

## Prevalence of Post Traumatic Stress Disorder Among Secondary School Students in Baquba

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### Abstract

**Background:** Post traumatic stress disorder occurs at high rate in adolescents and its rate appears to be rising . because this syndrome can have long lasting effect when it occurs before adulthood ,early recognition and treatment are vital .

**Aims of the study:** This study aims to identify the life time prevalence rate of PTSD among secondary school student and the relation of socio demographic characteristics after students exposed to stressful evens in their life Baquba city. which is considered to be one of the hot areas in Iraq .

**Method:** 296 secondary schools students were selected randomly from six secondary schools in Baquba city for the period from 1/10/2005 to 25/12/2005 those student were screened by semi-structure interview based on (DSM IV) criteria for the diagnosis of PTSD .

**Results:** The rate of life – time prevalence of PTSD among those students was 27.4% and the rate was higher among female which is 31% mainly of 13-14 years old and 24.6% in males mainly of 12-13 years old also the study revealed that the rate was higher in low socio economic stat and also high in students who live in urban area and those with family loss and injury .

**Conclusion:** The life-time prevalence of PTSD in adolescents (12-18) years of age is relatively high and it is higher in female than male and the rate is high

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Baquba teaching hospital/ Diyala/ Iraq.

### Diagnostic criteria of PTSD

The diagnosis of PTSD ,as described in the DSM-IV(APA,1994),requires the presence of definite traumatic experience and certain symptoms .

a person must have been subjected to an experience that threatened loss of or identity or serious injury and have reacted to that events with intense emotion ,horror ,fear ,helplessness or disorganized behavior .in addition specific criteria for these additional symptoms clusters must be met or at least one of theme last for one month .

1-Re-experiencing:- intrusive thought of trauma or repetitive post traumatic play ,recurrent nightmares(include those with recognizable content),flashback or trauma ,reenactment ,distress at reminder of trauma ,physiological reaction to trauma .

2- Numbing and avoidant - Avoids thought and feeling ,avoids activities and people ,failures of recall trauma ,loss of interest in significant ,Detachment from others ,Restricted ,after lost sense of the future .

3- Hyper arousal – exaggerated startle response hyper vigilance, difficulty in



concentration , irritability insomnia ,memory difficulties, fear of re occurrence . Although PTSD must caused significant clinical important in social ,education occupational functioning .

PTSD is categorized according to when symptoms occur and how long they last . There are 3 types of PTSD .

1- Acute – symptoms last between one and three months after the events .

2- Chronic –symptoms last more than three months after the events .

3- Delayed onset -symptoms don't appear until at least six months after the events .

Although PTSD must have caused significant clinical impairment in social , educational , occupation functioning .

## Method

This study was conducted in six secondary schools for both sexes in Baquba city .

## Subject

1. A sample of 296 students out of 1782 students were selected randomly by taking every sixth one from the list of class .

2. The sample included 167 males and 129 females ,their age range from 12-18 years old.

3. The total number of female students are 781 students present in .

A- Omm-salama intermediate and secondary school (493) .

B- Alhuria intermediate and secondary school (289) .

4.the total number for male student 1001 students present in .

A- Alsharif-Alradi secondary school (736) .

B- Burair intermediate school (265) .

## Design

1- A semi structured interview based on (DSM IV) criteria was used for interviewing each student to reach definite diagnosis of PTSD .

2- Socio-demographic characteristic had been used for those student diagnosed with PTSD .

3- Approval to conduct the study was taken from the general manger of education in Diyala governerate .

4- Consent form was taken from the students were told they are in research study exploring the percentage of PTSD in their age and it is effect on their study and their health . participating in the study is voluntary and the privacy of information were secured .

5-The result were subject for statistical analysis (chi-squared).

## Results

For the whole data .frequencies and percentage were calculated and to determined wether the distribution of frequencies for any event are different either from change or from theoretically expected destitution (chi-squared) were performed whenever applicable .

1. table(1) shows that life-time prevalence rate of PTSD in students sample is 27.4% .

2. table(2) shows the rate of PTSD students sample is higher in female than male .

3. table(3) shows the rate of PTSD in relation family loss or injury it is higher in female .

4. tables(4 , 5) shows the rate of PTSD in male and female students in relation to financial income is higher in low socio economic stat .

5. table(6) shows the rate of PTSD in male students is higher in 1st intermediate class 50%with mean age (13.1) .

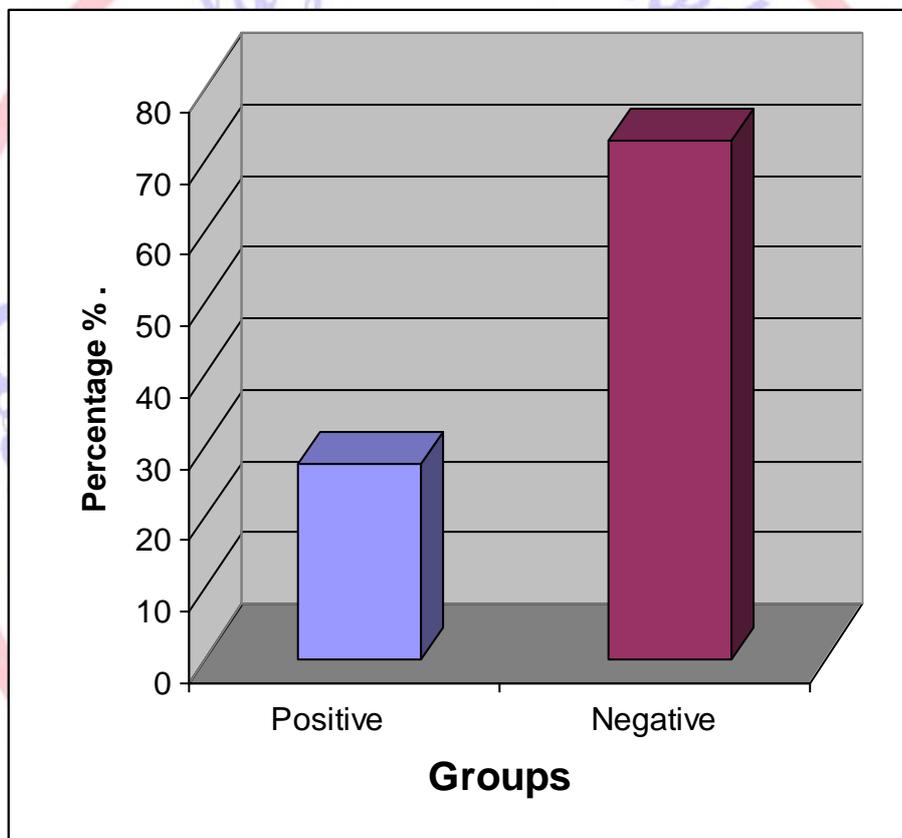
6. table(7) shows the rate of PTSD in female students is higher in secondary intermediate class 45.4 with mean age (13.5) .

7. table(8) shows the rate of PTSD of both male and female student is higher in urban area than rural area .

**Table (1):** life –time prevalence of PTSD in students sample.

PTSD Groups	NO.	Percentage %	Sign.(P-value)
Positive	81	27.4	<0.01
Negative	215	72.6	
<b>Total</b>	<b>296</b>	<b>100</b>	

Chi-Square = 60.66



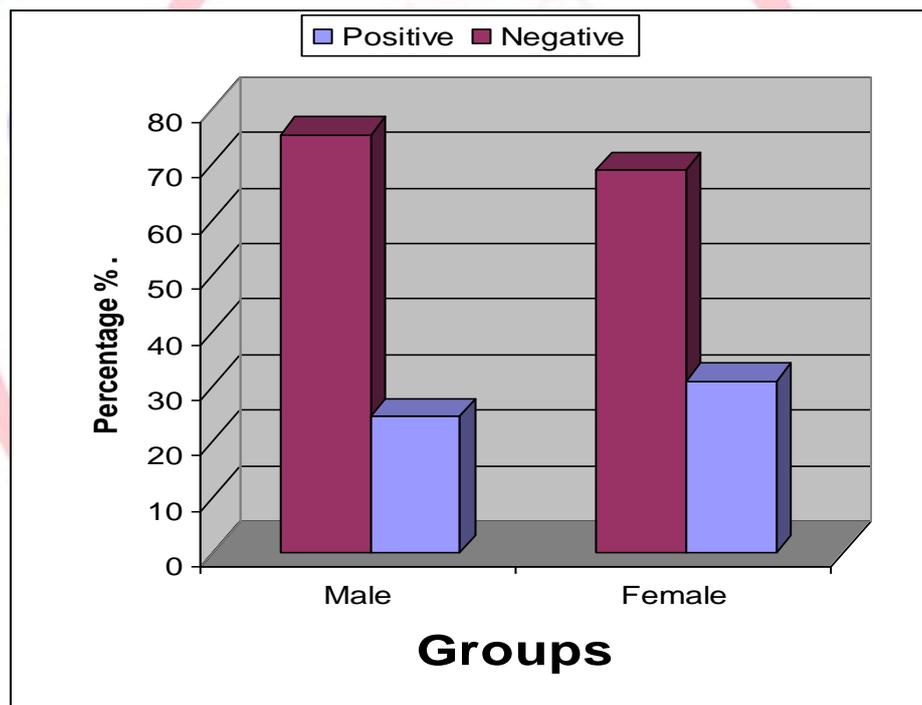
**Figure (1):** Bar chart of life –time prevalence of PTSD in students sample.

**Table(2):** Rate of PTSD in students sample in relation to gender .

Gender Groups		NO.	Percentage %	Sign.(P-value)
Male	Positive	41	24.4	<0.01
	Negative	126	75.6	
Female	Positive	40	31	<0.01
	Negative	89	69	
Total		296	100	

Male: Chi-Square = 43.26

Female: Chi-Square =18.16



**Figure(2):** Bar chart of Rate of PTSD in students sample in relation to gender .



**Table(3):** Rate of PTSD in relation to family loss or injury.

Gender Groups		NO.	Percentage %	Sign.(P-value)
Male PTSD	Positive	14	34	<0.01
	Negative	27	66	
Female PTSD	Positive	16	40	<0.01
	Negative	24	60	
Total		81	100	

Male: Chi-Square = 47.43

Female: Chi-Square =36.9

**Low income:** the income of the students and his family is not sufficient for his daily requirement.

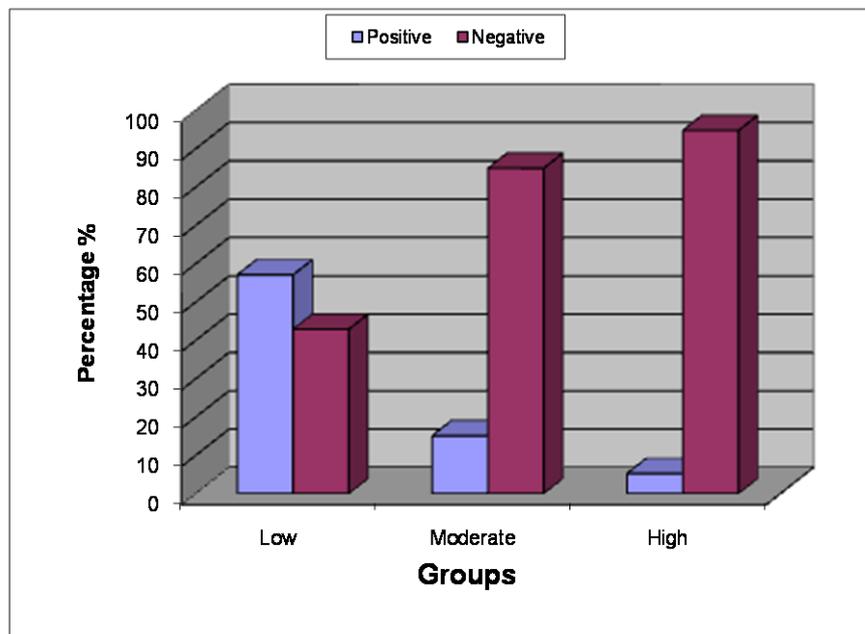
**High income:** the income of the students and his family is sufficient for his daily requirement and for extra need .

**Moderate income:**the income in the students and his family is sufficient for his daily requirement.

**Table (4):** Rate of PTSD in relation to financial income in male .

Groups( Male)		NO.	Percentage %	Sign.(P-value).
low income	Positive	24	57.1	<0.01
	Negative	18	42.9	
Moderate income	Positive	16	15.1	
	Negative	90	84.9	
High income	Positive	1	5.25	
	Negative	18	94.75	
Total		167	100	

Chi-Square = 48.57

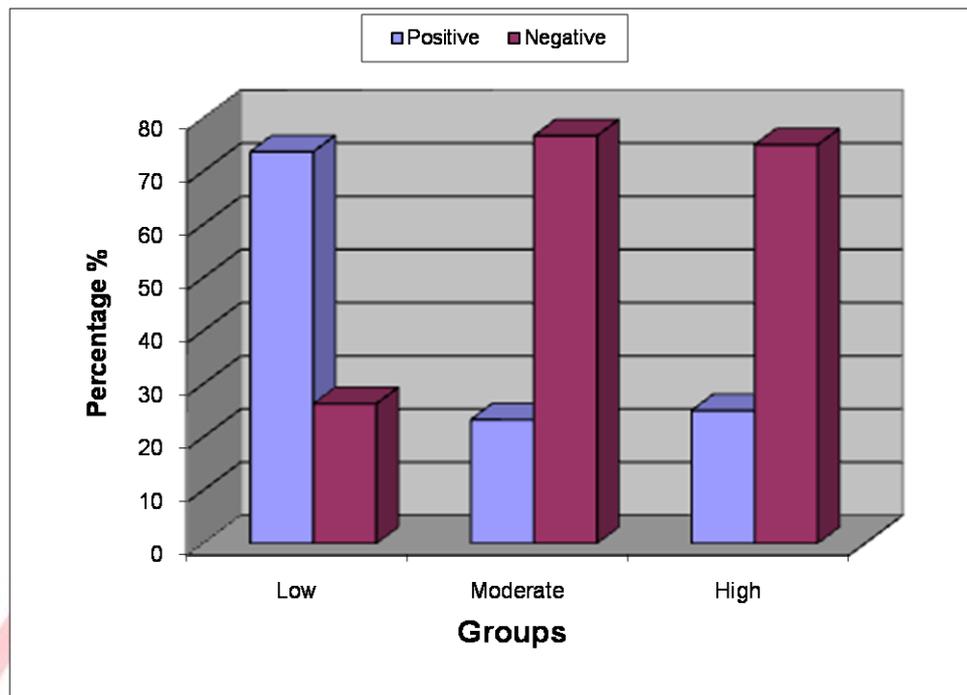


**Figure (4):** Bar chart of PTSD in relation to financial income in male .

**Table(5):** Rate of PTSD in relation to financial income in female .

Groups(Female)		NO.	Percentage %	Sign.(P-value)
low income	Positive	14	73.7	
	Negative	5	26.3	
Moderate income	Positive	20	23.3	
	Negative	66	76.7	
High income	Positive	6	25	
	Negative	18	75	
Total		129	100	

Chi-Square = 36.9



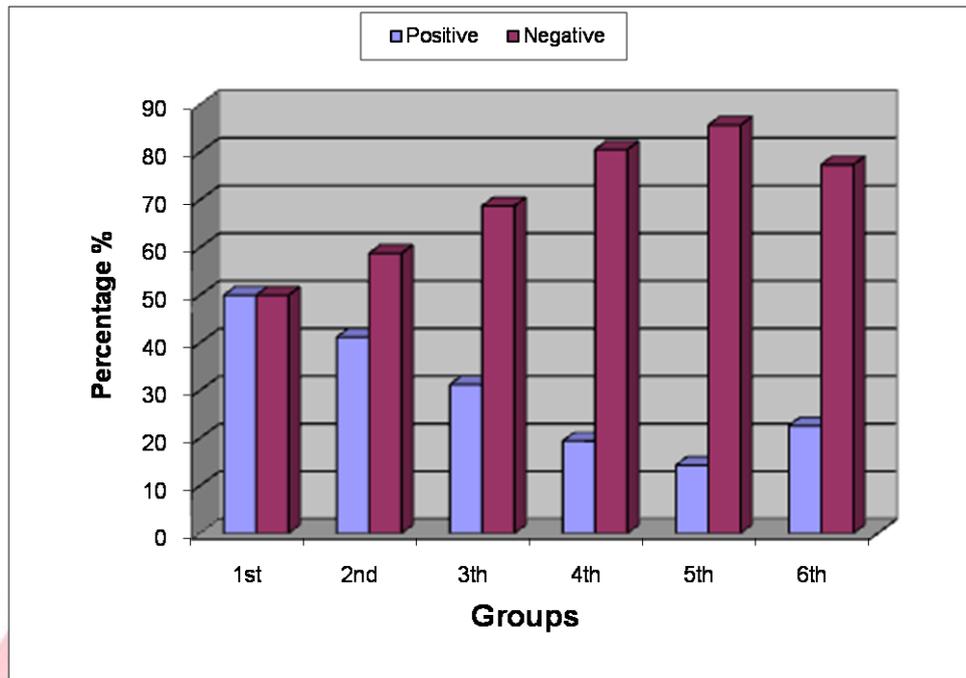
**Figure (5):** Bar chart of PTSD in relation to financial income in female .

**Table (6):** Rate of PTSD in male students sample in relation to school class and age group.

Class (Male)	Cases	NO.	Percentage %	Min. age(Years)	Max. age(Years)	Sign.(P-value)
1st	Positive	5	50	12	13	<0.01
	Negative	5	50			
2nd	Positive	7	41.2	13	14	
	Negative	10	58.8			
3th	Positive	5	31.25	14	15	
	Negative	11	68.75			
4th	Positive	7	19.4	15	16	
	Negative	29	80.6			
5th	Positive	5	14.3	16	17	
	Negative	30	85.7			
6th	Positive	12	22.6	17	18	
	Negative	41	77.4			
<b>Total</b>		<b>167</b>	<b>100</b>			

S.D= 1.16 S.E of mean = 0.12

Chi-Square = 47.67



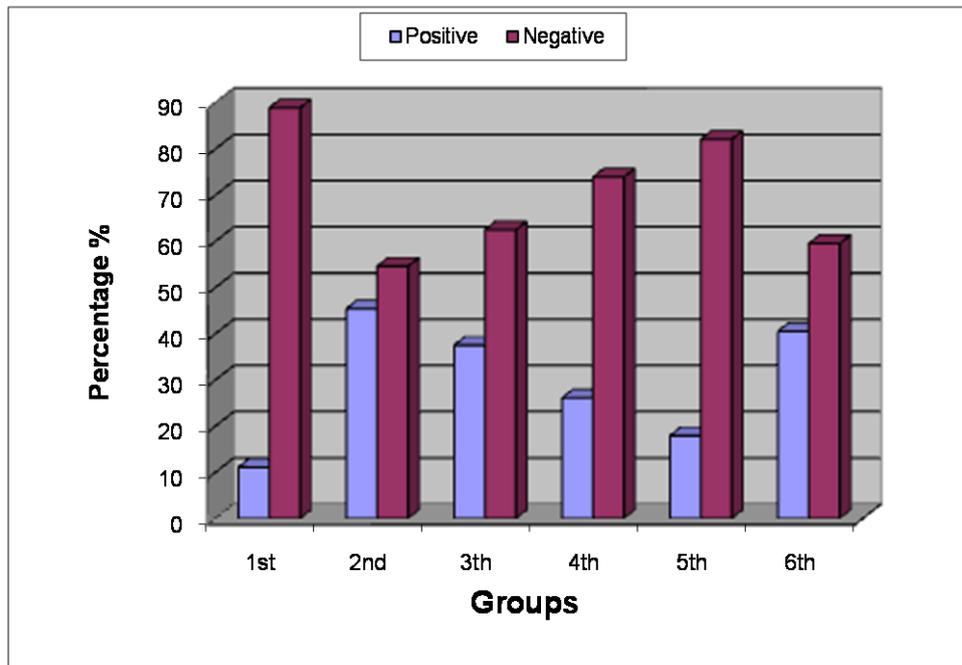
**Figure(6):** Bar chart of rate of PTSD in male students sample in relation to school class and age group.

**Table (7):** Rate of PTSD in female students sample in relation to school class and age group.

Class (Female)	Cases	NO.	Percentage %	Min. age(Years)	Max. age(Years)	Sign.(P-value)
1st	Positive	1	11.1	12	13	<0.01
	Negative	8	88.9			
2nd	Positive	5	45.4	13	14	
	Negative	6	54.6			
3th	Positive	6	37.5	14	15	
	Negative	10	62.5			
4th	Positive	6	26.1	15	16	
	Negative	17	73.9			
5th	Positive	5	17.9	16	17	
	Negative	23	82.1			
6th	Positive	17	40.5	17	18	
	Negative	25	59.5			
<b>Total</b>		<b>129</b>	<b>100</b>			

S.D =1.67 S.E of mean = 0.19

Chi-Square = 35.41



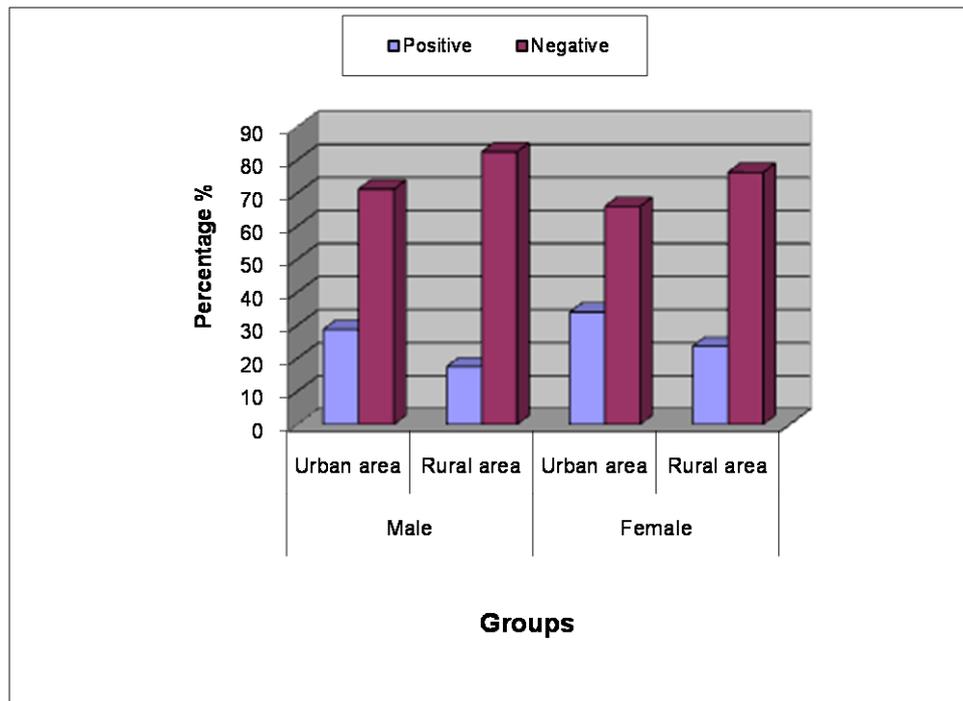
**Figure (7):** Bar chart of rate of PTSD in female students sample in relation to school class and age group.

**Table (8):** Rate of PTSD according to residential area.

Gender Groups	area	Cases	NO.	Percentage %	Sign.(P-value)
Male	Urban area	Positive	30	28.8	<0.01
		Negative	74	71.2	
	Rural area	Positive	11	17.5	
		Negative	52	82.5	
Female	Urban area	Positive	31	34	<0.01
		Negative	60	66	
	Rural area	Positive	9	23.7	
		Negative	29	76.3	
<b>Total</b>			<b>296</b>	<b>100</b>	

Male: Chi-Square = 10

Female: Chi-Square =21.7



**Figure (8):** Bar chart of rate of PTSD according to residential area.

## Discussion

The present study revealed that the prevalence rate of PTSD in students sample in Baquba Governorate according to DSM IV criteria is 27.4% in comparison with other studies had been done before ,In Baghdad the rate of acute PTSD was 25.4% [44] . When rate of PTSD are drawn from risk- population prevalence can vary from (3-100%) as (witness ,parental homicide , school shooting , Rape , sexual abused , exposed to violence ) in some way to violence in their communities meet the criteria for PTSD [45] . In Kuwait after the gulf crisis 80% of Kuwaiti children had PTSD symptoms [46] .Youngest who specially exposed to sudden unexpected man-made violence , war , will developed PTSD with prevalence rate from 27-100%[47] .In this study the percentage of PTSD response is higher in female than male which is 44.9%and32.5%respectivly which is similar with all studies that have investigated gender as a risk factors have found that females are more likely than males to develop PTSD . Also the study revealed that younger adolescents aged 12-15 year old more prone

to develop PTSD than the other age groups probably because higher level of anxiety trait in younger subject and the location of school of those student are closely to police station which was exposed to many attack by armed gun man and this result matched with other study revealed the prevalence rate of PTSD in children aged 2-15 year old was (37%) [48].

In this study high level of PTSD victims were found with low income which is consistently associated with greater post disaster distress and it is matched with other study show the rate of 91% victim had PTSD with low income [49] . Also in those student with personal loss of family member or injury in the traumatic event revealed high rate of PTSD . and comparison to other studies shows high rate of PTSD in family loss are injury [50] . Also that study revealed the prevalence rate is higher in adolescent how live in urban area due to severity of stressor and this result matched with the study show the range of prevalence of PTSD from 1-34% [51] .

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