

THE PREVALENCE OF POST-TRAUMATIC STRESS DISORDER AMONG PRIMARY SCHOOLS PUPILS IN BAGHDAD/AL-KARKH

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Received date: 24 March 2020

Revised date: 14 April 2020

Accepted date: 04 May 2020

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ABSTRACT

Background: The critical current situation in Baghdad and the huge amount of violence affect the whole population causing different degree of distress, anxiety, fear, and depression. The psychological trauma may precipitate post-traumatic stress disorder. In children post-traumatic stress disorder is a common response to community violence with higher rates in youngster's exposed to life threatening events.

Objectives: To estimate the prevalence of post-traumatic stress disorder in primary schools and study different associated factors (demographical, cultural, and social). **Subjects and Methods:** A descriptive cross-sectional study using random sample (multi-stage sampling) on 25 primary schools (boys and girls) from Al-Karkh sector/ Baghdad for the period of six months of teaching period 2010-2011 involving 2707 pupils from both sexes. A well-structured questionnaire including socio-demographic and post-traumatic stress disorder related factors were filled by the researcher through direct interview with ensured confidentiality. **Results:** The results obtained from primary schools showed a **29.8%** prevalence of post-traumatic stress disorder among such vulnerable group (**29.6% in boys and 30.1% in girls**), this rate is high enough to cause concern to take preventive and therapeutic measures to deal with it. The prevalence of criteria of post-traumatic stress disorder was **29.8%** for reaction to fear or terror or disability and painfully recalls the event, **38.7%** for avoidance symptoms, **30.1%** for hyper arousal symptoms and **98.1%** for study or social activity affected, obvious grief, or stress. **Conclusion:** A higher proportion of primary school children were affected with post-traumatic stress disorder with main factors associated adversely were female sex, increase failure rate, low family economic status, and if the parents were alive or not. The present study points the importance to be aware of early symptoms, an urgent need for targeted interventions, and the value of special follow-up.

KEYWORDS: Post-Traumatic Stress Disorder, Primary Schools Pupils in Baghdad/Al-Karkh.

INTRODUCTION

Post-traumatic stress disorder (PTSD) is defined as an anxiety disorder, characterized by aversive anxiety-related experiences, behaviors, and physiological responses that develop after exposure to a psychologically traumatic event (sometimes months after). Its features persist for longer than 30 days, which distinguishes it from the briefer acute stress disorder. These persisting posttraumatic stress symptoms cause significant disruptions of one or more important areas of life function.^[1]

Although a few instruments for assessing PTSD have been developed, they are appropriate for different contexts, such as school sniper attacks, wars, earthquakes, hurricanes, cruise-ship sinking, and industrial accidents. A quick screening instrument for childhood PTSD is to identify populations that require an early intervention. It will be of help to clinicians, especially after disasters when a large percent of population is affected. However, the existing instruments have long contents, ranging from 22 to 54 items. To date, no short PTSD screening scale developed for children and adolescent. Brief screening instruments are more preferable in order to avoid burdening families, aid

works, health care professional and the children themselves.^[2-6]

A number of studies have found a high prevalence of PTSD among children exposed to war trauma, state-sponsored terrorism, or interpersonal violence. For example, a study in countries exposed to widespread political trauma estimated that the prevalence of lifetime PTSD is 37% in Algeria, 28% in Cambodia, 16% in Ethiopia, and in Gaza 18% in 2001^[7] while in 2007 was 70.1%.^[8] The latter area in the Middle East has been subject to several studies on children's recollection of trauma experiences and their impact on their mental health. For example, the most common traumatic events reported by Palestinian children were, seeing victims' pictures on television, and witnessing bombardment and shelling; with between one-third and half of the children in different samples fulfilling criteria for PTSD.^[9,10] They were also likely to present with high rates of anxiety or depressive disorders.^[10,11]

The current study was conducted aiming at estimating the prevalence of PTSD in primary schools pupil in Baghdad/Al-Karkh and studying different associated factors that may play role in its determination.

SUBJECTS AND METHODS

A descriptive cross-sectional study using random sample (multistage sampling) on 25 primary schools (boys &

girls) from total schools related to Baghdad/Al-Karkh for the period of six months of teaching period extended from October 2010 to March 2011.

The sample size for the required pupils to be included in the current study was determined using Epi-Info 6 (EPI-Info Software Statistical Packages, WHO recommended, version 6, Adopted by CDC, USA, Atlanta) with worst expected result of non-response of 20% and expected frequency of 25% involving 851 pupils from both sexes of primary school pupils.

Al-Karkh district schools are subdivided into three sectors (Al-Karkh1, Al-Karkh2 & Al-Karkh3) according to the area and the map of Baghdad City, each one of these sectors is further subdivided into several educational regions (Al-Karkh 1 is subdivided into 4 educational regions, Al-Karkh 2 is subdivided into 4 educational regions, & Al-Karkh 3 is subdivided into 6 educational regions).

Using multistage sampling method covering 20% of primary schools, 25 primary schools (mixed schools for boys and girls) were randomly selected from a total of 135 schools of two educational regions (Al-Karkh/Al-Merkez and Al-Karkh/Al-Mansour) which are the subdivision of Al-Karkh 1 sector. The name of school, location, number of pupils screened, and number of pupils included in the study were as follows;

	<i>Place</i>	<i>Name of school</i>	Screened	Included
1	<i>Al-Aameria</i>	<i>Al-Bayader</i>	105	38
2	<i>Al-Aameria</i>	<i>Al-Bedoor</i>	107	35
3	<i>Al-Aameria</i>	<i>Al-Thakhafa</i>	97	35
4	<i>Al-Andalus</i>	<i>Al-Batool</i>	147	41
5	<i>Al-Andalus</i>	<i>Al-Gufraan</i>	87	25
6	<i>Al-Dawoodi</i>	<i>Al-Naseer</i>	106	26
7	<i>Al-Gazaliya</i>	<i>Al-Nahrwan</i>	103	36
8	<i>Al-Jameaa</i>	<i>Al-Azhar</i>	100	34
9	<i>Al-Karama</i>	<i>Al-Eman</i>	116	42
10	<i>Al-Khadraa</i>	<i>Al-Aseel</i>	99	32
11	<i>Al-Khadraa</i>	<i>Al-Farook</i>	107	29
12	<i>Al-Mansor</i>	<i>Al-Neil</i>	100	29
13	<i>Al-Motanabi</i>	<i>Al-Ashaari</i>	108	38
14	<i>Al-Saleheia</i>	<i>Al-Maserra</i>	101	32
15	<i>Al-Shulaa</i>	<i>Al-Aflaad</i>	112	41
16	<i>Al-Washash</i>	<i>Al-Khuld</i>	81	35
17	<i>Al-Washash</i>	<i>Al-NumanBinMonder</i>	127	49
18	<i>Al-Washash</i>	<i>Al-Zahawee</i>	133	42
19	<i>Al-Yarmouk</i>	<i>Nablus</i>	109	26
20	<i>Haifa Street</i>	<i>Al-Nada</i>	100	31
21	<i>Hay Elteshree</i>	<i>Al-Wehda</i>	108	31
22	<i>Heteen Street</i>	<i>Al-Ameen</i>	108	27
23	<i>ShekMaroof</i>	<i>Al-Rahmania</i>	96	25
24	<i>ShekhGunaid</i>	<i>Al-Bohtori</i>	104	27
25	<i>Tarablus</i>	<i>Al-MansorTasisi</i>	146	45
		Total	2707	851

After taking the permission of the authorized personnel in the ministry of education, one class from each grade was randomly chosen by simple random sampling (first, second and third class) in each school selected, then a total of 851 pupils exposed to traumatic events, aged 6-10 years, were included and interviewed (out of the total 2707 screened). This total number was distributed proportionally by school levels (First, Second, and Third) and district subdivisions from Al-Karkh region selected.

Data were obtained through direct interview using a questionnaire that was filled by the researcher in the presence of the class teachers and other school staff members, the name of the student and the name of the school were not included in the questionnaire to ensure the confidentiality. The total 851 students responded to the questionnaires with good response rate (100% response rate). During data collection, teachers were inside the classroom thus giving more confidence to pupils and hence ensuring more information about each student especially in demographic aspects.

The researcher described the purpose and process of the survey to the pupils, and gave standard instructions with many examples about the situation or nature of the questions to be easier for all pupils in the classroom before starting the interview of those pupils whom exposed to trauma only.

Data were obtained through well structured, direct interview, close-ended questionnaires, with questions about their socio-demographic economic status and then questions on PTSD related factors answered by Yes or No using Arabic version of M.I.N.I (International Neuropsychiatric Interview PTSD module 'I').

The questionnaire consisted of 15 items, concerning the socio-demographic variables elicited including age, sex, grade, number of failure years (if present), economic status of family, if any of parent is dead, education level of parents, then Arabic version of M.I.N.I was applied which start by ask the pupil if he exposed to any type of these trauma include; violent crimes such as kidnapping, rape or murder of a parent, sniper fire, and school shootings; motor vehicle accidents such as automobile; severe burns; exposure to community violence; war; peer

suicide; natural disaster, relative sudden death, and physical abuse. Then they were asked about:

=> Their reaction was fear or terror or disability.

=> For the last month, painfully recall the event.

=> Avoidance symptoms: (a- Avoid thinking of event or things remind it .b- Difficulty in remembering important details of event. c- Loss or decrease in social activity or interest. d- Feel lone Weak sensation or emotionally or stranger. e- Weak sensation or emotion.f- Feel of life endangered or bad than others).

=> Hyper arousal symptoms: (a- Find difficult to sleep. b- Obviously in tension or suffering pouts of rage. c- Difficulty to concentrate well. d- Nervous or in defensive mode. e- Rapid to shake).

=> For the last month, study or social activity affected, grief, or stress.

Each of the questions in this part of the survey was closed-end answer-type questions, with answers either yes or no, if (one no) of these questions it was not PTSD and excluded, while it must be (five yes) to be consider PTSD, in (Q3) it must be with (three yes) or more to be yes answer and if less than three it consider no answer, the same for (Q4) but (it was two or more yes to be yes answer).

The data were coded, entered, and analysed using computer facilities. The statistical analyses were completed using SPSS-18 (Statistical Packages for Social Sciences- version 18). Statistical analysis included the descriptive measures of frequency and percentages and the application of analytic test of significance, the Pearson chi-squared test, for testing the significance of difference between percentages for the qualitative variables with the use of $P \leq 0.05$ as the level of significance.

RESULTS

The prevalence of current PTSD in primary school pupils exposed to traumatic events was 29.8% (851 pupils exposed to traumatic event out of the total 2707 pupils screened) in the 25 primary schools in Baghdad/Al-Karkh 1 (Al-Mansoor & Al-Merkz educational region) as shown in figure 1 which also represent about 9.4% of the total screened pupils.

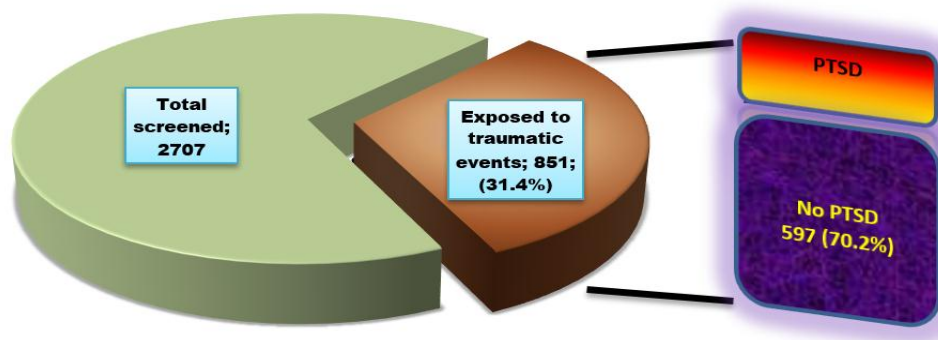


Figure 1: The prevalence of PTSD in primary school pupils.

Table 1 shows the demographic characteristic (sex, age, religion, and nationality) and the grade of the pupil with the number of failure years (if present) of the sampled pupils.

Regarding sex, 402 of boys were exposed to traumatic events (47.2%), from them 119 (29.6%) are PTSD; while 449 of girls were exposed to such traumatic event (52.8%), of them 135 (30.1%) were diagnosed as PTSD. This relatively high prevalence in females was not significant statistically ($P=0.882$).

According to the religion, in current study all PTSD pupils were Muslims 253 except one Christian pupil whom was diagnosed with PTSD.

For the nationality the prevalence of PTSD in Arabs was 30% while in Kurdish was 25%, with no significant difference between them statistically ($P=0.569$).

The prevalence of PTSD was higher with second class (32.3%), than in third classes (30.5%) and the lowest in the first class (26.9%), but statistically no significant different between them ($P=0.350$).

According to the years of failure the prevalence of PTSD is highest (46.2%) in pupils who failed two years, (36.6%) in pupils who had only one year of failure and only 28.8% in pupils without any failure with no significant difference between these rates ($P=0.131$).

Table 1: The distribution of PTSD according to demographic characteristic of pupils included in the study.

	Total		PTDS		χ^2 ;d.f.;P
	No	%	No	%	
Sex Boys	402	47.2	119	29.6	0.022;1;0.882
Girls	449	52.8	135	30.1	
Religion Muslim	848	99.6	253	29.8	3.201;2;0.202
Christian	1	0.1	1	100.0	
Others	2	0.2	-	-	
Ethnicity Arabic	823	96.7	247	30.0	0.325;1;0.569
Kurdish	28	3.3	7	25.0	
Grade First class	294	34.5	79	26.9	2.098;2;0.350
Second class	282	33.1	91	32.3	
Third class	275	32.3	84	30.5	
Failure years No	744	87.5	214	28.8	4.07;2;0.131
One year	93	10.9	34	36.6	
Two years	13	1.5	6	46.2	

* The Pearson Chi-square test is significant at the 0.05 level.

Table 2 demonstrates if the mother and father is alive or not, the distribution according to level of education of the father, the mother, and economic status of the family.

Concerning if the parent are alive or not, for the father is highly significant difference ($P=0.0001$) with a prevalence of PTSD for alive father (21.6%) and not alive (70.6%), while for the mother there is also statistically significant different ($P=0.0001$) with (27.5%) to alive mother and (65.4%) not alive.

The prevalence of PTSD increasing with decreasing the economic status of family, highest rate (43.6%) was low status, middle status (28.7%), and least was high status (15.3%), with a significant different statistically ($P=0.0001$).

Regarding father educational level the highest prevalence is secondary educational level(40.3%), the least illiterate (16.1%), while primary level in the mother (35.4%) is the highest and illiterate (21.5) the least, with a significant different statistically in both, father ($P=0.0001$) mother ($P=0.018$).

Table 2: The distribution according to level of education of father, mother and economic status in sample study and if father and mother alive.

	Total		PTDS		χ^2 ;d.f.;P
	No	%	No	%	
The father is alive Yes	708	83.2	153	21.6	136.5;1;0.0001*
No	143	16.8	101	70.6	
The mother is alive Yes	799	93.9	220	27.5	33.41;1;0.0001*
No	52	6.1	34	65.4	
Family economic status High	189	22.2	29	15.3	40.34;2;0.0001*
Middle	428	50.3	123	28.7	
Low	234	27.5	102	43.6	
Educational level of father Illiterate	118	13.9	19	16.1	30.45;4;0.0001*
Primary	77	9.0	26	33.8	
Intermediate	197	23.1	72	36.5	
Secondary	176	20.7	71	40.3	
College & Higher	283	33.3	66	23.3	
Educational level of mother Illiterate	65	7.6	14	21.5	11.86;4;0.018*
Primary	195	22.9	69	35.4	
Intermediate	227	26.7	70	30.8	
Secondary	160	18.8	55	34.4	
College & Higher	204	24.0	46	22.5	

* The Pearson Chi-square test is significant at the 0.05 level.

Table 3 shows the PTSD related questionnaires by using Arabic version of MINI.

Regarding the reaction is fear or terror disability the prevalence is (29.8%), while for painfully recall the event is (29.9%), these two questions are consider: re-experience symptoms.

According to Avoidance symptoms the prevalence of PTSD is (38.7%): for Avoid thinking of event or things remind it is (30.2%) with no significant different statistically ($P=0.061$), (25.2%) Difficulty in remembering an important details of event with significant different statistically ($P=0.014$), (79.6%) Loss or decrease in social activity or interest with high significant different statistically ($P=0.0001$), (53.2%) Feel lonely or stranger with high significant different statistically ($P=0.0001$), (71%) Weak sensation or emotion with high significant different statistically ($P=0.0001$), (30.5%) feel of life endangered or bad than others with significant different statistically ($P=0.015$).

The prevalence of PTSD concerning Hyper arousal symptoms is (30.1%): for Find difficult to sleep is (30.4%) with significant different statistically ($P=0.038$), (39.3%) Obviously in tension or suffering pouts of rage with high significant different statistically ($P=0.0001$), (44.5%) Difficulty to concentrate well with high significant different statistically ($P=0.000$), (39.6%) Nervous or in defensive mode with high significant different statistically ($P=0.0001$), (29.9%) Rapid to shake with no significant different statistically ($P=0.615$).

A high prevalence of PTSD (98.1%) for the work or social activity affected or obvious grief or stress.

Table 3: The distribution according to MINI (The PTSD related factors).

		Total		PTDS		χ^2 ;d.f.;P
		No	%	No	%	
1-Your reaction is fear or terror or disability (Re-experience)	Yes	851	100.0	254	29.8	-
	No	-	-	-	-	
2-For the last month, painfully recall the event (Re-experience)	Yes	849	99.8	254	29.9	-
	No	2	0.2	-	-	
3-a-Avoid thinking of event or things remind it	Yes	837	98.4	253	30.2	3.5;1;0.061
	No	14	1.6	1	7.1	
3-b-Difficulty in remembering an important details of event	Yes	349	41.0	88	25.2	6.06;1;0.014*
	No	502	59.0	166	33.1	
3-c-Loss or decrease in social activity or interest	Yes	255	30.0	203	79.6	430.6;1;0.0001*
	No	596	70.0	51	8.6	
3-d-Feel lonely or stranger	Yes	417	49.0	222	53.2	213.6;1;0.0001*
	No	434	51.0	32	7.4	
3-e-Weak sensation or emotion	Yes	183	21.5	130	71.0	188.9;1;0.0001*
	No	668	78.5	124	18.6	
3-f-feel of life endangered or bad than others	Yes	826	97.1	252	30.5	5.871;1;0.015*
	No	25	2.9	2	8.0	
Q3- (Avoidance symptoms)	Yes	657	77.2	254	38.7	-
	No	194	22.8	-	-	
4-a-Find difficult to sleep	Yes	825	96.9	251	30.4	4.294;1;0.038*
	No	26	3.1	3	11.5	
4-b-Obviously in tension or suffering pouts of rage	Yes	560	65.8	220	39.3	69.7;1;0.0001*
	No	291	34.2	34	11.7	
4-c-Difficulty to concentrate well	Yes	429	50.4	191	44.5	88.98;1;0.0001*
	No	422	49.6	63	14.9	
4-d-Nervous or in defensive mode	Yes	558	65.6	221	39.6	73.7;1;0.0001*
	No	293	34.4	33	11.3	
4-e-Rapid to shake	Yes	842	98.9	252	29.9	0.253;1;0.615
	No	9	1.1	2	22.2	
Q4- (Hyperarousal symptoms)	Yes	843	99.1	254	30.1	-
	No	8	0.9	-	-	
5-For the last month, work or social activity affected or obvious grief or stress	Yes	259	30.4	254	98.1	-
	No	592	69.6	-	-	

* The Pearson Chi-square test is significant at the 0.05 level.

DISCUSSION

The current prevalence of PTSD obtained in this study among primary school pupils (29.8%) was relatively lower than that in Gaza survey 2007 (70.1%)^[8]; in Nairobi (35%) after US embassy bombing^[12]; in bombing victims in France (31%)^[13], and in Algeria (37%).^[7] While it was higher than that reported in Baghdad in 2005 (18%) and in 2006 (14%); in Afghanistan (20.4%)^[14]; in New York City after September 11 attack (19.3%)^[15]; after earthquake in north China (18.8%)^[16]; in Cambodia (28%), and in Ethiopia (16%).^[7] This can be explained by the influence of difference in age (all these studies were applied to the targeted population of all age groups) and other related social, economic, and cultural factors and also the sample selection criteria. PTSD is a serious and often chronic response to overwhelmingly stressful events. The disorder is associated with increased rates of medical morbidity, poor health-related quality of life, and functional impairment^[17,18]. Children can be affected

directly by exposure to trauma and by adults' reactions, i.e. through primary and secondary traumatization.^[19]

Regarding sex differences, in current study the prevalence of was more in girls (30.1%) than boys (29.6%), the same results were obtained to that reported in many other studies conducted, like in Gaza 2007 (71.1% of the girls and 69% of the boys)^[8]; in Baghdad 2005 (girls 60% and boys 40%), and in 2006 (72% girls and 38% boys); and In Eastern Afghanistan (7.5% boys and 31.9% girls).^[14]

A report from Turkey's 1999 earthquake on post-disaster psychological effects showed higher scores in depression, anxiety, and PTSD in females.^[20] The girls was more than boys ratio which indicates that females are more vulnerable to develop PTSD therefore, require more attention, however, the lower prevalence of PTSD among boys may be due to under estimation because of family values, traditional and/or cultural norms.^[14,21]

As with other types of acute and chronic trauma, exposure to war and political conflict has been found to independently impact on adults' and children's mental health, predominantly associated with internalizing disorders such as PTSD.^[22,23] According to religion, all PTSD pupils were Muslims except one Christian pupil whom was diagnosed with PTSD. Religion reflects traditional and/or cultural norms different from Muslim and also the pressure of the community on them. Arabic and Kurdish nationalities are reported a high prevalence of PTSD%, although, they are different nationalities but living in the same geographical place make there prevalence high in both. This could be explained by the different dangerous condition faced all nationalities and social and cultural conditions prevailing in different communities. Apart from war related traumatic stress, there is reason to expect that additional aversive and stressful events are going to occur within severely affected communities. These additional traumatic events may in turn increase the risk of mental health disorders. Following the so-called "cycle of violence hypothesis" one would predict that high levels of war violence lead to higher levels of violence within the family and different communities.^[24,25]

The prevalence of PTSD is higher with second class, and least in the first class, there was no association between children's age and exposure to trauma. The addition of class levels or the children's age as a covariate, because of their independent association with some of the dependent variables, did not alter the findings.^[8] There is a distinct relationship between school performance (expressed by the number of failure years) and the prevalence of PTSD as the highest percent was in pupils having 2 years failure and more. They may manifest difficulty concentrating; demonstrate a decline in school achievement, or exhibit disruptive classroom behaviors, the failure is stressful condition which consider a type of PTSD to pupils. As in many other studies, the prevalence of PTSD diminishes as educational levels increase.^[26]

In this study there is high association between losing of one or both parents with increase PTSD prevalence. Nearly everybody lost a beloved one or suffered serious psychological trauma, many children lost one or two parents, siblings, and/or extended family members, and they witnessed most stressful event in their life and were not prepared to deal with the condition. Many had to cope with physical disabilities.^[21]

Among children, high economic status group experienced less traumatic events than middle and low economic status groups. Strong association was noticed between PTSD and family economic status, which mean there was increasing PTSD with decreasing level of economic status. The majority of families had a very low monthly income.^[8] A significant higher percentage of PTSD pupils belong to those with secondary educational level of father while mother education effect was more in the primary education level, this may support the

hypothesis that these pupils may exposed to PTSD at any educational level to the parents.

Exposure to war trauma was significantly associated with all measures of PTSD, including its three subscales, and with anxiety. The impact appeared related to the total number and severity of events, without any single event predicting PTSD symptoms. The lack of association between trauma and general mental health problems, predominantly of behavioral and social nature, was not surprising, as such generic measures usually reflect longstanding problems (in behavioral, emotional and social functioning) which are related to parenting, school or developmental difficulties, rather than acute trauma-induced distress.^[27,28]

Attention to PTSD in medical settings is a key to providing treatment to this population, because primary care, rather than specialty mental health services, is the point of contact with the health care system for the majority of individuals with PTSD.^[29]

Regarding the PTSD symptoms we had three main categories; re- experience, avoidance, and hyper arousal symptoms that were variably different from those obtained by the surveys at 2005 & 2006 in Al-Yarmouk Teaching Hospital. The difference between this study and the two studies during 2005 and 2006, could be related to many factors: like the difference in the sample age, this study deal with pupils from first, second and third class while two studies deal with pupils from first to sixth; the difference in place where these studies conducted; and the time difference due to continuity of stressful situation in Baghdad.^[30]

PTSD symptomatology may have far greater and longer lasting consequences for children because it affects the emerging personality of a child in the course of his or her structural development.^[31] Because a child has less defined and developed resources and adaptive coping mechanisms to assist in the regaining of equilibrium and wellbeing, she/he is less able to process the trauma.^[32] Also, a child bears the burden of being least able to voice his or her feelings and fears directly. As a result, a child who witnesses community violence may be particularly vulnerable to emotional and developmental problems.^[33] Witnessing community violence negatively impacts a child's sense of security by undermining belief in the parent's ability to protect.^[34] Attachment theorists maintain that trust and security in personal attachments are essential for healthy development because a child's early attachment experiences form his or her concepts of self, others, and the world.^[35] Disruptions in attachment with primary caregivers are a primary cause of emotional and behavioral problems among children.^[36] Children reared in an environment of violence may feel hopeless leading to a belief that they have neither the resources to nor the likelihood of achieving lasting or socially approved life goals. Related to this sense of helplessness is a shortened sense of the future that interferes with

seeing themselves in meaningful future roles. These children may engage in high risk sexualized or criminal behavior.^[37]

In conclusion, the impact of the current extremely violent environment in Baghdad was high enough to cause PTSD among children and hence emphasize the need of more concern to preventive and therapeutic measures. Girls were more vulnerable to develop PTSD than boys reflecting the likelihood of developing PTSD (type, amount of the exposure, and the degree of life threat). The main factors associated adversely with PTSD were increase failure rate, low family economic status level of parents, and if the parent alive or not.

The study recommend the need is essential for an effective plan & program to deal with the psychological trauma and its devastating effect. These results open the door for further researches about this subject. More programs involving the education of the families in addition to family member who complain from psychological disturbances (brothers, sisters and their parents) aided by coordination with schools, primary health care centers and families. The program activities include also training, consultation, and education about trauma to mental health workers, teachers and social supervisor in schools. Pediatric psychiatry evaluation for the children and their families is necessary accomplished by cooperation in pediatric department and with other trauma centers is recommended.

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