

PSYCHO-SOCIAL IMPACT OF ARMY PUBLIC SCHOOL TERRORIST ATTACK ON HIGH SCHOOL CHILDREN IN DISTRICT PESHAWAR, KHYBER PAKHTUNKHWA, PAKISTAN

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ABSTRACT

OBJECTIVE: To determine the psycho-social impact of Army Public School terrorist attack on high school children in district Peshawar, Khyber Pakhtunkhwa (KP), Pakistan.

METHODS: This cross-sectional study was conducted in government and private high school children from March to August 2015. Four hundred and twenty children were equally selected from both government and private high schools through stratified random sampling. The data was collected using psychometric tools, including Impact of Event Scale-Revised (IES-R) and Strength and Difficulty Questionnaire (SDQ). Pearson's chi-squared 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 (50%) were males and 210 (50%) were females. Out of the 420, 59 (14%) showed avoidance, 46 (11%) intrusion and 38 (9%) had hyper-arousal. Scores of ≥ 33 were shown by 59 (14%) children that means 14% of the children had some sort of psychological problem. Social problems were shown by 17 (4%) children while 21 (5%) were at risk of developing such problems.

CONCLUSION: High school children in district Peshawar Pakistan, had both psychological and social problems along with risk of developing such problems after the tragic event, which suggested a need of psycho-social relief activities in the schools, in order to bring back the students to their normal life.

KEY WORDS: Psycho-social Impact (Non-MeSH); High School Children (Non-MeSH); Adolescent (MeSH); Terrorism (MeSH); Pakistan (MeSH); Army Public School terrorist attack (Non-MeSH).

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INTRODUCTION

These days no individual on 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, a total of 753 attacks occurred whose primary purpose was to destroy educational buildings, especially of female institutes, rather the human loss.⁴

On 16th December, 2014 an inhumanity happened in the Army Public school Peshawar, Pakistan in which nine gunmen in military uniform entered the school and started the massacre of children and the staff. Children were compelled to

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watch 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 natural disasters 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 become victims of war and terrorism become 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 showed by children after exposure to traumatic events depend upon their age, personality and developmental stage. Some of the children showed extreme frustration due to continuous discussion of the event in their surroundings while some of them were normal from outside, but inside they were scared and grieving. Changes in mood, irritability, loss of appetite, disturbance in sleep pattern, anxiety, depression and appearance of some strange behaviour were very common which were not related to their personality prior to the incident.⁹

Now schools, colleges, universities, offices, restaurants and other public places are constantly under-threat. Due to which people prefer to stay at home rather than going out. These days, group conversations are mostly shifted to

dyadic conversation, people no longer trust each other and a decline is observed in kindness, love, leadership and team work.¹⁰ Due to psychological disturbances created by terrorist activities, children mostly remain isolated, do not make friends and tend to avoid social gatherings. This results in children missing the opportunity to learn social interaction skills and self-confidence, which are important ingredients for moving in a society. These children have no faith in their abilities and face a lot of problems in schools when they are not able to engage themselves in class room tasks, thus making schools less productive part of their lives.¹¹

Most of the research is focused towards those who are directly involved but there is no emphasis to conduct research on those who are indirectly involved, like by watching the whole event on television, newspaper and discussion in the community. Thus, there is a serious need to put our attention towards this issue because we live in a province that is most adversely affected by terrorism, where more than 1000 schools are destroyed by terrorist activities which spread the feeling of hopelessness in 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, Khyber Pakhtunkhwa (KP), Pakistan.

METHODS

This cross-sectional study was conducted from March to August 2015 in government and private high schools of district Peshawar, KP, Pakistan. A total of 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

TABLE I: STUDY PARTICIPANTS DEMOGRAPHICS

Variables		Frequency (n=420)	Percentages
Gender	Male	210	50
	Female	210	50
Age (years)	13	114	27.1
	14	114	27.1
	15	100	23.8
	16	92	21.9
Class	8 th	147	35
	9 th	139	33
	10 th	134	32

and 210 from private schools. In the 420 study participants, 147 were from class 8th, 139 from class 9th and 134 from class 10th. The 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.

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 principal investigator to give exactly the same context of questioning so that each respondent received exactly the same interview stimulus as any other (same question, fixed order of questions, short, precise, one-dimensional question, same manner) to ensure no variation,

and the 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 of both the public and private high schools were included in the study. Of the total students 210 (50%) were males and 210 (50%) were females and age ranged from 13-16 years, as shown in Table I.

No statistically significant association was observed between the student gender and age of the students with social problems (Table II) and psychological problems (Table III).

In case of Impact of Event Scale (IES-R), some of the results were quite high such as, 69% of the participants chose 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 even then. Results of all the questions are shown in the Table IV. Among the total, 59(14%) showed avoidance, 46 (11%) intrusion and 38 (9%) had hyper-arousal. Scores of >33 were shown by 59(14%) children that mean 14% of the children had some sort of psychological problem as depicted in Table V.

In the case of Strength and Difficulty

TABLE II: CROSS-TABULATION BETWEEN THE GENDER AND AGE OF THE STUDENT WITH SOCIAL PROBLEM

Variable		Social Behavior			p-value
		Clinically significant problem	Risk of problem	Problem is unlikely	
Gender	Male (n=210)	9	8	193	0.632
	Female (n=210)	10	12	188	
Age (years)	13 (n=114)	5	3	106	0.625
	14 (n=114)	6	8	100	
	15 (n=100)	6	5	89	
	16 (n=92)	2	4	86	

TABLE III: CROSS-TABULATION BETWEEN THE GENDER AND AGE OF THE STUDENT WITH PSYCHOLOGICAL PROBLEM

Variable		Psychological Problem		p-value
		Yes	No	
Gender	Male (n=210)	181	29	0.780
	Female (n=210)	179	31	
Age (years)	13 (n=114)	100	14	0.462
	14 (n=114)	96	18	
	15 (n=100)	89	11	
	16 (n=92)	75	17	

Questionnaire (SDQ), on question of 'Considerate of other person feelings; 16% chose 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. Social problems were shown by 17(4%) children while 21(5%) were at risk of developing such problems, as shown in Table VI.

DISCUSSION

In the case of Impact of Event Scale (IES-R), most of the participants showed extreme feelings about certain questions of the questionnaire such as 69% chose the option extremely in response of the question that, if that event had not happened or it was not real, similarly, more than half of the

children chose the option extremely in reply of the 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 the event continuously popped up in their minds and same percentage showed waves of strong feelings about the event. Overall result is that 14% of the children are likely to have presence of psychological problem.

In response of Strength and Difficulty Questionnaire (SDQ), majority of the children were of the opinion that they give value to the feelings of others, kind to younger children, helpful if someone gets hurt but there was a percentage of children who were no longer in favour of sharing, helping others and/or 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 study showed that even after passage of more than an year, adolescents who were not directly exposed to the event had psychological problems.¹⁵ Six months after the World Trade Centre, prevalence of mental health problems among the children and adolescents were calculated, with slightly high prevalence 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% respectively 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 children towards terrorism. About 37% of the respondents had the opinion that children were highly afraid to go outside their homes and 21% said that these

TABLE IV: FREQUENCY AND PERCENTAGE OF EXTREME FEELINGS SHOWN BY STUDY PARTICIPANTS

Impact of Event Scale - Revised (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

TABLE V: 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

TABLE VI: 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

days, children became more violent and aggressive due to terrorist activities.¹⁹

In Karachi, Ahmed AE et al. conducted a study which showed that due to ongoing terrorist activities in the city, 66% of the undergraduate university students had mild stress levels and the main stress symptom observed was irritability.²⁰ In our study, majority of the students had feelings related to, 'if this event had not happened and removal of the event from the memory'. In the same city, a study reported impact of terrorism on mental health and social life of the medical students was 79% and 17%²¹ which is higher than our study. The reason for these differences may be due to sample size, sampling technique, age group, study setting and sensitivity towards terrorism. Although our sample is likely not representative of most child disaster samples, as 14% of our sample reported psychological problems, and 4% reported social problems while 5 % are at risk to such problems after this tragic event. These rates are much lower than those found in most child disaster samples.²² Of course, the level of disaster exposure and other related factors account for some of the differences in the prevalence of psychopathology across studies.^{22,23} School based research studies is the best tool for the screening of the children who are at risk of psychological problems and need care.²⁴

According to the stress buffering model, social support from family, friends and school personals give protection to the individuals from the adverse effects of stress. This support may mitigate the impact of stress by providing a solution

to the problem, by reducing the importance of the problem or distract the attention from the problem and in turn, facilitates the adoption of certain healthy lifestyle activities such as exercise, proper nutrition, rest and taking 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 social support from family and friends, but this association almost disappears if social support is strengthened. The findings of the study suggest that peer support is a natural protectant for adolescents with terrorism related stress.²⁵

LIMITATION OF STUDY

Army Public School Terrorist attack may have psycho-social impact on rest of the schools in KP, Pakistan as this study covers schools only in district Peshawar; there is a need of further research in this regard.

CONCLUSION

The presence of psychological and social problems among the high school children of district Peshawar, KP, Pakistan is of a particular concern. The findings of our study shows that children in district Peshawar had both psychological and social problems along with risk of developing such problems after the tragic event, which suggests a need of psycho-social relief activities in the schools, in order to bring back the students to their normal life. In this scenario, Education Department KP in co-ordination with the Health Department should appoint psychologists to develop psychosocial relief programs for these children. They will also help

the teachers as to how to teach these children, how to deal with their anxiety, its management and coping skills.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

AD: Concept acquisition of data, drafting the manuscript, final approval of the version to be published

NM, IA & ZK: Study design, analysis & interpretation of data, final approval of the version to be published

AI: Critical review, final approval of the version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest

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