The aim of the study was to estimate the prevalence of depressive symptoms and perceived family functioning in a group of 112 displaced Croatian children who had been exiled from their homes (the eastern part of Slavonia and Baranya) at the beginning of war in Croatia. The children had been living in refugee camps near Osijek for 4 years at the time of the investigation. All the examinees completed the Croatian version of the War Trauma Questionnaire, the Children’s Depression Inventory (CDI), and the Hudson’s Index of Family Relations (HIFS). According to previously established cut-off scores on the CDI, 20 children (17.9%) scored within the clinical range, and 23 children (20.5%) reported significant problems in their perception of family relationship on HIFS. There was a significant correlation between the number of war traumatic experiences and CDI score, HIFS score and the depression scores on CDI. The findings may be useful in the planning of psychosocial intervention programmes for traumatised children.

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INTRODUCTION

The effects of war on children were studied in World War II (Freud and Burlingham, 1943) and, more recently, in wars in Israel (Milgram and Milgram, 1975; Laor et al., 1997), Lebanon (Macksoud and Aber, 1996; Farhood et al., 1993), Palestine (Qouta et al., 1995a; Qouta et al., 1995b), BiH (Husain et al., 1998; Miller et al., 1996) and Croatia (Ajdukovic, 1998; Zivcic, 1993).

Children’s reactions are likely to be mediated by biological and psychosocial risk factors, parental responsibility, their own coping style, and the proximity and degree of the exposure to the stressor (Jensen and Shaw, 1993). Regressive behavior, episodic aggression, psychological disturbances, guilt, grief reactions, changes in school performance, personality changes, and various depressive, anxiety and posttraumatic symptoms have been described as the most common reactions of children to war-related stress (Thabet and Vostanis, 1999; Nader et al., 1993; Goldstein et al., 1997).

Refugee experience is tragic, especially for children. Forced displacement, separation from or loss of family members, and the disruption of life in community, school, family, and friends may increase the risk for future emotional and behavioral disturbances in displaced children (Mollica et al., 1997; McCloskey and Southwick, 1996; Montgomery, 1998; Paardekooper et al., 1999).

One of the common features of the 1991-1995 war in Croatia was a large number of displaced persons and refugees. More than 100,000 displaced school children and adolescents were registered in Croatia at the end of 1991 (Dzepina et al., 1992). Before displacement, the children had stayed in areas directly affected by the war operations which means they had experienced one or more extremely stressful events such as prolonged bombing, living in shelters, witnessing the killing and injuring of people in the near environment. The examination of the emotional reactions of Croatian displaced children in the first few months after displacement, showed that displaced children manifested more negative emotions (especially sadness and fear) than did their local peers, based on self-report as well as parents’ and teachers’ reports (Zivcic, 1993). Many children had been living in displacement for several years, because their homes had been devastated or occupied. They had had to change their former way of life, school and friends and they had to adapt to the new environment.

This study describes Croatian displaced children with war traumatic experience who lived in a refugee camp for four years at the time of our investigation. The aim of our study was to explore the prevalence of depressive symptoms in displaced children and their perception of family relationship.
METHODS

Subjects

We studied a group of 112 displaced children from a refugee camp near the city of Osijek (Eastern Slavonia), which provided accommodation for displaced children and their families mostly from Eastern Slavonia and Baranya. The total number of displaced persons in this camp was 2,480 (815 children up to 18 years of age and 1,665 adults). Each displaced child aged from 12 to 15 (69 boys and 43 girls with an average of 13 years and 8 months) from the register of displaced persons in the camp was interviewed. All the children and their parents were informed about the study and gave their consent. The majority of the children were placed in the camp with their parents (80%), and the others lived only with their mother, grandparents, or a cousin. At the time of the study, children’s family status was: father killed or died N=6 (5.4%); father still in the army N=67 (57.8%); father missing during the war N=9 (8%); mother killed or died N=1 (0.9%).

The study was conducted in May 1997, which means that the children had been living in the camp for 4.0 years at the time of the investigation (the camp was established in 1993). They had experienced several traumatic events before displacement because they lived in the zones of active war operations (North-East Croatia). The displaced children attended the elementary school in the village near the refugee camp, together with the local children.

Instruments

1. The Children’s Depression Inventory (CDI) is a 27-item, self-report measure designed to assess the social, behavioral, and affective symptoms of depression in children (Kovacs, 1981). Each of the 27 items consists of three sentences that describe the symptom of depression in varying degrees of severity. Children choose the sentence that best describes them during the past 2 weeks. Each item set is then scored from 0 (symptom is absent) to 2 (symptom is present most or all the time) resulting in a range of total scores from 0 to 54. A high score indicates a high depressive feeling. The cut-off total score of 18 had discriminated between depressed and non-depressed children (Zivcic, 1993). The CDI has been reported (Zivcic, 1993) to have acceptable internal consistency (coefficient $\alpha = 0.82$) on a population of Croatian school-aged children, and coefficient $\alpha = 0.79$ on a clinical sample. A coefficient $\alpha$ for reliability of 0.83 was obtained indicating good internal consistency for the CDI on this sample of children. The Croatian version of the Children’s Depression Inventory was used in the study.
2. War Trauma Questionnaire is a self-report instrument to measure which of the 21 specific war trauma stressors was experienced by children during the war in Croatia (Franc et al., 1993). It included the questions related to the following war trauma experiences: forced to leave home, separation from parents during the war, living in a shelter for long periods because of shelling, injuring of family members, watching injured and killed people, shelling of their homes. The answering options were yes and no.

3. The Index of Family Relations (Hudson, 1981) is a measure of the degree or magnitude of intrafamilial stress, viewing the family as a unit and as reported by children. It consisted of 25 items asking children to assess their own feelings about the quality of family life during the last 30 days. The scale included items such as "My family rarely cares for me", "My family gets on my nerves", "I feel like a stranger at home", "I am proud of my family". Each item had to be answered on a 5-point scale (1-rarely or none of the time to 5-most or all of the time). The scale yielded a score ranging from 0 to 100 (higher scores are interpreted as the greater the magnitude of the problems). The psychometric qualities of this scale are documented by Hudson (1982) which has designed the scale that has a "clinical cutting score" of 30. Children who score over 30 generally have been found to have problems in their perception of family relationships. In the present study, the internal consistency was good (coefficient $\alpha = 0.75$). The scale had been used in children during the war in Croatia (Barath, 1995).

Procedure

The children were assessed in school during regular school hours. The instructions were given by the psychiatrist on how to respond to each measure. The children completed the Croatian version of the War Trauma Questionnaire, of the Children's Depression Inventory and the Hudson's Index of Family Relations.

RESULTS

The most frequently reported war trauma experiences based on the War Trauma Questionnaire are presented in Table 1. These included displacement from their homes, separation from their family, staying in shelters because of shelling, direct experience of shelling or witnessing a killing, watching injured and dead people. The mean number of war trauma experiences reported by displaced children was 8.6 (range 0-28, SD=4.5).
The descriptive statistics of the investigated variables are presented in Table 2. Twenty children (17.9%) reported clinically significant depressive scores on the CDI. A similar rate of children, 23 (20.5%) reported a significant problem in their perception of family relationship based on total HIFS scores.

Examination of the frequency of individual CDI items endorsed indicates that the majority of items were endorsed at level 0 (Table 3). There were seven exceptions to this: item 2 (things work out) – 61.6% endorsed "I am not sure things will work out for me"; item 4 (have fun) – 51.8% endorsed "I have fun in some things"; item 6 (worry) – 55.3% endorsed "I am worried that bad things will happen to me"; item 8 (self-blame) – 53.6% endorsed "I often think it is my fault when something bad happens to me"; item 13 (indecision) – 57.2% endorsed "It is hard to make up my mind about things"; item 20 (loneliness) – 59.8% endorsed "I feel alone many times"; item 21 (fun at school) – 50.9% endorsed "I have fun at school only once in a while". On item 9 about suicidal ideation 23.2% endorsed "I think about killing myself but I would not do it".

In order to investigate the relationship between the number of war traumatic experiences, CDI score and HIFS score the correlations coefficient is computed. Results show significant correlations between a number of war traumatic experiences and CDI score, HIFS score and CDI score, while there was not a significant correlation between the number of war traumatic experiences and HIFS score (Table 4).
The displaced children investigated in this study experienced stressful events at the time of intensive war operations (1991, 1992) in Northeast Croatia, when they were forced to leave their homes. Among this group of children about two thirds had been exposed to close shelling, almost half had been separated from a parent, and more than one third had witnessed the injury or killing of people in the near environment. They had changed places of living several times and when the camp was established in 1993, they came to live in the camp.
After five years and more since they had experienced war traumas, 17.9% of displaced children manifested clinically significant depressive scores on CDI.

The higher rate of depressive symptoms among the refugee children in the study is comparable with the findings of some other authors. A longitudinal follow-up study of Cambodian refugee children showed that 50% of the children who were traumatized between 6 and 12 years of age, developed a depressive disorder after 4 years of displacement (Kinzie et al., 1986). On the other hand, Cambodian refugee adolescents who lived for more than a decade in Thailand’s Site II refugee camp reported more depressive symptoms than Cambodian refugee adolescents of the same age who lived in the USA (Savin et al., 1996). Depressive symptoms were mainly predicted by recent stressful events while PTSD symptoms were related to war trauma in early childhood. Servan-Schreiber and colleagues (1998) found that 11.5% of the children who escaped from Tibet and found refuge in Tibetan settlements in India met DSM-IV criteria for MDD. Among a community sample of thirty eight adolescent and young adult refugees from Afghanistan, Mghir et al. (1995) determined that 11 subjects met DSM-III criteria for major depression. In several studies authors investigated the nature and severity of psychiatric problems among Bosnian refugee children. For example, Weine et al. (1995) describe the psychiatric impact of “ethnic cleansing” in Bosnia on Bosnian adolescents during the first year after their resettlement in the United States. Depressive disorder was diagnosed in 25% of the subjects. Papageorgiou et al. (2000) reported that 47% of Bosnian refugee children, hosted by Greek families for a period of seven months manifested clinically significant depressive scores on the Depression Self-Rating Scale for Children.

Zivcic (1993) examined the emotional reactions of Croatian displaced children with the Child Depression Inventory showing that both, displaced and local children had exhibited more depressive symptoms than children of the same age before the war in Croatia (the CDI average score of refugee children was 11.28 after six months of displacement, that of local children was 10.77 and for the children assessed before the war it was 9.57). The average scores on CDI in this study were higher than in the Zivcic study with displaced children in Rijeka. The total number of experienced war traumas is significantly associated with the CDI score total. This is consistent with the research of Mghir et al. (1995) which have found significant positive correlations between the subjects’ psychiatric diagnosis and the total number of traumatic events experienced. The number and severity of traumatic experiences
have also been associated with low self-esteem and cognitive impairment, although the latter could be an expression of PTSD (Qouta, 1995a).

Children with traumatic experience had a greater need for emotional support from the social environment, especially from the family. Family relations may be disruptive because of war (refugee status, death or absence of parent) and temporary separations (Ahmad and Mohamed, 1996; Mack-soud and Aber, 1996). The clinically observed Croatian children from families with various types of family conflicts caused by war showed that their predominant problems are depressive reactions, anxiety and behavioral disorders (Kocijan-Hercigonja and Remeta, 1996). On the other hand, Barath (1995) found that the vast majority of Croatian children in his study perceived their mothers changed "for the better" in their behavior, as compared to the pre-wartime experience. The author suggested that the families whose life was in immediate danger during the acute war activities tended to retain their cohesiveness and positive helping resources, especially toward the children.

Our results suggest that the largest number of the displaced children perceive their family relationship as positive and supportive. One fifth of the children reported significant problems in their perception of family relationship on HIFS. We found that perception of family relations has a significant influence on the level of depression in displaced children.

The exposure to war with its multiple stressors may constitute a significant interference with children's emotional, social and intellectual development (Jensen and Shaw, 1993). Older children were more at risk of developing depressive symptomatology. Children in this study were in adolescence, which is a period of intensive development of self-concept. Positive identification models, support, the feeling of being a member of a group, family and community norms and values, which are all disrupted in war, play an important role in adolescence. Because of adolescence, recapitulatory of early childhood, frustrations may lead to the eruption of the depressive core from the earlier developmental phases, and since the defense system has not become firm yet, anxiety and depression may arise.

The findings of this study should be incorporated in programmes of psychosocial interventions and treatments of displaced children and their families which should involve local child psychiatry and psychology services. Longitudinal follow-up studies of Croatian displaced children are needed to determine the profound effects of war traumatic experiences in the postwar time period.
REFERENCES


Depresivnost i doživljaj obiteljskih odnosa u hrvatske djece progranih

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Cilj istraživanja bio je ustanoviti prevalenciju depresivnih simptoma i doživljaj obiteljskih odnosa u skupini od 112 hrvatske djece progranih, progranih početkom rata u Hrvatskoj iz Istočne Slavonije i Baranje. Prosječna dužina boravka u prograničnom naselju blizu Osijeka u vrijeme provedbe istraživanja iznosila je 4 godine. Svi ispitanici ispunili su hrvatske verzije Upitnika ratnih traumatskih iskustava, Ljestvice za dječju depresiju i Indeksa obiteljskih odnosa. Analiza rezultata pokazala je da 17,9% djece ima značajnu povisenu rezultat na Ljestvicu za dječju depresiju, a 20,5% djece izvijestilo je o značajnom problemu u doživljaju obiteljskih odnosa na Indeksu obiteljskih odnosa. Nađena je statistički značajna korelacija broja traumatskih iskustava rezultata na CDI i HIFS s ukupnim rezultatom na Ljestvicu za dječju depresivnost. Dobiveni rezultati mogu poslužiti u kreiranju psihosocijalnih programa u radu s traumatiziranim djecom progranih.

Depressivität und Einschätzung der Familienverhältnisse unter Kindern kroatischer Vertriebener

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Mit dieser Untersuchung sollte die Prävalenzrate von Depressionssymptomen und die Sicht der Familienverhältnisse in einer Gruppe von 112 Kindern, deren Eltern zu Beginn des Krieges in Kroatien (1991) aus Ostslawonien und der Baranja vertrieben worden waren, ermittelt werden. Die Zeit, die die Vertriebenen im Durchschnitt in einem Flüchtlingslager bei Osijek verbracht hatten, betrug vier Jahre. Alle Untersuchungsteilnehmer erhielten die kroatischen Versionen folgender Fragebögen: