

## Children in war: A silent majority under stress

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To assess the amount of stress exposure and reactions among children following a war situation, two comparative groups of non-displaced ( $N = 64$ ) and displaced children ( $N = 70$ ) from Croatia were administered a modified version of the War Trauma Questionnaire as well as the Impact of Event Scale (IES). The results showed that a majority of the children had been exposed to armed combat, with displaced children significantly more exposed to destruction of home and school as well as to acts of violence, and loss of family members, than the non-displaced children. Regarding the IES scores, displaced children had significantly higher scores for the total score and for the intrusion and avoidance subscales. For girls the total score and intrusion score were significantly higher than for boys. Different exposure factors were significantly related to the IES scores, especially for the intrusion subscale of the IES.

There has been a dramatic increase in the civilian war casualties, from 10 per cent in the First World War to approximately 80 per cent in conflicts occurring after the Second World War. This development makes children especially vulnerable. Besides the loss of life and the damages to physical health, war also inflicts less visible, but still important, psychological wounds. An accumulating body of evidence shows that war experiences can damage the psychosocial development of children and their expectations regarding future life (Dyregrov & Raundalen, 1987, 1992a; Macksoud & Aber, in press).

There is discrepancy in the literature concerning how the severity, frequency and nature of war events affect children's psychological well-being (e.g. see the reports from Chimienti, Nasr & Khalifeh, 1989 and Saigh, 1985, both from the same conflict area). There is reason to believe that part of this discrepancy reflects the various kinds of stressors that children are exposed to in different war situations, as well as the manner in which stressors are defined. A vast difference exists between the active participation of children and youth on the Gaza Strip and the West Bank, and children in Croatia and Bosnia & Hercegovina. Stressors termed 'air-raids', 'bombing' and 'loss' are broad categorizations that differ vastly from conflict to conflict.

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examine: (a) The frequency of exposure to different war events. (b) The level of distress as measured by the IES in children differently exposed to the war situation, i.e. displaced and non-displaced children. (c) Possible gender differences in the reactions. (d) The relationship between exposure to war stressors and scores on the IES.

## Method

### *Events*

In the late 1980s, the fall of the communist regimes brought drastic changes to international politics. Two former Yugoslavian republics, Croatia and Slovenia, voted for independence and armed conflict followed. This led to the first full-scale war in Europe since the Second World War. Former neighbours became bitter enemies and the conflict exposed children in some areas of Croatia, particularly those living near the Serbian border, to acts of violence. In other areas it was not so much personal acts of violence that children were exposed to but air raids, shelling and bombing. The war led to a sudden, rapid increase in uprooting of people. By March 1992 there were as many as 380 000 displaced persons within Croatia and about 180 000 people staying in other European countries. This means that more than 7 per cent of the Croatian population held the status of 'displaced'. More than half were children (56 per cent)<sup>1</sup>.

### *The sample*

The sample consists of 134 children attending an arbitrarily selected school in Zagreb (selected because of the short distance to the University of Zagreb), the capital of Croatia. According to screening performed by the Croatian Ministry of Education and UNICEF Office in Zagreb (Kuterovac, Franc & Matulic, 1993), the school consists of an average percentage of displaced and refugee children (around 25 per cent), and the children who attend the school are of average socio-economic status. The children were between the ages of 10 and 15 years, with a mean age of 12.3 years. The sample consists of two comparative groups; a group of 64 children from Zagreb and a group of 70 displaced children mostly from the area of Vukovar, but also from other war zones in Croatia. The children were displaced because of the war, and they lived in hotels or with relatives in Zagreb where they attended school.

### *Procedure*

Data were collected by a school counsellor in one elementary school under the supervision of the authors.

The questionnaire included an arbitrated version of the War Trauma Questionnaire (Macksoud, 1992) with 14 items inquiring about the children's exposure to direct warfare, separations, losses and other war traumas. To assess the children's distress, a slightly modified Croatian version of Horowitz's Impact of Event Scale was used (Horowitz *et al.*, 1979). The modification to the IES consisted in changing the items from the past to the present tense for better understanding. The IES was translated from English into Croatian and then retranslated into English. Items showing dissimilarities were discussed and an appropriate alternative chosen. After naming the worst war experience, the children were asked to fill in the IES regarding their reactions during the previous 14 days. In another study (Dyregrov *et al.*, unpublished) the IES items were shown to have high relevance for children and to be useful for assessing post-traumatic stress reactions in children older than 10 years.

<sup>1</sup>Numbers are based on: Government of the Republic of Croatia, Office for Displaced Persons and Refugees. Report on the numbers of registered displaced persons and refugees in the Republic of Croatia. March 1992.

parents or family members present ( $\chi^2 = 33.05, p < .001$ ). Air raids in Zagreb took place during working hours when most children were either alone at home or at their schools. The schools in the war zone were closed and work was stopped because of heavy attacks, and children more often had someone close to stay with during the attacks. However, the duration of the stay was significantly longer for the displaced children ( $\chi^2 = 50.49, p < .001$ ). The longest stay in a shelter lasted less than 24 hours for most of the children from Zagreb (97 per cent), while 61 per cent of the displaced children stayed more than one day. More than one-fourth of the displaced children (27.5 per cent) stayed more than a month in shelters or cellars during the sieges of the towns and the villages. Some of these shelters were completely inadequate.

More than 90 per cent of the total sample had been exposed to armed combat in general, and 25 per cent of the children from Zagreb and 81 per cent of the displaced children had experienced bombing and shelling ( $\chi^2 = 40.68, p < .001$ ). Since there was no heavy attack on Zagreb, none of the children residing there had experienced their homes being attacked, while 54 per cent of the displaced children had experienced this ( $\chi^2 = 45.86, p < .001$ ). Many displaced children (53 per cent) also experienced attacks against their schools (none of the Zagreb children experienced this;  $\chi^2 = 44.13, p < .001$ ). The destruction of homes was among the worst experiences according to the interviews with the children.

Only a few of the children from Zagreb had personally witnessed people being killed (0 per cent) or injured (5 per cent), while 44 per cent of the displaced children had seen someone being injured ( $\chi^2 = 25.63, p < .001$ ) and 27 per cent had seen someone being killed ( $\chi^2 = 18.07, p < .001$ ).

Concerning the loss of a family member, 59 per cent of the displaced children had experienced this, in contrast to 19 per cent of the Zagreb children ( $\chi^2 = 20.54, p < .001$ ). Most losses were among distant relatives, grandparents and siblings (see Table 1).

Regarding separation from their parents or caretakers, 73 per cent of the displaced children, as opposed to 8 per cent of the Zagreb children, had been separated from one or both parents or caretakers ( $\chi^2 = 54.59, p < .001$ ). The most common separation was from fathers, since children usually fled with the mothers, leaving fathers defending the villages or towns. Concerning school activities, 100 per cent of the displaced children were forced to change their home or school compared to none in the Zagreb sample ( $\chi^2 = 118.7, p < .001$ ). The displaced children were absent from school significantly more often than the Zagreb children ( $\chi^2 = 46.36, p < .001$ ) and had significantly longer absences ( $\chi^2 = 36.87, p < .001$ ). About half (51 per cent) of the displaced children who had been out of school had been away for more than three months.

A sum score (called War Trauma Questionnaire Total-WTQ) based on most of the different stressors outlined in Table 1 (indicated in Table 7) was made (i.e. a score of 1 if out of school, a score of 0 if not; 1 if exposed to war operations and 0 if not). Table 2 shows that Zagreb children were significantly less exposed than displaced children (Zagreb:  $M = 6.42, SD = 1.34$ , displaced:  $M = 13.63, SD = 4.40$ ;  $F = 164.64, p < .001$ ).

Table 4. IES scores and *t* tests for Zagreb (*N* = 62) and displaced (*N* = 69) children

	Zagreb children		Displaced children		<i>t</i>	<i>p</i> <
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
IES Intrusion	12.7	8.4	19.3	9.3	4.25	.001
IES Avoidance	18.6	9.0	22.2	9.1	2.30	.023
IES Total	31.3	15.4	41.5	15.0	3.85	.001

group indicating more distress among the displaced children (displaced: *M* = 41.5, *SD* = 15.0, Zagreb: *M* = 31.3, *SD* = 15.4; *t* = 3.85, *p* = .001). The mean scores for both subscales of intrusion and avoidance were significantly higher for displaced children than Zagreb children (see Table 4 for scores and levels of significance).

Table 5 shows the IES scores for girls and boys in Zagreb. Girls have significantly higher scores than boys on IES total (girls: *M* = 35.6, *SD* = 14.6, boys: *M* = 26.7, *SD* = 15.1; *t* = 2.34, *p* = .02) as well as for intrusions (see Table 5 for scores and level of significance).

Table 5. *t* tests of IES scores between girls (*N* = 32) and boys (*N* = 30) from Zagreb

	Girls		Boys		<i>t</i>	<i>p</i> <
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
IES Intrusion	15.2	8.7	10.0	7.2	2.52	.01
IES Avoidance	20.4	8.0	16.7	9.7	1.63	n.s.
IES Total	35.6	14.6	26.7	15.1	2.34	.02

Table 6 lists the IES scores for displaced girls and boys. The results are similar to those for the Zagreb children, as both the IES total and the IES intrusion score are significantly higher in girls compared to boys. The correlation between the total score on the IES and total score on the War Trauma Questionnaire was statistically significant (*r* = .35, *p* < .001). Both subscales proved to be significantly related to the war experiences (avoidance: *r* = .24, *p* < .01; intrusion: *r* = .36, *p* < .001).

Table 6. *t* tests of IES scores between displaced girls (*N* = 36) and boys (*N* = 34)

	Girls		Boys		<i>t</i>	<i>p</i> <
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
IES Intrusion	21.8	9.0	16.6	9.0	2.34	.02
IES Avoidance	23.8	8.5	20.4	9.6	1.52	n.s.
IES Total	45.5	13.3	37.3	16.0	2.39	.02

Table 7 lists the correlations between different stressors and the IES total, IES intrusion and IES avoidance scores. Children who had experienced a family member being injured or killed, or who had witnessed killing, witnessed injury or who had

Table 8. Percentages of children in Horowitz's groups (low, medium and high distress)

Children	Low ( $<9$ )	Medium (9-19)	High ( $>19$ )
Zagreb			
Intrusion	40.3	35.5	24.2
Avoidance	21.0	30.6	48.4
Displaced			
Intrusion	20.3	30.4	49.3
Avoidance	8.7	27.5	63.8

Table 8 gives the percentages of Zagreb and displaced children who experienced different degrees of distress when Horowitz (1982) criteria for low (scores  $<9$ ), medium (scores 9-19) and high distress (scores 19 or higher) were used.

The percentages show that a large proportion of displaced children fall in the high distress group regarding both intrusions (49.3 per cent) and avoidance (63.8 per cent). One-fourth (24.2 per cent) of the Zagreb group report intrusion at a high distress level, while 49.3 per cent score in the high distress group for avoidance.

### Discussion

The children described in this study have experienced a variety of stressors during the war in Croatia. Forced separations from family members, exposure to armed combat, having family members injured or killed, witnessing others being injured or killed, having their home or school attacked or shelled, or having to stay in inadequate cellars or shelters, sometimes over extended periods, have been among the experiences the groups of children studied have been through. There is no doubt that the displaced children have been more extensively exposed, but many children residing in Zagreb have lived through stressful exposure as well. More than 90 per cent of both groups had been exposed to armed combat, and a majority of both groups had been exposed to shooting at close range, and had to spend time in shelters due to air raids. The displaced children have experienced what Terr (1991) called type II trauma, resulting not from a discrete event but from repetitive or cumulative trauma.

The results on the IES show that the displaced children have significantly higher scores than the Zagreb children on IES total, IES intrusion and IES avoidance subscales. Particularly concerning intrusion, the mean score was much higher in the displaced group ( $M = 19.3$ ) than in the Zagreb group ( $M = 12.7$ ). Because of the higher degree of exposure in the displaced group, especially witnessing brutality (injury and killing) at close range, this is to be expected. Compared to another group of children exposed to warfare (Iraqi children) where the same questionnaire (IES) was used (Dyregrov & Raundalen, 1992b), the mean scores are somewhat lower. Here both the intrusion and avoidance scores were above 20 both six months and a year after the Gulf War. (In Basra scores on intrusion and avoidance were over 25 one year after the war.) Yule, Bolton & Udwin (unpublished) reported comparable IES scores in a group of 90 children and adolescents who survived the

that the two sexes were exposed to, as was the case in Macksoud & Aber's study (in press). It is debatable whether gender differences such as these reflect a true difference in distress, or differences in reporting or acknowledging reactions (Dyregrov *et al.*, unpublished). Studies that rely on parental observation of affective symptoms and behaviour problems (cf. Chimienti *et al.*, 1989) find some symptoms and behaviour more common in boys and others in girls.

The fact that children who were displaced report more distress than children from Zagreb, and the positive correlations between stressors and distress (IES scores), although not proving any causal direction, must be taken as another indication that there is a positive relationship between exposure and distress. Israeli studies from the Gulf War in 1991 are clearly in support of the situational exposure (intensity of attack, proximity to missile explosions) being related to intensity of stress reactions (Klingman, 1992; Mintz reported in Swenson & Klingman, 1993). In the present study a moderate significant relationship was found between the number of events a child had been exposed to (sum score WTQ) and IES total as well as subscores. Specific factors such as sensory exposure to violence, loss of or injury to a family member, attack on own home, and school absences were significantly related to different IES scores, particularly the intrusion score. This is in line with what Macksoud & Aber (in press) found (see introduction), although they did not find number of events experienced related to adaptation outcomes.

That exposure to violence is a significant stressor related to elevated distress levels is not surprising, as civilian exposure to violence in different forms, such as kidnapping (Terr, 1979, 1983), murder or violent assault (Malmquist, 1986; Pynoos & Eth, 1984) and sniper shooting at a school playground (Pynoos *et al.*, 1987), is related to the development of PTSD in children. It is still unclear if problems are caused by the sensory exposure as such, the interpretation given to the event by the child, or other ramifications of the event.

Regarding primary intervention, these results highlight the need to limit children's exposure to various war stressors to reduce the chance of continuing distress. If children witness gruesome events, their chances of being bothered by intrusive thoughts and images increase, and they have to use avoidance strategies to defend against these memories. From the correlations between war stressors and IES scores, as well as through the interviews, there is an indication that it is the strong sensory exposure to sights, sounds, smells and kinaesthetic stimuli (vibrations) that forms the basis of the intrusive images and thoughts. A more detailed questionnaire about these aspects in later research will help to delineate the part played by these factors in the intrusiveness and the need to use avoiding strategies to reduce intrusions.

When using Horowitz's criteria for low, medium and high distress, a majority of the children fall in the medium-to-high-distress groups, regardless of them residing in Zagreb during the war or in the more active war areas. This shows how devastating a war situation is for all children concerned, and how children will be influenced by the presence of war in the country. In the most highly exposed group (displaced children) around half the children fall into the highly distressed group for both intrusion and avoidance, even though at the time of study they were well away

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