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Prospective study of displaced children's symptoms in wartime Bosnia

Abstract *Background*: This study examines the psychological symptoms of Bosnian children exposed to war and trauma, and detects changes in these symptoms over time. *Method*: A total of 147 displaced children residing in refugee centers in Bosnia completed self-report assessments of anxiety, depressive, and posttraumatic stress symptoms at two time points. *Results*: Symptoms of posttraumatic stress, anxiety, and depression showed a greater decrease in boys relative to girls over time. *Conclusion*: Gender may be an important factor in the natural course of trauma-related symptoms among war traumatized children. Further research is needed to better understand the psychological effects of war trauma on children, and the natural course of posttraumatic symptoms, so as to improve interventions targeted to this vulnerable population.

Introduction

Armed conflict affecting civilian populations has become increasingly common toward the end of the twentieth century (Swenson and Klingman 1993). The corresponding chaos places children at significant risk, often exposing them to equal or greater psychological stress and trauma as compared to adults (Swenson and Klingman 1993). As with adults, the physical health of children not killed by combat often deteriorates due to increased physical trauma, malnutrition, disease, and decreased access to health services (Martinez and Richters 1993). While physical morbidity may be similar to that in adults, children's psychological response to trauma may be quite different from adults' as a result of their rapidly changing developmental levels, limited coping styles, and inability to seek services (Magwaza et al. 1993). Children's manifestation of trauma-related symptoms is different than adults, and these symptoms are more likely to change over time (Terr 1990).

There is a long history of descriptive reports of children's psychological reaction to wartime stress, dating from the Second World War (Bodman 1941; Glover 1942). More recent reports have examined the impact of conflict on children from many regions including Africa (Cliff and Noormahomed 1993; Magwaza et al. 1993), the Balkans (Ajdukovic 1998; Zivcic 1993), the Middle East (Abdelkhalek 1997; Klingman 1992; Nader et al. 1993; Schwarzwald et al. 1994; Thabet and Vostanis 1999), and Southeast Asia (Clarke et al. 1993; Sack et al. 1996; Savin et al. 1996).

Symptom patterns vary greatly, but common reactions include intrusive thoughts, anxiety, depression, difficulty concentrating, psychosomatic disturbances, and sleep disorders (Martinez and Richters 1993). Posttraumatic Stress Disorder (PTSD) in children has been described after multiple war-related exposures, witnessing death or injury, and injuring another (Nader et al. 1993; Thabet and Vostanis 1999). Children losing a family member, witnessing a death, or being displaced are more likely to exhibit anxiety or depressive symptoms (Chimienti et al. 1989). Intense exposure through close physical or emotional proximity has also been associated with more severe stress responses (Schwarzwald et al. 1993). Adolescent females have been found to have higher rates of posttraumatic stress symptoms (Ajdukovic 1998) and greater war-related fears than

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males (Abdelkhalek 1997). Higher frequencies of stress reactions and anxiety were also noted in Israeli girls and younger children following the Gulf War, with symptoms decreasing significantly over time (Klingman 1992; Schwarzwald et al. 1994).

The importance of longitudinal studies in traumatized children has been noted (Jensen and Shaw 1993), yet few longitudinal studies of war traumatized children exist except among refugee populations, who may be substantially different due to stress stemming from resettlement (Clarke et al. 1993). Studies of war traumatized children have also seldom been able to use subjects in an active war zone or in situations approaching "complete" war (Somasundaram 1993). Most samples are drawn from populations of victims following isolated attacks, brief conflicts, or regions with chronic tension without active fighting.

A longitudinal study of posttraumatic, anxiety and depressive symptoms in a population of children in a war zone provides an opportunity to detect changes not apparent in a cross-sectional study and is better suited for distinguishing between transient and persistent symptoms. A better understanding of the natural course of children's symptoms may contribute to recommendations for prevention as well as better targeted interventions.

This prospective cohort study assesses Bosnian war traumatized children's reported symptoms of depression, anxiety and posttraumatic stress symptoms at two points in time. Based on our clinical experience, and drawing on support in prior research, we hypothesized that:

1. Girls would report higher levels of symptoms than boys.
2. Younger children would report higher levels of symptoms than older children.
3. Symptoms would decrease over time.

Background

Bosnia Herzegovina was devastated by armed ethnic conflict after declaring its independence from Yugoslavia in 1991. Four plus years of conflict resulted in the deaths of over 200,000 people and created more than 1,300,000 refugees. This does not include the hundreds of thousands of individuals displaced in collective centers (refugee camps) inside Bosnia.

The participants in this survey were Bosnian Muslim children displaced from their villages, towns, and cities throughout central and northern Bosnia by Croatian and Serbian military and paramilitary activity. All of the children had been exposed to at least one traumatic event known to be related to posttraumatic symptoms (Macksoud et al. 1993), with most children reporting multiple trauma exposures. Over 95% had been forcibly displaced from their home, the majority had been forcibly separated from parents and had a family member killed in the conflict, and over one-third reported witnessing the violent injury or death of family members and having been exposed to combat.

Subjects and methods

Subjects

As part of a mental health needs assessment of children in central Bosnia, 366 refugee children and their families were approached to participate in a survey of wartime experiences and psychological symptoms in children. Eligible children were between the ages of 5 and 12 and residing in collective centers in the Zenica region, approximately 60 km from Sarajevo and 10 km from the nearest front line. At the time of the initial survey, some children had been in the camps for over a year, while others had just arrived. Several centers distant from the town were not included in the survey due to difficulties with security and transportation, but all eligible children in the remaining centers were invited to participate.

Consent was obtained for 357 children – a 97% participation rate – and 85% ($n = 304$) successfully completed the survey of self-reported symptoms, which will be described later. Of these, 54% ($n = 157$) were girls, and 46% ($n = 147$) were boys. Children under the age of 7 ($n = 42$) and nine older children were removed because of lack of literacy and unreliable survey completion. Approximately 8 months later, the questionnaire was repeated in the collective centers. Of the original participants, 48% ($n = 147$) completed the follow-up survey; 53% ($n = 78$) of the follow-up survey were girls, and 47% ($n = 69$) were boys. The response rate among those children remaining in the centers was 100%, likely a result of refugee goodwill toward the humanitarian aid organizations who were conducting a variety of activities in the centers. The children of families who had left the camp and moved into private accommodations, fled to another area of Bosnia, or left the country were unable to be resurveyed.

Both surveys were conducted by trained Bosnian Muslim child mental health care workers employed by an international humanitarian non-governmental organization (NGO), assisted by the local refugee and mental health councils.

Questionnaire and procedures

The initial surveys were completed in early 1994, with demographic information obtained from an adult responsible for the child (94% parents). The survey included questions about the child and family's background, educational level, gender, age, and war experiences.

The initial self-report information was gathered by assembling the children in small groups of three to ten to participate in age-appropriate interviews. The instrument used was a cartoon-based interview of children's distress symptoms (Valla et al. 1994), previously used to assess children exposed to inner city violence in the United States (Richters and Martinez 1993). The instrument had been adapted by a former supervisor of the project to reflect the living circumstances of Bosnian children in war zone collective centers (Goldstein et al. 1997) after discussions with the developers. The cartoons included depictions of a child with trauma-related symptoms, and an associated two- to three-sentence script. Respondents were asked to mark a circle that was empty, 50% shaded, or completely shaded, respectively labeled in Bosnian with "never", "some of the time", or "a lot of the time." Prior to instrument administration, the children were taught to use this response format. The cartoon was shown while it was described orally, and the children were asked to mark a circle indicating how often they felt like "Sead", the child depicted in the cartoon. All children responded to every item individually. At the request of the Bosnian staff, two slight modifications were made to the follow-up survey. The language was modified from using the name Sead to "some children" and verbal descriptions were used in place of the

cartoons. Subject answers falling outside the range of appropriate responses were coded as a non-answer for the item in question.

Symptom scores are the summation of the numerical scores assigned to the answers in each symptom cluster (e.g., never = 1, some of the time = 2, a lot of the time = 3). The range was 16–48 for the anxiety scale, 14–42 for depression, 15–45 for emotional numbing, 17–51 for hyperarousal, and 25–75 for intrusive thoughts.

Statistical analysis

Hypotheses were tested using multivariate analysis of variance, where the repeated measure was the multivariate dimension. Examination of the data suggested that there were gender differences in the change in symptoms over time. We tested these differences by testing whether the gender × time interaction was associated with PTSD levels in this model.

Before testing these hypotheses, we considered whether the nonrandom character of our study group at Time 1, and the attrition of children from Time 1 to Time 2, would make our hypotheses untestable. Specifically, we examined whether boys and girls differed on demographic characteristics and levels of PTSD at Time 1. In addition, we compared Time 1 demographics and PTSD levels for children who had a Time 2 score (i.e., completed the follow-up) and those who did not have a Time 2 score. Finally, we examined whether the interaction between child gender and child-missing-status at Time 2 was associated with differences in demographics and PTSD for children at Time 1. These comparisons used analysis of variance (reported in Tables 1 and 2), and log-linear modeling (reported in Table 3).

Results

The right-hand columns of Tables 1 and 2 report the tests of the associations between, on the one hand, child

gender and Time 2 missing status, and, on the other hand, Time 1 demographics and PTSD levels. We found no associations for father's occupation, mother's occupation, child age, or family socio-economic status. Children of fathers with secondary education (or higher) were more likely to be missing at Time 2. Gender and missing status had a complicated relationship with mother's education: boys were more likely to be missing than girls when mothers had at least a secondary education, but not when mothers had less education. Boys were also more likely to be living with another family. To control for the possible biasing effects of these differences, we included father's education, mother's education, and living with other family as covariates in our hypothesis tests.

Children who were missing at Time 2 tended to be in a higher school grade. Boys had higher Time 1 depression scores than girls among children with Time 2 scores, whereas girls were more depressed at Time 1 among those whose scores were missing at Time 2. This pattern was also found for emotional numbing, hyperarousal, and intrusive thoughts. For each PTSD variable Time 1 score, there was a statistically significant interaction between missing status at Time 2 and gender (Table 2). Girls who were missing at Time 2 had higher Time 1 PTSD levels than did girls who were present at Time 2. However, boys who were missing at Time 2 had lower Time 1 PTSD levels than boys who were present at Time 2. This study focuses on those children with both Time 1 and Time 2 scores. It appears that because of subject

Table 1 Children at Time 1: demographic frequencies

Follow-up missing status Child gender		Time 2 score obtained				Time 2 score missing				Variable × Child gender*			Variable × Missing status[†]			Variable × Gender × Missing[§]		
		Girls		Boys		Girls		Boys										
Variable	Value	N	$\%$	N	$\%$	N	$\%$	N	$\%$	X^2	df	p	X^2	df	p	X^2	df	p
Father's education	Elementary or less	36	48	39	52	33	57	25	43	0.44	1	0.52	6.31	1	0.012	1.52	1	0.22
	Secondary or more	42	58	30	42	53	54	46	46									
Mother's education	Elementary or less	48	51	46	49	60	62	37	38	1.30	1	0.25	0.21	1	0.65	4.34	1	0.037
	Secondary or more	30	57	23	43	26	43	34	57									
Father's occupation	Other	14	47	16	53	19	63	11	37	0.01	1	0.93	0.04	1	0.86	1.68	1	0.20
	Farmer	62	56	49	44	63	53	55	47									
Mother's occupation	Other	5	36	9	64	8	44	10	56	3.01	2	0.22	1.42	2	0.49	1.41	2	0.49
	Farmer	21	64	12	36	23	55	19	45									
	Housewife	51	53	46	47	55	59	39	41									
Currently living with	Other	2	20	8	80	2	29	5	71	5.71	1	0.02	0.68	1	0.41	0.14	1	0.71
	Own family	76	55	61	45	84	56	66	44									

* Variable × Child gender tests the association between gender and (for example) father's education in the table formed by summing frequencies for boys and girls across follow-up missing status categories

† Variable × Missing status tests the association between father's

education and attrition (missing status) in the table formed by summing across genders

§ Variable × Gender × Missing tests whether father's education is associated with differential attrition between the genders

Table 2 Children at Time 1: demographics and PTSD means and standard deviations

Follow-up missing status	Time 2 score obtained				Time 2 score missing				Gender*			Missing status[†]			Gender × Missing status[§]		
Child gender	Girls		Boys		Girls		Boys										
Variable	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F	df	p	F	df	p	F	df	p
Age	9.71	1.53	9.93	1.67	9.88	1.75	10.17	1.61	1.96	301	0.16	1.00	301	0.32	0.07	301	0.80
Grade	2.52	1.33	2.64	1.41	2.81	1.31	3.20	1.56	1.44	299	0.23	8.04	299	0.005	0.41	299	0.52
Family SES	9.32	2.43	9.01	2.88	9.78	2.78	9.04	1.93	3.43	301	0.07	0.91	301	0.35	0.44	301	0.51
Anxiety	28.17	5.76	30.52	6.32	28.69	5.71	27.72	5.36	0.99	300	0.33	2.38	300	0.12	6.17	300	0.02
Depression	24.36	4.43	25.90	4.99	25.14	5.01	24.41	4.77	0.46	300	0.50	0.24	300	0.62	4.20	300	0.04
Emotional numbing	25.58	4.59	27.06	5.51	26.28	4.99	25.07	4.90	0.03	300	0.86	0.89	300	0.35	5.46	300	0.02
Hyper-arousal	30.05	5.61	33.07	5.98	30.67	5.77	30.73	5.72	5.16	300	0.02	1.35	300	0.25	4.89	300	0.03
Intrusive thoughts	44.12	7.98	49.19	9.84	45.31	8.59	44.75	8.93	4.66	300	0.03	2.02	300	0.16	7.61	300	0.006

* Gender tests whether (for example) mean ages differ between boys and girls
[†] Missing status tests whether the mean ages of children with a Time 2 score differed from those who did not have a Time 2 score
[§] Gender × Missing status tests whether gender differences in mean age were similar for children with and without a Time 2 score
– Among school-age children
– Denominator degrees of freedom. These tests have one numerator degree of freedom

Table 3 Time 1 and Time 2 PTSD levels by gender*

Interview	Time 1				Time 2				Gender: Time 1[§]		Gender: Time 2[§]		Time[§]		Gender × Time[§]	
Gender	Girls		Boys		Girls		Boys									
Variable	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F[†]	p	F[†]	p	F[†]	p	F[†]	p
Anxiety	28.17	5.76	30.52	6.32	30.67	4.84	29.33	5.04	5.22	0.02	3.46	0.065	0.82	0.37	13.09	0.0004
Depression	24.36	4.43	25.90	4.99	27.22	4.36	25.13	4.30	3.80	0.053	9.75	0.002	2.53	0.11	19.19	0.0001
Emotional numbing	25.58	4.59	27.06	5.51	27.55	4.65	26.00	4.77	2.79	0.10	5.15	0.03	1.64	0.20	13.07	0.0004
Hyper-arousal	30.05	5.61	33.07	5.98	33.47	4.57	32.42	4.69	9.62	0.002	1.79	0.18	2.04	0.16	14.71	0.0002
Intrusive thoughts	44.12	7.98	49.19	9.84	47.54	7.16	46.83	6.97	11.75	0.0008	0.38	0.54	0.17	0.68	13.43	0.0003

* Table includes only those children with scores at Time 1 and Time 2
[†] Test has 1 numerator and 142 denominator degrees of freedom
[§] Analyses included father's education, mother's education, and living with other family as covariates

attrition, this group included a subset of boys who were somewhat more disordered than the Time 1 group of boys, and a subset of girls who were slightly less disordered. In summary, Table 2 suggests that, on the one hand, there may have been differences between boys and girls in PTSD coming into the study and, on the other hand, the attrition at Time 2 may be nonrandom with respect to gender and PTSD.

The first hypothesis was that girls would demonstrate higher levels of PTSD symptoms than boys would. This was true only for depressive symptoms and emotional numbing at Time 2 (see Table 3). Otherwise, boys had higher levels of anxiety, hyperarousal, and intrusive thoughts at Time 1; and other differences were not significant. The second hypothesis was that younger children would show higher symptom levels. However, Pearson correlations between age and PTSD levels ranged from 0.14 to 0.07, and were never statistically significant. Finally, we hypothesized that symptoms would decrease over time. Table 3 shows that PTSD did not change significantly over time.

There was, however, a striking and consistent pattern in Table 3. Boys had higher symptom levels on each scale at Time 1 and girls had higher levels on each scale at Time 2. Although these gender differences were not always significant within a given time, there was a strong gender × time interaction in every PTSD subscale. This indicated that the direction of gender differences in PTSD severity reversed over time; that is, boys assessed at Time 2 had lower mean scores than girls assessed at Time 2.

Discussion

The findings of this survey of Bosnian children suggest that boys and girls subject to war trauma and remaining in a war zone may have a different natural course of

trauma-related symptoms. Prior work had found that over 95% of these children met criteria for PTSD using an algorithm based on the DSM-IV at the time of the initial survey, over 90% experienced significant sadness and anxiety, and those with greater trauma exposure reported more symptoms (Goldstein et al. 1997). At the time of the second survey there was little change in the overall level of posttraumatic stress symptoms, anxiety, and depression, but our findings suggest that gender may play a role in the natural development of symptoms over time. This finding is consistent with prior research that has found differences between boys and girls in reports of traumatic symptoms (Chimienti et al. 1989, Nader and Pynoos 1993; Schwarzwald et al. 1994).

We did not find that younger children reported more symptoms than their older peers. However, participants in this study were younger and the age range more restricted (7–12 years old) than those in studies finding age differences (Schwarzwald et al. 1994). Many children in this study had also been chronically exposed to war trauma over several years from a very young age – experiences hypothesized to have an impact on a child's development (Garbarino and Kostelny 1993).

There was no evidence to support the hypothesis that symptoms decreased over time. Girls surveyed actually reported an increase in symptoms, although this difference was not statistically significant. Unobserved factors may be responsible for the differences between boys and girls in reported symptoms at Time 2. It is possible that the collective centers themselves were more traumatic to the girls than the boys, due either to retraumatization or exposure to events more traumatic for girls, such as sexual assault. However, the Bosnian staff and local refugee council did not report knowledge of sexual harassment or assaults in the centers. Another possible factor is that the social structure destroyed in the war was never rebuilt in the centers – a situation hypothesized to affect girls more than boys post disaster (Green et al. 1991). Girls are also thought to be at increased risk after exposure to war trauma vis a vis boys, related to differences in their coping mechanisms (Elbedour et al. 1993; Schwarzwald et al. 1993), and their difficulty in adapting to repeated trauma (Ziv et al. 1974).

Limitations

The attrition of approximately half the sample is concerning, but this rate of attrition is comparable to the rate of general turnover seen in the centers and was addressed in the analysis. The lack of an opportunity to validate the adaptation of the instrument to the Bosnian language and culture, and its initial use in a war zone, is also a concern. However, Bosnian mental health professionals who later used the instrument for clinical screening felt that it accurately detected children's symptoms. The time that elapsed between the trauma and the survey may possibly affect the detection of symptom differences between boys and girls. Unfortu-

nately, because we had no information on when the trauma occurred or how long the children had been in the centers, we are unable to identify a critical time interval. Our subjects were also exposed to repeated or chronic traumas over months and years, rather than a single episode.

Almost all the surveyed children participated in at least one monthly group meeting involving a humanitarian NGO. Although brief, these meetings may have had some impact on the children's reporting of symptoms. Differences between participants and non-participants could not be detected due to the limited number of non-participants. Participants may have been more willing or able to discuss their experiences, but could also have been re-traumatized. Bosnian staff who ran the meetings did not feel that boys and girls responded to the meetings differently. Finally, given the nonrandom nature of this study, we are also unable to control for the possibility that there may have been differences between boys' and girls' symptom levels coming into the study, or that the attrition may be nonrandom with respect to gender and PTSD. Limitations of this nature are common in research in areas with ongoing conflict and limited resources (Chimienti et al. 1989; Martinez and Richters 1993; Swenson and Klingman 1993).

Despite these limitations, this sample provided a unique opportunity to assess the natural course of children's posttraumatic symptoms within a war zone, in temporal and geographical proximity to their wartime stressors. It also provided an opportunity to study children's responses in their own society, without confounding of the stressors associated with moving to another culture. Research in this environment, however, will also have a substantial number of limitations. Despite the relative safety of a collective center within their own country, displacement from their homes and ever-present reminders of the ongoing conflict were continual stressors. In essence, this exploratory study provides an opportunity to learn something of the natural course of psychological symptoms of children in a war zone. If possible, future longitudinal work might assess the differences between refugees who leave their country versus those who remain. Future research designs in areas of conflict may also wish to specifically address the impact of humanitarian activities in collective centers and refugee camps.

Conclusion

We find that trauma-related symptoms in collective center children trend differently over time in boys and girls. This observation suggests that interventions to aid war traumatized children in a war zone might consider the child's gender in designing programs and interventions. It is unclear whether the differences in symptom change are due to factors that are easily modified, and caution should be taken in drawing conclusions from this exploratory study. However, the knowledge that

such differences between boys and girls exist may be useful to those working with these populations.

One common assumption among humanitarian aid workers is that established refugee camps are difficult places to live, but generally not traumatogenic. However, our findings raise the question of whether this assumption is accurate, or whether aspects of the camps may actually be harmful to girls, and if so, whether these aspects can be mitigated. Increased knowledge may help determine what additional services are needed and reveal whether current interventions may, in some cases, exacerbate rather than alleviate problems.

Clinically, our findings suggest that the optimal timing of interventions may be different for boys than for girls. In addition, interventions targeted specifically towards boys on the one hand and girls on the other might prove to be more useful than a single intervention for both sexes. Finally, psychosocial programs should carefully consider the children's environment, with an eye toward both war-related and refugee-related stressors, prior to implementing an intervention that may not be appropriate for those children at that place and time.

The results reported here raise important clinical and theoretical questions for future research in terms of clarifying the mechanisms or factors involved in children's response to war trauma. The results may also have implications for the development of services to assist children refugees and victims of wartime trauma. Research now must move forward on how best to improve interventions to aid this vulnerable population.

References

Abdelkhalek AM (1997) A survey of fears associated with Iraqi aggression among Kuwaiti children and adolescents – a factorial study 5.7 years after the Gulf War. Psychol Rep 81: 247–255

Ajdukovic M (1998) Displaced adolescents in Croatia – sources of stress and posttraumatic stress reaction. Adolescence 33: 209–217

Bodman F (1941) War conditions and the mental health of the child. BMJ 2: 286–288

Chimienti G, Nasr JA, et al (1989) Children's reactions to war-related stress. Affective symptoms and behaviour problems. Soc Psychiatry Psychiatr Epidemiol 24: 282–287

Clarke GN, Sack WH, et al (1993) Three forms of stress in Cambodian adolescent refugees. J Abnorm Child Psychol 21: 65–77

Cliff J, Noormahomed AR (1993) The impact of war on children's health in Mozambique. Soc Sci Med 36: 843–848

Elbedour S, ten Bensel R, et al (1993) Ecological integrated model of children in war: individual and social psychology. Special section. Children and war. Child Abuse Neglect 17: 805–819

Garbarino J, Kostelny K (1993) Children's response to war: What do we know? In: Leavitt LA, Fox NA (eds) The psychological effects of war and violence on children. Lawrence Erlbaum Hillsdale, pp 23–40

Glover E (1942) Notes on the psychological effects of war conditions on the civilian population. III. The blitz. Int J Psychoanalysis 29: 17–37

Goldstein RD, Wampler NS, et al (1997) War experiences and distress symptoms of Bosnian children. Pediatrics 100: 873–878

Green BL, Korol M, et al (1991) Children and disaster: age, gender, and parental effects on PTSD symptoms. J Am Acad Child Adolesc Psychiatry 30: 945–951

Jensen PS, Shaw J (1993) Children as victims of war: current knowledge and future research needs. J Am Acad Child Adolesc Psychiatry 32: 697–708

Klingman A (1992) Stress reaction of Israeli youth during the Gulf war: a quantitative study. Prof Psychol Res Pract 23: 521–527

Macksoud MS, Dyregrov A, et al (1993) Traumatic war experiences and their effects on children. In: Wilson JP, Raphael B (eds) International handbook of traumatic stress syndromes. Plenum Press, New York, pp 625–633

Magwaza AS, Killian BJ, et al (1993) The effects of chronic violence on preschool children living in South African townships. Special section. Children and war. Child Abuse Neglect 17: 795–803

Martinez P, Richters JE (1993) The NIMH community violence project. II. Children's distress symptoms associated with violence exposure. Special issue. Children and violence. Psychiatry Interpers Biol Proc 56: 22–35

Nader K, Pynoos RS (1993) The children of Kuwait after the Gulf crisis. In: Leavitt LA, Fox NA (eds) The psychological effects of war and violence on children. Lawrence Erlbaum Hillsdale, pp 23–40

Nader K, Pynoos RS, et al (1993) A preliminary study of PTSD and grief among the children of Kuwait following the Gulf crisis. Br Clin Psychol 32: 407–416

Richters JE, Martinez PE (1993) Violent communities, family choices, and children's chances: an algorithm for improving the odds. Special issue. Milestones in the development of resilience. Dev Psychopathol 5: 609–627

Sack WH, Clarke GN, et al (1996) Multiple forms of stress in Cambodian adolescent refugees. Child Dev 67: 107–116

Savin D, Sack WH, et al (1996) The Khmer adolescent project. III. A study of trauma from Thailand's site II refugee camp. J Am Acad Child Adolesc Psychiatry 35: 384–391

Schwarzwald J, Weisenberg M, et al (1994) Stress reactions of school-age children to the bombardment by scud missiles: a 1-year follow-up. J Traumatic Stress 7: 657–667

Schwarzwald J, Weisenberg M, et al (1993) Stress reaction of school-age children to the bombardment by SCUD missiles. J Abnorm Psychol 102: 404–410

Somasundaram DJ (1993) Psychiatric morbidity due to war in northern Sri Lanka. In: Wilson JP, Raphael B (eds) International handbook of traumatic stress syndromes. Plenum Press, New York, pp 333–348

Swenson CC, Klingman A (1993) Children and war. In: Saylor CF (ed) Children and disasters. Plenum Press, New York, pp 137–158

Terr LC (1990) Too scared to cry. Harper & Row, New York

Thabet AA, Vostanis P (1999) Post-traumatic stress reactions in children of war [In Process Citation]. J Child Psychol Psychiatry 40: 385–391

Valla JP, Bergeron L, et al (1994) A structured pictorial questionnaire to assess DSM-III-R-based diagnoses in children (6–11 years): development, validity, and reliability. J Abnorm Child Psychol 22: 403–423

Ziv A, Kruglanski AW, et al (1974) Children's psychological reactions to wartime stress. J Pers Soc Psychol 30: 24–30

Zivcic I (1993) Emotional reactions of children to war stress in Croatia. J Am Acad Child Adolesc Psychiatry 32: 709–713