

Post-traumatic stress reactions in children of war in Iraq

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Abstract:

Background: The war in Iraq has had a tremendous impact on children.

Objectives: To investigate the frequency and severity of Posttraumatic Stress reactions in primary school Iraqi children who experienced school bombardments as war trauma.

Methods: In the period from April to May 2005; 121 Children from four primary schools in Baghdad completed self-report Child Post Traumatic Stress Reaction Index (CPTSD-RI), Arabic version,

Results: The children reported severe to very severe PTSD reactions were 90 (74.4%) of the total number of participants. There was a highly significant correlation between severity and subscales of avoidance, arousal and experiencing ($p>0.01$). There were no significant correlations between younger and older age groups, and between boys and girls. The most frequently reported symptoms are identified as traumatic (67.77%), sleep disturbances (64.46%), easily startled (61.98%) and sense of foreshadowing (62.8%)

Conclusions: Highly frequent rates of PTSD reactions reported in Iraqi primary school children who had experienced war trauma. Severe and very severe reactions reported by children were also high.

Keywords: PTSD, children of war, CPTSD-RI

Introduction

Recently, mental health professionals have begun researches on the prevalence and phenomenology of post-traumatic stress disorder (PTSD) among children exposed to trauma. These researches revealed that traumatic experiences are common among children ⁽¹⁾. The incidence of PTSD in a number of studies have converged to suggest that traumatic events can lead to severe and debilitating PTSD in children, with rates varying greatly across studies ⁽²⁾.

The majority of studies refer to young people exposed to natural catastrophic events such as floods (with prevalence of 37% at post-flood and 7% at 17 years ⁽³⁾), also following earthquakes with rates varying from 37% to 91% depending on proximity ⁽⁴⁾. Pynoos et al 1987 studied children exposed to community violence, sniper attack at school ⁽⁵⁾. Nearly 40% were found to have moderate to severe PTSD fourteen months later. The same children were assessed and reported that 74% of those most severely exposed in the playground still report high levels of PTSD, and 19% of unexposed children reported some degree of PTSD ⁽⁶⁾.

The impact of war on children attracted the attention of the research community. Children, who had experienced war trauma, 4 years after they left Cambodia, 50% had developed PTSD and mild but prolonged depression ⁽⁷⁾. In study of Kuwaiti children following the gulf war, it was found that 70% reported moderate to severe PTSD reaction ⁽⁸⁾. Wien et al (1995) established PTSD in 25% and

depression in 17% of a small sample of Bosnian adolescents who had moved to America during the Yugoslavian war⁽⁹⁾. Ahmad (1992) found the same rate in displaced Kurdish children⁽¹⁰⁾.

The aim of this study is to investigate the frequency of PTSD reactions in Iraqi children who experienced war trauma, and to figure out the nature and frequency of PTSD reactions.

Patients & Methods:

In the period from April to May 2005, one hundred twenty one (11.5% of the student body) of four primary schools in Dora, and Bajia in Al-Karkh Sector of Baghdad.

Age range of Children was 7-12 years, mean ($9.8 \pm SD 1.63$). The children were divided in two age groups, younger (7-9 years) and older age groups (10-12 years), based on a median split of the sample (9 years) to examine potential age differences. (Table 1)

Those four schools had exposed to direct bombardment by mortars or indirect car bombs explosions close to their buildings or play yards. Ninety percent of the students were Muslims and 10% Christians.

Children were recruited through their school's headmaster after describing the study to them and then to parents through teachers-parents councils. All children had experienced bomb explosion at their schools. Some children's schools sustained mild to moderate damage, also some children sustained severe injuries, and some schools were condemned for few weeks.

The measure used is Child Post Traumatic Stress Reaction Index (CPTSD-R1)^(11,12,13). It is a 20 items self-report scale designed to assess post-traumatic stress reactions of children of 6-16 years following exposure to traumatic events⁽⁵⁾. It was patterned after diagnostic and statistical manual of mental disorders 3rd edition [DSM-III].

Items rated on 0-4 scale: mild PTSD reaction if total score is 12-24, moderate 25-39, severe 40-59, and very severe 60 and above. The CPTS-R1 translated to Arabic following piloting⁽¹⁴⁾.

The instructions for answering the questions are as follows: answer each question by placing a check mark under the word that describes your feelings. Answers are on a 5- point scale ranging from 0 (none) to 4 (most of the time).

Children completed all self-report questionnaires approximately 5 months after the explosions.

Assessments conducted in small groups in which the questionnaire administered by a single examiner, mostly the student's teacher of each group who helps to facilitate comprehension of items after reading them aloud. Then children read along silently.

Results:

The children reported severe to very severe PTSD reactions was 90 (74.4%) of the total number of participants (score >40). 63 children (70%) of the severe and very severe reactions recorded in the schools directly bombarded by mortar bombs, or physically injured. Children with moderate to very severe reactions were 106 (87.6%) of the total number of participants. (Table-1)

The mean CPTSD-RI score was 52.9, (SD=18.2), range (8-80).

Highly significant correlation between severity and high CPTSD-RI sub scales of arousal, re-experiencing and avoidance ($p>0.01$).

Means of arousal are higher than avoidance, and avoidance higher than re-experiencing. (Figure 1). The most frequently reported items of the CPTSD-RI, symptoms occurring most the of the time in exposed children were: identified as traumatic (67.77%), sleep disturbance (64.46%), easily startled (61.98%), and foreshadowing (62.8%) (Table-2). Analysis of variance revealed no significant differences by age, sex and religion.

Discussion:

High rates of posttraumatic stress reactions reported in primary school children who had experienced bombardments of their schools as war trauma. They are higher than those reported in Palestinian children (54%), applying child posttraumatic stress reaction index CPTSD-RI.⁽¹⁵⁾ In children of Iraqi Kurdistan with (60%) prevalence of post traumatic stress disorder in a semi-structured interview based on DSM-III-R criteria.⁽¹⁰⁾ They are lower than the 94% of the Bosnian children met Diagnostic and Statistical Manual of Mental Disorders, 4th ed, criteria for posttraumatic stress disorder.⁽¹⁶⁾

The severity of PTSD reactions was proportionate to the proximity and extent of exposure, 32 children (26.5%) whose schools exposed to direct mortar explosions and 11 children (9%) who had been physically injured reported very severe reactions. it was the same finding in children exposed to the sniper attack in the playground of school,⁽⁵⁾ and after the Armenian earthquake,⁽¹⁷⁾

Another probability for the high rates and severity of PTSD reactions is Iraqi children had chronic exposure to war violence resulted in the development of complex post-traumatic stress disorder (C-PTSD), a constellation of symptoms that occur as a result of repeated exposure to war traumas for instance living as refugee, displaced, and immigrant populations. In addition, Children exposed to loss of family members, friends and bombarded homes. School bombardments considered as single variable in this study.

Also 11 (84.6%) of the 13 children who sustained physical injuries reported very severe reactions. correlations between physical injuries and severity of PTSD reactions need to be verified in future studies.

As in some PTSD studies analysis of variance revealed no significant differences in gender, age and religion^(5,16).

High rates of cognitive and emotional PTSD symptoms reported: sleep disturbances, easily startled, and regular fears, children did not present predominantly with somatising or behavioral problems. The same findings found in Palestinian children⁽¹⁴⁾. Previous research with victims of war trauma had supported the validity of PTSD "beyond the barriers of culture and language"⁽¹⁸⁾.

Limitations are the absence of global assessments or clinical interviews for all participants, and reliance on self-report measures. Brief self-report measures are particularly useful when there are not enough clinicians to individually evaluate each traumatized child. Family functioning, school and social network disruption were not accounted for in this study.

The war-related posttraumatic stress disorder reactions were severe and wide spread. Identification of children most at risk of developing PTSD and other psychiatric disorders can be achieved through the collection of information about their experiences during the conflict and their appraisal of events, as well as screening methods for high-risk children.

Table-1: frequency and severity PTSD reactions (No.121)

Severity of PTSD reactions	Frequency (%)
Mild	15 (12.4%)
Moderate	16(13.2%)
Severe	34 ((28.1%)
Very Severe	56 (46.3%)
Total	121 (100%)

Table-2: PTSD symptoms (CPTS-RI Items)-total sample (121)

CPTS-RI Item	None/little No. (%)	Sometimes No. (%)	Mostly/most time No. (%)
Identified as traumatic	5(4.13%)	34(28.1%)	82(67.77%)
Regular fear	19(15.70%)	37(30.58%)	65(53.72%)
Repetitive images	21(17.36%)	33(27.27%)	67(55.37%)
Repetitive thoughts	15(12.40%)	40(33.1%)	66(54.5%)
Nightmares	36(29.75%)	37(30.58%)	48(39.67%)
Fear of recurrence	20(16.53%)	40(33.06%)	61(50.41%)
Anhedonia	6(5.79%)	48(39.67%)	67(55.37%)
Emotional detachment	17(14.04%)	47(36.36%)	57(50.41%)
Emotional avoidance	16(13.22%)	44(36.36%)	61(50.41%)
Emotional numbing	20(16.53%)	39(32.23%)	62(51.24%)
Easily startled	10(8.26%)	36(29.75%)	75(61.98%)
Sleep disturbance	14(11.57%)	29(23.97%)	78(64.46%)
Memory difficulties	23(19.01%)	32(26.25%)	64(52.89%)
Concentration difficulties	21(17.36%)	43(35.54%)	57(47.11%)
Social avoidance	12(9.92%)	43(35.54%)	66(54.55%)
Upset by reminders	6(4.94%)	57(47.11%)	58(47.93%)
Somatic complaints	27(22.31%)	44(36.36%)	50(44.63%)
Behavior outburst	37(30.58%)	30(24.79%)	54(44.63%)
Guilt	9(7.44%)	52(42.98%)	60(49.59%)
Sense of foreshadowing	13(10.74%)	32(26.44%)	76(62.80%)

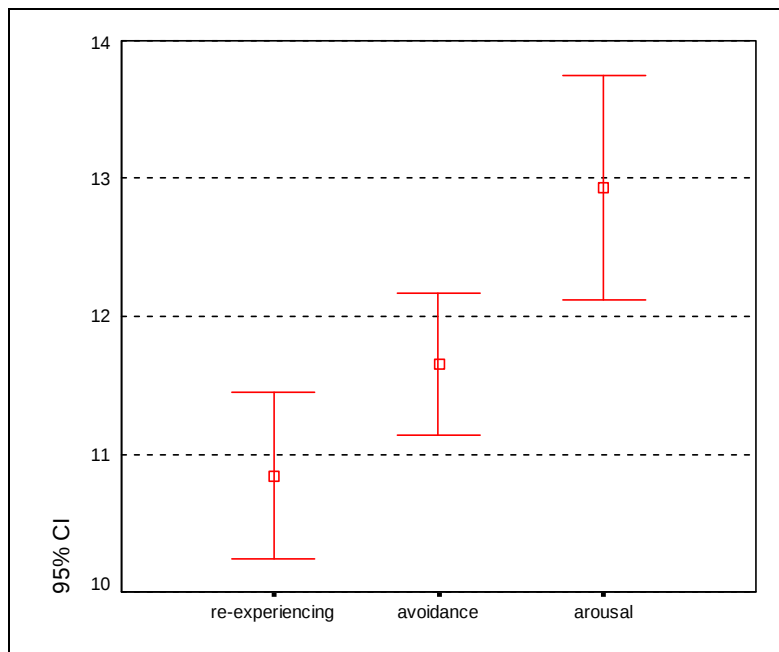


Figure-1: Means of Arousal, Avoidance and re-experiencing.

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