

Psycho-social impact of Army Public School terrorist attack on high school children in district Peshawar, Khyber Pakhtunkhwa, Pakistan

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Objective: To determine the psycho-social impact of Army Public school terrorist attack on high school children in district Peshawar.

Method: A cross-sectional study was conducted on Government and private high school children from March to August 2015. Four hundred and twenty children's in the age group of 13-16 years, equally selected from both Government and private high schools through stratified random sampling were enrolled in the study. Data was collected from the participants through psychometric tools included **Impact of Event Scale-Revised (IES-R)** and **strength and difficulty questionnaire (SDQ)**. **Statistical package for social sciences version 16** was used for the **data analysis**. **Chi-square test** was used to determine the association **between the age, gender and psychological and social problems**.

Results: Total 420 students **in the age group of 13 to 16 years** were included **in** the study, in which 210 were males and 210 were females. Out of the 420, 59 (14%) showed avoidance, 46 (11%) intrusion and 38 (9%) hyper-arousal. Score of 33 and more were shown by 59 (14%) of the children which mean 59 (14%) of the children had some sort of psychological problems. Social problems were shown by 17 (4%) of the children while 21 (5%) were at risk of such problems.

Conclusion: After analysing the psychosocial impact of Army public school terrorist attack on high school children, it is highly recommended that government should start certain

psycho-social relief activities in the schools, in order to bring back the students to their normal life and will revive a spirit of enthusiasm in them.

Key words: Psychological impact, social impact, high school children, adolescents, Army Public school, terrorism.

Introduction:

These days no individual on the planet earth is immune to the devastating effects of terrorism. In the era of 1970-2014, about 3400 terrorist attacks hit the educational institutes. [1, 2] In 2004 the most lethal attack occurred in a school in Beslan, Russia, as a result of which 338 were killed. [3]The country where most of the terrorist attacks on educational institutes took place from 1990-2013 is Pakistan; here total 753 attacks occurred whose primary purpose was to destroy the educational building especially of female's institute rather the human loss. [4]

On 16 December, 2014 an inhumanity happened in the Army Public school Peshawar, Pakistan in which nine gunmen in the military uniform entered the school and started the massacre of the children and the staff. Children were compelled to watch the extreme violence and at the end 150 were killed including 132 children. [5] This attack is regarded as the most brutal and violent attack on record since 1970. [2]

Research shows that man-made disaster is psychologically more pathogenic than the natural disaster and terrorist activity is considered as one of the most pathogenic disastrous activity [6]. The most vulnerable population in this regard are the children especially in the age group of 6-15 years because they are psychologically immature. It is well known that children who became victim of war and terrorism became physically, socially and psychologically

traumatized but here it is important to mention that children who are not directly involved are equally socially and psychologically affected.[7,8]

Reactions shown by the children after exposure to traumatic event depend on their age, personality and developmental stage. Some of the children are strongly frustrated due to continue discussion of the event in the society and the school while some are seems to be normal but inside they are sad and scared. Some shows changes in mood, became irritable, appetite and sleep pattern disturbance, anxiety, depression and some strange behaviour which was previously not a part of their personality.[9]

Now schools, colleges, universities, offices, restaurants and other public places are really insecure. Due to which people prefer to stay at home rather than to go out. These days group conversations are mostly shifted to dyadic conversation, people no longer trust each other and a decline is observed in the kindness, love, leadership and team work.[10] Due to psychological disturbance created by terrorist activities, children mostly remains isolated do not make friends and tend to avoid the social gatherings. So they miss the opportunity to learn the social interactions skills and self confidence which are the important ingredients for moving in a society. These children have no faith on their abilities and face a lot of problems in the schools when they are not able to engage themselves in class rooms' tasks, so the schools became the mostly unlikely part of their life. [11]

Most of the research is focused towards those who are directly involved but there is no emphasis to conduct the research on those who are indirectly involved like by watching the whole event in television, newspaper and discussion in the community. So there is a serious need to put our attention toward this issue because we live in a province that is most adversely

affected by terrorism, where more than 1000 schools are destroyed by the terrorist activities which spread feeling of hopelessness in the school going children. [12]

This study aimed to determine the psycho-social impact of Army Public school terrorist attack on high school children in district Peshawar.

Methods and Materials:

A cross-sectional study was conducted from March to August 2015 in the government and private high schools of district Peshawar, Khyber Pakthunkhwa Pakistan. Total 420 children in the age group of 13-16 years were included in the study in which 210 were males and 210 were females. Stratified random sampling technique was used, with 210 students randomly selected from government and 210 from private schools. In these 420 study participants, 147 were from class 8th, 139 from class 9th and 134 from class 10th. Schools were randomly selected through lottery method and then inside each school, children were randomly selected through table of random numbers.

All the students of class 8th, 9th and 10th were included and the students who were absent on the day of data collection and federal schools were excluded from the study because these schools did not give the permission for data collection due to security issues.

13 Ethical approval was obtained from Khyber Medical University, Ethical committee and the education authorities to conduct the study in the selected schools. The purpose of the study was explained to the heads of the selected schools and an informed written consent was obtained from them. Similarly an informed written consent was obtained from the parents of the selected children through their teachers.

Data was collected in the class rooms through a validated and self administered questionnaire. Each question of the questionnaire was explained to the students by the researcher and then time was given to them to choose their options. The data collection tool was **Impact of Event Scale-Revised (IES-R) and strength and difficulty questionnaire (SDQ)**. [13, 14] SPSS (Statistical Package for Social Sciences) version 16 was used for data analysis.

Results:

A total of 420 students from class 8th, 9th and 10th class of both the public and private high schools, were included in the study.

Table: 1 Study Participants Demographics

Variables	Frequency	Percentages
Gender		
Male	210	50%
Female	210	50%
Age (years)		
13	113	27%
14	113	27%
15	101	24%
16	93	22%
Class		
8 th	147	35%
9 th	139	33%
10 th	134	32%

No statistically significant association was observed between the student gender and psychological (p-value =0.780) and social problems (p-value =632). Similarly no statistically

significant association was observed between the student age and psychological (p-value =0.462) and social problems (p-value =0.625).

7 In case of impact of event scale (IES-R), some of the results were quite high such as 69% participants choose the option extremely that if that event had not happened or was not real, 52% children were extremely trying to remove that event from their memory and 43% were jumpy and easily startled now. Results of all the questions are shown in the table below.

Table: 2 Frequency and Percentage of extreme feelings shown by study participants

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1 Impact of Event Scale (IES-R)	Frequency	Percentage of extreme Feeling
Any reminder brought back feelings about it.	172	41%
I had trouble staying asleep.	25	6%
Other things kept making me think about it.	96	23%
I felt irritable and angry.	126	30%
I avoided letting myself get upset when I thought about it or was reminded of it.	101	24%
I thought about it when I didn't mean to.	126	30%
I felt as if it hadn't happened or wasn't real.	290	69%
I stayed away from reminders about it.	126	30%
Pictures about it popped into my mind.	147	35%
I was jumpy and easily startled.	46	11%
I tried not to think about it.	126	30%
I was aware that I still had a lot of feelings about it, but I didn't deal with them.	84	20%
My feelings about it were kind of numb.	96	23%
I found myself acting or feeling like I was back at that time.	80	19%
I had trouble falling asleep.	46	11%

I had waves of strong feelings about it.	147	35%
I tried to remove it from my memory.	218	52%
I had trouble concentrating.	54	13%
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart	63	15%
I had dreams about it.	50	12%
I felt watchful and on guard.	109	26%
I tried not to talk about it.	126	30%

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Table: 3 Result of Impact of event scale (IES-R)

Impact of Event Scale	Scoring the Scale	Frequency	Percentages showed by Children
Psychological problems	Sum of the means of the three subscale scores i.e., Avoidance, Intrusion and hyper-arousal	59	14%
Avoidance	Mean of items 5, 7, 8, 11, 12, 13, 17 and 22	59	14%
Intrusion	Mean of items 1, 2, 3, 6, 9, 14, 16 and 20	46	11%
Hyper-arousal	Mean of items 4, 10, 15, 18, 19 and 21	38	9%

In case of strength and difficulty questionnaire (SDQ), on question of Considerate of other person feelings, 16% chooses the option not true. About 13% of the children are now not in favour of any sort of sharing, 5% have the opinion that they are not helpful when someone is hurt, 5% are now not kind to younger children and 2% are not ready for any volunteer work.

Table: 4 Result of Strength and Difficulty Questionnaire (SDQ)

Score of Strength and Difficulty Questionnaire	Interpretation	Frequency	Percentage
6-10	Clinically significant problem unlikely	382	91%
5	Risk of social problem	21	5%
0-4	Clinically significant problem present	17	4%

Discussion:

In case of ⁷ Impact of Event Scale (IES-R), some of the participants showed extreme feelings about certain questions of questionnaire such as more than half chooses the option extremely in response of question that if that event was not happened or it was not real, similarly more than half of the children choose the option extremely in reply of question that they tried to remove the event from their memory. Most of the children had the opinion that they had extreme brought back feelings about the attack and pictures of event continuously popped into their mind and same percentage showed waves of strong feelings about the event. Overall result is that 14% of the children have the likely presence of psychological problem.

In response of strength and difficulty questionnaire (SDQ), majority of the children had the opinion that they give value to other person feeling, kind to younger children, helpful if someone got hurt but there was a percentage of children who were no longer in favour of sharing, helping others and to show kindness to others. Out of 420 students, 5% were at risk and 4% had some sort of social problems.

A study conducted by Ughetta Moscardino et al with the title of psychological adjustment 18 months after the Beslan school attack Russia; the result showed that even after passing more

than a year, ¹² adolescents who were not directly exposed to the event had psychological problems. ¹⁰ [15] Six months after the World Trade Centre, prevalence of mental health problems among the children and adolescent was calculated, here the prevalence was slightly high i.e., 18% as compared to this study.[16] Response of the Norwegian High school children to the Oslo terror attack of July 2011 was determined in which the percentage of Avoidance, Intrusion and Hyper-arousal were lower i.e., 5.5, 0.8 and 1.1% as compared to this study.[17] After the Boston Marathon Bombing, a study showed that 9% of the youth had psychological problems including emotional symptoms, hyperactivity, conduct problem and inattention. [18]

In 2009, Pakistan Institute of Peace studies conducted a study in three cities i.e., Lahore, Rawalpindi and Peshawar to assess the response of the adults and the children towards the terrorism. About 37% of the respondents had the opinion that children were highly afraid to go outside their home and 21% said that these days' children became more violent and aggressive due to terrorist activities. [19]

In Karachi, Ahmed AE et al. conducted a study that showed that due to ongoing terrorist activities in the city, 66% of the undergraduate university students had mild stress level and the main stress symptom observed was Irritability. [20] In our study majority of the students have feelings related to if this event was not happened and removal of the event from the memory. In the same city, a study reported ⁶ impact of terrorism on mental health and social life of the medical students was 79% and 17% [21] which is higher than our study.

School based research studies is the best tool for the screening of the children who are at risk of psychological problems and need care. [22]

According to the stress buffering model, ¹¹ social support from family, friends and school personnel gives protection to ² the individuals from the adverse effects of the ² stress. This support may mitigate the impact of stress by providing solution to the problem, by reducing the importance of the problem or distract the attention from the problem and in turns facilitates the adoption of certain healthy lifestyle activities ² such as exercise, proper nutrition, rest and take care of personal hygiene. A study conducted in Dimona, Israel determined that association between bombing and its perceived stress was very strong in case of low ⁸ social support from family and friends but ⁸ this association became almost disappear if social support was strong. The findings of the study suggest that the peer support is a natural protectant for the adolescents with terrorism related stress. [23]

Limitation of Study:

Army public school terrorist attack may have psychosocial impact on rest of schools in Khyber Pakhtunkhwa, as this study covers schools only in district Peshawar, so there is a need of further research studies in this regard.

Conclusion:

The presence of psychological and social problems among the high school children of district Peshawar is of particular concern. In this scenario Education department Khyber Pakhtunkhwa in co-ordination with the health department of the province should appoint the psychologists to develop psycho-social relief programs for these children. They will also help the teachers as how to teach these children, how to deal with their anxiety, its management and coping skills.

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