and a strong cultural trend is confirmed through the statistical analysis. The significant difference is on intrusion subscale for girls. A 19% effect was estimated by applying Cohen's d test and though small in size, it is the most prominent of the remaining effects obtained. This finding can be interpreted in the backdrop of the cultural milieu. In majority homes, teenage girls are kept closer to their parents and made to focus inward, that is, inside the house. They are housebound, with little or no opportunity to play physical games or venture out of the house except for the absolute necessary and unavoidable. Their activities are perforce managed around the daily routine and proximity to parents and relatives is consequently greater. As the Pakistani society becomes more and more conservative, aggressive and volatile, the restrictions on girls increase, leaving few avenues to vent out feelings or physical needs. At the same time, the Pakistani society tends to obsess about rituals and repeated actions. Similarly, repetitive thoughts are part of the pattern and having very little else to do, girls in particular, become victim of intrusive thoughts as compared to boys who have numerous opportunities to mingle in public at large and successfully distract themselves with other interests. This also explains why the overall score on IES-R is higher for girls.

The reason that effect for gender on avoidance and hyperarousal subscale scores is insignificant has cultural relevance. The Pakistani people have a tendency to gather around and 'watch the show'. Whenever a road accident or fight takes place, hordes gather to watch the spectacle. Indeed, there have been numerous incidents of bomb blasts where people have rushed to the spot and a second blast took place with greater casualties. There is more curiosity and excitement to go and see what is happening thus reducing sensitivity to avoidance aspect and insignificant results. At the same time, the nation is hypervigilant and easily excited. Secondly, as reactive individuals, most tend to

respond on the spur of the moment to serious and non-serious events. People are more to react violently than rationally. Due to prevailing law and order situations and uncertain political scenarios, the people are already chronically anxious and expecting the worst. The small effect of Cohen's d on both subscales also lends support to the findings. Pakistani culture is basically described as a collectivistic type. Normal households comprise of grandparents and parents and siblings who in turn have their own families, all under the same roof. Therefore the joys and sorrows of one are felt and shared by all. The family system works as a buffer against the stresses of life and is a source of growth and resilience. The vulnerability of girls to PTSD can be understood in better in the background of a society where traditional gender roles are strictly enforced (Elklit & Peterson, 2008).

Adel (2011) studied war violence in children between the ages of 9-16 in Gaza Strip. Significant gender differences in favor of boys were also found. In a study conducted in four European nations assessing exposure of adolescents to traumatic events where mean age was 14.5 years, direct and indirect exposure to traumatic event as it happened to a family member or close friend was assessed. Gender had relevance to the kind of trauma adolescents were exposed to. The authors have estimated lifetime prevalence of PTSD in the total sample at 9.0 %. Furthermore, 14.1% of the sample reached a subclinical level of PTSD. Having once been exposed, girls were found to suffer from PTSD twice as often as boys. At the same time, cultural differences between the nations were considered responsible for several outcomes, such as female-male ratio in PTSD and traditional gender roles.

Conclusion

The outcome of the present research indicates that there is a gender difference with girls experiencing more symptoms of PTSD than boys. These outcomes are falling into the pattern found by extant research that gender differences although typically small, are found (Saylor, Belter& Stokes, 1997). For instance, boys have been reported to exhibit more externalizing behavior problems but they are not in the extreme (Vogel & Vernberg, 1993). Gender differences in emotional problems for adolescents are well known across cultures. Girls are at a two-fold risk for predicted psychopathology and more symptoms of depression than boys.

A research such as this also raises the question of meaningfulness and importance of gender studies findings to health and performance (Singer et al., 1995). According to Qadir et al. (2011) gender disadvantages pervasively effect life and autonomy with greater part of it mediated through poor care and restricted opportunity. The mental health of Pakistani women also seems to be exceptionally poor. Previous studies have sought to quantify the impact of gender disadvantage by comparing outcomes between boys and girls, with the implicit assumption that girls were generally disadvantaged. It may be because gender roles are exceptionally clearly defined (Qadir et al., 2011). Thus in countries where practices and services are inequitably distributed, governmental policies and programs should be designed to cater for a segment of society disadvantaged because of its gender. Young girls who suffer from mental health issues need intervention at early stages in order to improve their future lives and of those associated with them.

Adolescents are valuable members of society. Rather than focusing on their behavioral, emotional issues which may arise due to environmental, familial and socio-political events, they need to be understood in the context of their developmental capabilities (Wolfe & Mash, 2006). Adolescence is an opportunity to imbue values and develop skills from the society needed for a successful and productive adult life.

Limitations of the Study

The present study has gained basic valuable information about the presence of PTSD symptoms in adolescent girls and boys; however there is much more to be done in this area. As the country has suffered long from terrorist attacks and communal violence, the effects will reverberate through the generations. The range and scope of the present research needs to be expanded. Due to restrictions in time and financial resources, the study was carried out in a major metropolitan city of Pakistan. Larger samples from different parts of the country will create a better understanding of the magnitude of the problem. Furthermore, only self-report forms were used to gather information. A methodology which involves teachers and/or parents will yield more information and create awareness in the adolescents' support system about their areas of difficulty. The present research investigated one aspect of trauma, that is, symptoms. Information from multiple aspects needs to be obtained. Researches on similar topics but from different angles and scope will help develop a better understanding of the pre, peri and post-traumatic processes involved in Pakistan

adolescents due to indirect exposure to violence. Eventually, this can contribute to a local and universal understanding of trauma and PTSD; enabling policy making at governmental level and developing effective teaching and intervention strategies.

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